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GRENADA

STATUTORY RULES AND ORDERS NO. 23 OF 2024

IN EXERCISE OF THE POWERS CONFERRED UNDER SECTION 49(1) OF THE CIVIL AVIATION ACT CAP. 54A, THE DIRECTOR GENERAL HEREBY MAKES THE FOLLOWING REGULATIONS—

(Gazetted 26th July, 2024).

CHAPTER 1
PRELIMINARY

1. Citation. These Regulations may be cited as the

CIVIL AVIATION (FLIGHT SAFETY) REGULATIONS, 2024.

2. Interpretation and construction.—(1) For the purpose of this Part, the applicable definitions are contained in Part 1 of the Schedule – “General Policies, Procedures and Definitions.”

(2) Reserved.

(3) An aircraft shall be deemed to be in flight from the moment when, after the embarkation of its crew for the purpose of taking off, it first moves under its own power, until the moment when it next comes to rest after landing; and the expressions “a flight,” “to fly” and “flight time” shall be construed accordingly.

(4) Every person employed or engaged in an aircraft in flight on the business of the aircraft shall be deemed to be a member of the crew thereof.

(5) References in these Regulations to the operator of an aircraft are, for the purposes of the application of any provision of these Regulations in relation to any particular aircraft, references to the person who at the relevant time has the management of that aircraft, and cognate expressions shall be construed accordingly.

(6) A power to issue directions under these Regulations shall include the power to make different provisions with respect to different classes of aircraft, aerodromes, persons or property and with respect to different circumstances and with respect to different parts of Grenada and to make such incidental and supplementary provisions as are necessary or expedient for carrying out the purposes of these Regulations.

(7) For the purpose of these Regulations, the term “instrument” means a document issued by the Government of Grenada and includes any Regulations,

direction, instruction, rule or other requirement, any notice and any certificate, licence, approval, permission, exemption, authorizations, logbook record or other document.

(8) Any power conferred by these Regulations to issue, make, serve or grant any instrument shall be construed as including a power exercisable, in the like manner and subject to the like conditions, if any, to vary, revoke, cancel or otherwise terminate the instrument.

(9) The term “instruments” means aircraft components used by the flight crew for the purpose of flight and navigation.

3. Application of Convention. For the purposes of the Act and of these Regulations, the provisions of the Chicago Convention and the Annexes thereto together with the Standards and Recommended Practices established by the International Civil Aviation Organization thereunder, and such other internationally recognised standards and practices shall be adopted and applied, as appropriate, in Grenada.

4. Application of Part 1 of Schedule. The provisions of Part 1 of the Schedule apply in relation to general policies, procedures and definitions for the purposes of these Regulations.

CHAPTER 2

PERSONNEL LICENSING

5. Application of Part 2 of Schedule. Subject to the provisions of this Chapter, the provisions of Part 2 of the Schedule apply in relation to the following—

- (a) the requirements for issuing licences, ratings and authorisations;
- (b) the conditions under which those licences, ratings, and authorisations are necessary; and
- (c) the privileges and limitations of holders of those licences, ratings and authorisations.

6. Requirement for licence, rating or authorisation. A person shall not act as a pilot, a flight engineer, an aviation maintenance technician or an air traffic controller of a civil aircraft unless that person is the holder of a valid licence, rating or authorisation for that purpose issued or validated by—

- (a) the Authority in accordance with these Regulations; or
- (b) the State in which the aircraft is registered;

and any conditions subject to which the licence, rating or authorisation was issued or rendered valid are complied with.

7. Approval of training or instruction by the Authority.—(1) Without prejudice to any other provision of these Regulations the Authority may, for the purpose of personnel licensing as provided in this Chapter and in Part 2 of the Schedule, and subject to such conditions as the Authority thinks fit—

- (a) approve any course of training or instruction;
- (b) authorize a person to conduct such examinations or tests as the Authority may specify;
- (c) approve a person to provide or conduct any course of training or instruction;
- (d) approve a person as qualified to furnish reports to the Authority and to accept such reports; and
- (e) certify an aviation training organization.

(2) Where any provision of these Regulations permits a test to be conducted in a flight simulator approved by the Authority, that approval may be granted subject to such conditions as the Authority thinks fit.

8. Grant of licence, rating, or authorisation. The Authority shall grant licences, ratings or authorisations pursuant to this Chapter and to Part 2 of the Schedule, subject to such conditions as the Authority thinks fit, if satisfied that the applicant is a fit person to hold the licence, having regard in particular to his previous conduct, or if there is evidence of unlawful conduct in aviation or previous breaches of aviation regulations, and is qualified by reason of his or her knowledge, experience, competence, skill, physical and mental fitness to act in the capacity to which the licence relates, and for that purpose the applicant shall furnish such evidence and undergo such examinations and tests, including in particular medical examinations, and undertake such courses of training as the Authority may require of that person.

9. Requirement for signature of holder.—(1) Upon receiving a licence, rating or authorization granted pursuant to this Chapter and Part 2 of the Schedule, the holder thereof shall forthwith sign his or her name thereon in ink with his or her ordinary signature.

(2) A licence, rating or authorisation granted pursuant to this Chapter and Part 2 of the Schedule shall not be valid unless it bears thereon the ordinary signature of the holder in ink.

10. Duration of licence, rating or authorisation. A licence, rating or authorization shall remain in force for the period specified in the licence, rating or authorization but may be reviewed by the Authority from time to time to determine that the holder is fit and qualified in accordance with the applicable Regulations.

11. Requirement for currency.—(1) The holder of a licence, rating or authorization granted pursuant to these Regulations shall not be entitled to exercise the privileges of that licence, rating or authorization on a flight unless the holder is qualified and current for the functions the holder is to perform on that flight in accordance with these Regulations.

(2) A person who, on the last occasion when he or she took a test for the purposes of qualification, competency or currency, failed that test shall not be entitled to fly in the capacity for which that test would have qualified him or her had he or she passed it.

12. Medical examination and certificate.—(1) The holder of a licence, rating or authorization granted pursuant to these Regulations for which a current medical certificate is also a prerequisite to perform any of the functions authorized, shall have a current medical certificate when engaged in those functions.

(2) An applicant for or holder of a licence, rating or authorization shall upon such occasions as the Authority may require, submit himself or herself to a medical examination by a person approved by the Authority who shall make a report to the Authority in such form as the Authority may require.

(3) On the basis of a medical examination pursuant to sub-regulation (2), the Authority or any person approved by the Authority as competent to do so may issue to the holder of the licence, rating or authorization, a medical certificate subject to the requirements of Part 2 of the Schedule and such conditions as the Authority thinks fit, as being medically fit to perform the functions to which the licence, rating or authorization relates and the medical certificate shall be valid for such period as is therein specified and shall be deemed to form part of the licence, rating or authorisation.

(4) A person shall not be entitled to act as a member of the flight crew of an aircraft registered in Grenada if he or she knows or suspects that his or her physical or mental condition renders him or her temporarily or permanently unfit to perform such functions or to act in such capacity.

(5) A holder of a medical certificate issued pursuant to these Regulations who—

- (a) suffers any personal injury involving incapacity to undertake his or her functions as a member of the flight crew; or
- (b) suffers any illness involving incapacity to undertake those functions throughout a period of twenty days or more;

shall inform the Authority in writing of such injury or illness, as soon as possible in the case of injury and as soon as the period of twenty days has elapsed in the case of illness and the medical certificate shall be deemed to be suspended upon the occurrence of such injury or the illness.

(6) A suspension pursuant to sub-regulation (5) shall cease upon the holder being medically examined under arrangements made by the Authority and pronounced fit to resume his or her functions as a member of the flight crew or upon the Authority exempting, subject to such conditions as the Authority thinks fit, the holder from the requirement of a medical examination.

(7) The Authority may issue a certificate of validation rendering valid for the purposes of these Regulations any licence as a member of the flight crew of aircraft granted under the law of any State other than Grenada.

13. Certificate of validation. A certificate of validation may be issued in accordance with Part 2 of the Schedule and subject to such conditions and for such periods as the Authority thinks fit.

14. Logbook. A member of the flight crew of an aircraft registered in Grenada and a person who engages in flying for the purpose of qualifying for the grant of a licence, rating or authorization or of establishing currency pursuant to these Regulations shall keep a personal flying logbook in which the information specified in Part 2 of the Schedule shall be recorded.

CHAPTER 3

AVIATION TRAINING ORGANISATION

15. Application of Part 3 of the Schedule. Subject to the provisions of this Chapter, the provisions of Part 3 of the Schedule apply to the requirements for certifying and administering aviation training organizations.

16. Requirement for aviation training organisation certificate. A person shall not engage in any programme of aviation training on behalf of a holder of an air operator certificate issued pursuant to these Regulations unless that person is the

holder of a valid aviation training organization certificate issued pursuant to these Regulations and the conditions subject to which the aviation training organization certificate was issued are complied with.

17. Application for aviation training organisation certificate. An organization intending to engage, in any programme of aviation training on behalf of a holder of an air operator certificate issued pursuant to these Regulations may apply to the Authority for an aviation training organization certificate.

18. Grant of aviation training organisation certificate.—(1) In granting an aviation training organization certificate to an organization situated in a Contracting State other than Grenada, the Authority may take into account, in relation to such organization, the possession of a certificate of approval issued by the licensing authority of the State in which the organization is located.

(2) The Authority may grant an aviation training organization certificate to an organization which complies with the requirements of Part 3 of the Schedule in respect of the activities applied for.

19. Form of aviation training organisation certificate. An aviation training organization certificate shall be in such form, be subject to such conditions and limitations and contain such particulars as may be determined from time to time by the Authority.

20. Training and checking manual. An aviation training organization shall use a training and checking manual approved by the Authority that lays out the processes, procedures and quality systems applicable to its activities.

CHAPTER 4

REGISTRATION AND MARKING OF AIRCRAFT

21. Application of Part 4 of the Schedule. Subject to the provisions of this Chapter, the provisions of Part 4 of the Schedule apply to the requirement for registration and marking of an aircraft.

22. Aircraft to be registered.—(1) A person shall not fly or operate an aircraft in or over Grenada unless it is registered in—

- (a) Grenada in accordance with these Regulations;
- (b) a Contracting State;

- (c) some other State in relation to which there is in force an agreement between the Government of Grenada and the Government of that State which makes provision for the flight over Grenada of aircraft registered in that State;

and there is a valid certificate of registration in force for that aircraft and any conditions of that registration are complied with.

(2) Sub-regulation (1) shall not apply to a kite or captive balloon.

23. Application for registration. A person may apply to the Authority for the registration of an aircraft, in the form and in the manner specified in Part 4 of the Schedule.

24. Registration of aircraft.—(1) Upon receiving an application for the registration of an aircraft in Grenada and on being satisfied that the aircraft may be properly so registered, the Authority shall, subject to the provisions of these Regulations including Part 4 of the Schedule, register the aircraft in Grenada in a register to be kept for that purpose and to be known as the Register of Aircraft.

(2) The Register of Aircraft shall include the following particulars in relation to an aircraft registered—

- (a) the number of the certificate;
- (b) the nationality mark of the aircraft, and the registration mark assigned to it by the Authority;
- (c) the name of the constructor of the aircraft and its designation;
- (d) the serial number of the aircraft; and
- (e) the name and address of every person who is entitled as owner to a legal interest in the aircraft or a share therein, or, in the case of an aircraft which is the subject of a charter by demise, the name and address of the charterer by demise; and
- (f) in the case of an aircraft registered pursuant to sub-regulations (3) and (4) of Regulation 26, an indication that it is so registered.

25. Certificate of registration. The Authority shall furnish to the person in whose name the aircraft is registered (in these Regulations referred to as “the registered owner”) a certificate of registration.

26. Refusal or discontinuance of registration.—(1) Subject to the provisions of this Regulation, an aircraft shall not be registered or continue to be registered in Grenada if it appears to the Authority that—

- (a) the aircraft is registered outside of Grenada and that such registration does not cease by operation of law upon the aircraft being registered in Grenada;
- (b) an unqualified person holds any legal or beneficial interest by way of ownership in the aircraft or any share therein;
- (c) it would be inexpedient in the public interest for the aircraft to be or to continue to be registered in Grenada; or
- (d) the aircraft does not qualify for the issue of a certificate of airworthiness in accordance with the provisions of Regulation 33.

(2) Subject to sub-regulation (3), the following persons shall be qualified to hold a legal or beneficial interest by way of ownership in an aircraft registered in Grenada or a share therein—

- (a) the Government of Grenada;
- (b) a citizen or permanent resident of Grenada or other such persons as the Authority shall approve;
- (c) a company incorporated in Grenada under the Companies Act, Chapter 58A and having its principal place of business in Grenada.

(3) If a person, other than a person referred to in sub-regulation (2), holds a legal or beneficial interest by way of ownership in an aircraft, or a share therein, the Authority, upon being satisfied that the aircraft may otherwise be properly so registered, may register the aircraft in Grenada and such person shall not cause or permit the aircraft, while it is registered pursuant to this paragraph to be used for the purpose of commercial air transport or aerial work.

(4) If an aircraft is sold under a contract of hire-purchase, let on hire or chartered by demise to a person qualified under sub-regulation (2), the Authority may, whether or not that person is entitled as owner to a legal or beneficial interest therein, register the aircraft in Grenada in the name of the hire purchaser, lessee or charterer upon being satisfied that the aircraft may otherwise be properly so registered, and subject

to the provisions of this Regulation the aircraft may remain so registered during the continuation of the contract, lease or charter.

(5) Subject to sub-regulations (3) and (4), if at any time after an aircraft has been registered in Grenada a person referred to in sub-regulation (3) becomes entitled to a legal or beneficial interest by way of ownership in the aircraft or a share therein, the registration of the aircraft shall thereupon become void and the certificate of registration shall forthwith be returned by the registered owner to the Authority.

(6) In this Regulation references to an interest in an aircraft do not include references to an interest in an aircraft to which a person is entitled only by virtue of his or her membership of a flying club and the reference in sub-regulation (5) to the registered owner of an aircraft includes in the case of a deceased person, his legal personal representative, and in the case of a body corporate which has been dissolved, its successor.

27. Change in particulars of registration.—(1) The registered owner of an aircraft registered in Grenada shall inform the Authority forthwith in writing of—

- (a) any change in the particulars which were furnished to the Authority on the date of the application for the registration of the aircraft;
 - (b) the destruction of the aircraft, or its permanent withdrawal from use; or
 - (c) in the case of an aircraft registered pursuant to sub-regulation (4) of Regulation 26, the termination of the demise charter.
- (2) Any person who becomes the owner of an aircraft registered in Grenada shall within twenty-eight days thereof inform the Authority in writing to that effect.

28. Amendment of register. The Authority may, whenever it appears to be necessary or appropriate to do so for giving effect to these Regulations for bringing up to date or otherwise correcting the particulars entered on the Register of Aircraft, amend the Register of Aircraft or, if the Authority thinks fit, cancel the registration of the aircraft, and shall cancel that registration within two months of being satisfied that there has been a change in the ownership of the aircraft.

29. Cancellation of registration in public interest. Nothing in this Chapter shall require the Authority to cancel the registration of an aircraft unless in its opinion it would be in the public interest to do so.

30. Nationality and registration marks.—(1) An aircraft, other than aircraft permitted pursuant to these Regulations to fly without being registered, shall not fly in or over Grenada unless it bears painted thereon or affixed thereto, in the manner required by the law of the State in which it is registered, the nationality and registration marks required by that law.

(2) The marks to be borne by aircraft registered in Grenada shall comply with Part 4 of the Schedule.

(3) An aircraft shall not bear any marks which purport to indicate—

- (a) that the aircraft is registered in a State in which it is not in fact registered; or
- (b) that the aircraft is a State aircraft (as defined in Article 3 of the Chicago Convention) of a particular State if it is not in fact such an aircraft, unless the appropriate authority of that State has sanctioned the bearing of such marks.

CHAPTER 5 AIRWORTHINESS

31. Application of Part 5 of the Schedule. Subject to the provisions of this Chapter, the provisions of Part 5 of the Schedule shall apply to the following—

- (a) certification of an aircraft and aeronautical components;
- (b) issuance of airworthiness certificates and other certifications for aeronautical components;
- (c) continued airworthiness of aircraft and aeronautical components;
- (d) rebuilding and modifications of aircraft and aeronautical components;
- (e) maintenance and preventative maintenance of aircraft;
- (f) aircraft inspection requirements;
- (g) air operator aircraft maintenance and inspection requirements; and
- (h) any other matters provided for in that Part of the Schedule.

32. Type certificate.—(1) For the purposes of this Regulation a type certificate with respect to an aircraft, engine or propeller means a document issued by the manufacturer, and approved by the appropriate authority of the State of manufacture, certifying that the type design of the aircraft, engine or propeller and of the variants specified on the type data sheet, comply with the certification basis to which the certificate refers and it includes the type certificate data sheet, the type design, the operating limitations and any other conditions or limitations prescribed for the aircraft.

(2) A person shall not operate an aircraft registered in Grenada for commercial air transport or aerial work unless—

- (a) the Authority has issued, accepted or validated, a type certificate for that aircraft as provided for in Part 5 of the Schedule and in accordance with this Regulation; and
- (b) the person maintains or operates the aircraft in accordance with the type certificate that was used in the issuance of the certificate of airworthiness for that aircraft.

(3) A person who intends to operate an aircraft to be registered in Grenada for commercial air transport or aerial work shall apply to the Authority for the issue, acceptance or validation of a type certificate as provided in Part 5 of the Schedule for that aircraft, in accordance with this Regulation and the requirements of the Authority from time to time.

(4) An applicant for a type certificate of an aircraft, or for the acceptance or validation thereof, shall submit, with the application, detailed data identifying the airworthiness standards to which the aircraft was designed and data which describes the design, construction and performance of that aircraft.

(5) The Authority shall accept or validate a type certificate, in respect of any aircraft, engine or propeller that is imported into Grenada, subject to such conditions or limitations as it shall consider appropriate and in accordance with Part 5 of the Schedule, provided that—

- (a) the airworthiness authority of the State of manufacture has issued a type certificate on the basis of the Federal Aviation Regulations, the Joint Aviation Authorities Air Regulations or the Canadian Aviation Regulations; and
- (b) the type certificate approval basis meets the airworthiness requirements laid down by the Authority.

(6) In any other case, other than that mentioned in sub-regulation (5), the Authority may in its discretion accept or validate a type certificate that is issued by the airworthiness authority of the State of manufacture and the type certificate approval basis meets the airworthiness requirements laid down by the Authority.

33. Certificate of airworthiness.—(1) Subject to sub-regulation (2), a person shall not fly or operate an aircraft in or over Grenada unless there is in force in respect thereof a certificate of airworthiness duly issued or rendered valid under the law of the State in which the aircraft is registered, and any conditions subject to which the certificate was issued or rendered valid are complied with.

(2) Sub-regulation (1) shall not apply to flights of the following aircraft, beginning and ending in Grenada without passing over any other State—

- (a) an aircraft flying in accordance with a special airworthiness certificate issued pursuant to Part 5 of the Schedule; or
- (b) an aircraft flying in accordance with the conditions of a permit to fly issued by the Authority in respect of that aircraft.

(3) In the case of an aircraft registered in Grenada the certificate of airworthiness referred to in sub-regulation (1) shall be a certificate of airworthiness issued in accordance with the provisions of these Regulations including Part 5 of the Schedule.

(4) The Authority shall issue in respect of any aircraft a certificate of airworthiness if the Authority is satisfied that the aircraft is fit to fly having regard to—

- (a) the design, construction, workmanship and materials of the aircraft (including in particular any engines fitted therein), and of any equipment carried in the aircraft which the Authority considers necessary for the airworthiness of the aircraft; and
- (b) subject to sub-regulation (4) the results of flying trials, and such other tests of the aircraft as the authority may require.

(5) If the Authority has issued a certificate of airworthiness in respect of an aircraft which, in the Authority's opinion, is a prototype aircraft or a modification of a prototype aircraft, the Authority may dispense with flying trials in the case of any other aircraft if the Authority is satisfied that it conforms to such prototype or modification.

(6) A certificate of airworthiness shall specify such conditions as are, in the opinion of the Authority, appropriate to the aircraft in accordance with Part 5 of the Schedule and the certificate shall be issued subject to the condition that the aircraft shall be flown only for the purposes indicated on that certificate or associated certificates.

(7) The Authority may issue a certificate of airworthiness subject to such other conditions relating to the airworthiness of the aircraft as the Authority thinks fit.

(8) A certificate of airworthiness may designate the performance group of the aircraft.

(9) The Authority may, subject to such conditions as the Authority thinks fit, issue a certificate of validation rendering valid for the purposes of these Regulations a certificate of airworthiness issued in respect of any aircraft under the law of any State other than Grenada.

(10) Subject to the provisions of these Regulations, a certificate of airworthiness or validation issued under this Regulation shall remain in force for such period as may be specified on the certificate, but may be reviewed by the Authority from time to time to determine that the aircraft conforms to the applicable airworthiness requirements.

(11) A certificate of airworthiness or a certificate of validation issued in respect of an aircraft shall cease to be in force—

- (a) if the aircraft, or such of its equipment as is necessary for the airworthiness of the aircraft, is overhauled, repaired or modified, or if any part of the aircraft or of such equipment is removed or is replaced, otherwise than in a manner and with material of a type approved by the Authority either generally or in relation to a class of aircraft or to the particular aircraft;
- (b) until the completion of any inspection of the aircraft or of any such equipment as aforesaid, being an inspection made for the purpose of ascertaining whether the aircraft remains airworthy and—
 - (i) classified as mandatory by the Authority; or
 - (ii) required by a maintenance program approved by the Authority in relation to that aircraft; or

- (iii) until the completion to the satisfaction of the Authority of any modification of the aircraft or of any such equipment as aforesaid, being a modification required by the Authority for the purpose of ensuring that the aircraft remains airworthy.

(12) Nothing in these Regulations shall oblige the Authority to accept an application for the issue of a certificate of airworthiness or validation or for the variation or renewal of any such certificate when the application is not supported by such reports from such approved persons as the Authority may specify, either generally or in a particular case or class of cases.

34. Compliance with Part 5 of Schedule in performing maintenance. A person shall not perform maintenance, preventative maintenance, or modifications on an aircraft except in accordance with Part 5 of the Schedule.

35. Compliance with airworthiness directives; and modifications and repairs.—

(1) Airworthiness directives, or equivalent, issued by the State of manufacture and mandatory service bulletins issued by an aircraft manufacturer shall be complied with.

(2) In the interest of safety, the Authority may order that an aircraft registered in Grenada or operated by a holder of an air operator certificate issued under these Regulations, aircraft engine, propeller or component shall be modified or undergo special inspections.

(3) An order pursuant to Regulation (2), shall constitute an airworthiness directive and compliance is mandatory.

(4) An owner or operator of an aircraft registered in Grenada and the holder of an air operator certificate issued pursuant to these Regulations shall ensure that such owner or operator receives all airworthiness directives and mandatory service bulletins that affect his or her aircraft and that are issued by the licensing authority in the State of Manufacture or the State of Design.

(5) On the issue of an applicable airworthiness directive or mandatory service bulletin the owner or operator of a Grenada registered aircraft and each holder of an air operator certificate issued under these Regulations shall take such action as shall be prescribed therein and shall record the details of all actions taken in the log book and other technical records of the aircraft.

(6) Mandatory or optional repairs or modifications shall be embodied only in accordance with approved data specified and in accordance with the instructions issued by the State of Manufacture, the State of Design, the type certificate holder or the manufacturer, as the case may be.

(7) All modifications or repairs carried out shall be subject to approval by the Authority in accordance with detailed drawings and other technical data adequate to define completely the proposed modification and using approved materials, parts and processes conforming to the manufacturer's specifications and in accordance with a technical assessment showing compliance with an approved design standard.

36. Continued airworthiness.—(1) A person shall not fly an aircraft registered in Grenada in respect of which a certificate of airworthiness is in force unless—

- (a) the aircraft, including in particular its engines and propellers, together with its equipment and radio station, is maintained in accordance with a maintenance program developed in accordance with the Regulations applicable to the type of operation;
- (b) the required inspections of the aircraft have been completed in accordance with the Regulations applicable to the type of operation; and
- (c) there is a flight manual or other approved document carried on, and available in, the aircraft, in such form as shall be approved by the Authority, for the use of the flight crew containing the limitations within which the aircraft is considered airworthy, together with such additional instructions and information as may be necessary to show compliance with the Regulations relating to performance and for the safe operation of the aircraft.

(2) The holder of an air operator certificate issued pursuant to these Regulations, or other operator of an aircraft, shall ensure that an aircraft registered in Grenada shall be maintained and periodically inspected in accordance with the requirements of the approved data and manuals issued by the manufacturer and in accordance with the maintenance program issued by the manufacturer and approved by the Authority and that all airworthiness directives and mandatory service bulletins are complied with, and shall ensure that an approved maintenance organization maintains its aircraft in an airworthy condition and in accordance with the approved maintenance program.

(3) The approved maintenance program referred to in sub-regulation (1) shall specify the occasions on which an inspection must be carried out for the purpose of issuing a release to service in accordance with this Regulation and the applicable Parts of the Schedule.

(4) A release to service may be issued for the purposes of these Regulations only by—

- (a) the holder of an aviation maintenance technician licence—
 - (i) granted under these Regulations and the applicable Parts and entitling the holder to issue that release to service; or
 - (ii) granted under the law of a State other than Grenada and rendered valid under these Regulations in accordance with the ratings, privileges and limitations of the licence;
- (b) a person whom the Authority has authorized to issue a release to service in a particular case, and in accordance with that authority;
- (c) an approved maintenance organization; or
- (d) subject to sub-regulation (5), a person approved by the Authority as being competent to issue such a release to service, and in accordance with that approval.

(5) In approving a maintenance programme, the Authority may direct that a release to service relating to that programme, or to any part thereof specified in its direction, may be issued only by the holder of such a licence as is so specified.

(6) A person referred to in sub-regulation (4) shall not issue a release to service unless the person has first verified that—

- (a) maintenance has been carried out on the aircraft in accordance with the maintenance programme approved for that aircraft;
- (b) inspections and modifications required by the Authority and the applicable requirements have been completed as certified in the relevant release to service;

- (c) defects entered in the aircraft logbook or technical log of the aircraft in accordance with the Regulations have been rectified or the rectification thereof has been deferred in accordance with procedures approved by the Authority; and
- (d) other releases to service have been issued in accordance with the Regulations;

and for this purpose the operator of the aircraft shall make available to that person such information as is necessary.

(7) A release to service shall be issued in duplicate and one copy of the most recently issued release to service shall be carried in the aircraft when the Regulations so require, and the other shall be kept by the operator elsewhere than in the aircraft.

(8) Subject to the provisions regarding retention of documents in this Regulation and its applicable Parts, each release to service shall be preserved by the operator of the aircraft for a period of two years after it has been issued.

37. Aircraft records.—(1) An aircraft logbook or technical log shall be kept in respect of an aircraft registered in Grenada or an aircraft operated by the holder of an air operator certificate issued pursuant to these Regulations.

(2) At the end of every flight by an aircraft operated by the holder of an air operator certificate issued pursuant to these Regulations, the pilot in command shall enter in the aircraft logbook or technical log, the information required under these Regulations applicable to the type of operation, and sign and date such entries.

(3) Upon the rectification of any defect which has been entered in a technical log in accordance with sub-regulation (2), a person issuing a release to service required by these Regulations in respect of that defect shall enter that information in the aircraft logbook or technical log in such a position as to be readily identifiable with the defect to which it relates.

(4) Subject to sub-regulation (5), the aircraft technical log referred to in this Regulation shall be carried in the aircraft as required by the applicable Regulation and Parts, and copies of the entries referred to in this Regulation shall be kept on the ground.

(5) In the case of an aeroplane of which the maximum total weight authorized does not exceed 2,730 kg, or a helicopter, if it is not reasonably practicable for the copy of the technical log to be kept on the ground the copy may be carried in the aeroplane or helicopter, as the case may be, in a container approved by the Authority for that purpose.

38. Inspection, overhaul, repair, replacement and modification.—(1) Except as provided in sub-regulation (2), an aircraft registered in Grenada, being an aircraft in respect of which a certificate of airworthiness issued or rendered valid pursuant to these Regulations is in force, shall not fly unless there is in force a release to service issued in accordance with this Regulation if the aircraft or any part of the aircraft or such of its equipment as is necessary for the airworthiness of the aircraft has been overhauled, repaired, replaced, modified, maintained, or has been inspected as required by the Regulations, as the case may be.

(2) The following items, namely—

- (a) equipment provided in compliance with Part 7 of the Schedule;
- (b) radio apparatus provided for use in an aircraft or in any survival craft carried in an aircraft, whether or not such apparatus is provided in compliance with these Regulations;

shall not be installed or placed on board for use in an aircraft registered in Grenada or operated by a holder of an air operator certificate issued under these Regulations after being overhauled, repaired, modified or inspected, unless there is in force in respect thereof at the time when it is installed or placed on board a release to service issued in accordance with this Regulation.

(3) A release to service shall—

- (a) certify that the aircraft or any part thereof or its equipment has been overhauled, repaired, replaced, modified or maintained, as the case may be, in a manner and with material of a type accepted or approved by the Authority either generally or in relation to a class of aircraft or the particular aircraft and shall identify the overhaul, repair, replacement, modification or maintenance to which the certificate relates and shall include particulars of the work done; or

- (b) certify in relation to any inspection required by the Authority that the aircraft or the part thereof or its equipment, as the case may be, has been inspected in accordance with the requirements of the Authority and that any consequential repair, replacement or modification has been carried out as aforesaid.

(4) Subject to the provisions of these Regulations regarding retention of certifying documents required under sub-regulation (3), a release to service shall be preserved by the operator of the aircraft to which it relates for the period of time for which he is required to preserve the log book relating to the same part of the aircraft or to the same equipment or apparatus as the case may be.

(5) In this Regulation, the expression “repair” includes, in relation to a compass, the adjustment and compensation thereof and the expression “repaired” shall be construed accordingly.

39. Aircraft, engine and propeller log books.—(1) In addition to any other log books required pursuant to these Regulations the following log books shall be kept in respect of an aircraft registered in Grenada—

- (a) an aircraft logbook;
- (b) a separate log book in respect of each engine fitted in the aircraft; and
- (c) a separate log book in respect of each variable pitch propeller fitted to the aircraft.

(2) The log books shall include the particulars respectively specified in Part 5 of the Schedule.

(3) An entry in the log book, other than an entry as is referred to in Part 5 of the Schedule shall be made as soon as practicable after the occurrence to which it relates.

(4) An entry in the log book, being such an entry as is referred to in Part 5 of the Schedule shall be made upon each occasion that any maintenance, overhaul, repair, replacement, modification or inspection is undertaken on the engine or propeller as the case may be.

(5) Entries in a log book may refer to other documents, which shall be clearly identified, and any other document so referred to shall be deemed, for the purposes of these Regulations, to be part of the log book.

(6) The operator of every aircraft in respect of which log books are required to be kept pursuant to this Regulation, shall keep the log books or cause them to be kept in accordance with the provisions of this Regulation.

(7) Subject to the provisions regarding retention of documents, every log book shall be preserved by the operator of an aircraft until a date two years after the aircraft, the engine or the variable pitch propeller, as the case may be, has been destroyed or has been permanently withdrawn from use.

40. Aircraft weight schedule.—(1) An aircraft in respect of which a certificate of airworthiness issued or rendered valid under these Regulations is in force shall be weighed, and the position of its centre of gravity determined, at such times and in such manner as the Authority may require or approve in the case of that aircraft.

(2) Upon the aircraft being weighed pursuant to sub-regulation (1), the operator of the aircraft shall prepare a weight schedule showing—

- (a) either the basic weight of the aircraft, that is to say, the weight of the aircraft empty together with the weight of unusable fuel and unusable oil in the aircraft and of such items of equipment as are indicated in the weight schedule, or such other weight as may be approved by the Authority in the case of that aircraft; and
- (b) either the position of the centre of gravity of the aircraft when the aircraft contains only the items included in the basic weight or such other position of the centre of gravity as may be approved by the Authority in the case of that aircraft.

(3) Subject to the provisions for retention of documents, the weight schedule shall be preserved by the operator of the aircraft until the expiration of a period of six months following the next occasion on which the aircraft is weighed for the purposes of this Regulation.

CHAPTER 6

APPROVED MAINTENANCE ORGANISATION

41. Application of Part 6 of the Schedule. Subject to the provisions of this Chapter, the provisions of Part 6 of the Schedule apply to the issuing of approvals to organizations for maintenance, preventative maintenance and modifications of aircraft and aeronautical products and the general operating rules for an approved maintenance organization.

42. Requirement for approved maintenance organisation certificate. A person shall not carry on the design, manufacture, distribution, maintenance, modification or repair of aircraft, aircraft components or aircraft materials, or any training activities associated therewith unless that person holds a valid approved maintenance organization certificate in accordance with these Regulations and Part 6 of the Schedule and the conditions subject to which the approved maintenance organization certificate was issued are complied with.

43. Application for approved maintenance organisation certificate. An organization intending to engage, in any stage of the design, manufacture, distribution, maintenance, modification or repair of aircraft, aircraft components or aircraft materials, or in training activities associated therewith, may in the form prescribed by the Authority apply to the Authority for an approved maintenance organization certificate in respect of those activities.

44. Grant of approved maintenance organisation certificate.—(1) In granting an approved maintenance organization certificate to an organization situated outside of Grenada, the Authority may take into account, in relation to such organization, the possession of a certificate of approval issued by the manufacturer of the aircraft, aircraft components or materials and by the licensing authority of the State in which the organization is located.

(2) The Authority may issue an approved maintenance organization certificate to an organization which it is satisfied is fit, having regard in particular to its previous conduct, or if there is evidence of unlawful conduct in aviation or previous breaches of aviation regulations and which complies with the requirements of Part 6 of the Schedule as to facilities, resources, tools and equipment, data and documentation, and systems of quality control, adequate for the activities applied for and shall have in place a maintenance manual approved by the Authority that lays out the processes, procedures and quality systems applicable to its activities.

45. Form and conditions of approved maintenance organisation certificate. An approved maintenance organization certificate shall be in such form, be subject to such conditions and limitations and contain such particulars as may be determined from time to time by the Authority.

46. Duration of approved maintenance organisation certificate. An approved maintenance organization certificate shall remain in force for such period as may be specified in the certificate, but may be reviewed by the Authority from time to time to determine that the holder remains fit and qualified in accordance with the requirements of Part 6 of the Schedule.

CHAPTER 7**AIRCRAFT INSTRUMENTS AND EQUIPMENT**

47. Application of Part 7 of the Schedule. Subject to the provisions of this Chapter, the provisions of Part 7 of the Schedule apply to the minimum instrument and equipment requirements for all aircraft in all operations.

48. Requirement for instruments and equipment.—(1) A person shall not fly or operate an aircraft in or over Grenada unless it is so equipped as to comply with the law of the State in which it is registered.

(2) In the case of an aircraft registered in Grenada or operated by the holder of an air operator certificate issued pursuant to these Regulations, the instruments and equipment required to be provided, in addition to any other equipment required by or under these Regulations, shall be that specified in Part 7 of the Schedule as are applicable in the circumstances and shall comply with the provisions of that Part and the equipment, shall be of a type approved by the Authority either generally or in relation to a class of aircraft or in relation to that aircraft and shall be installed in a manner so approved.

(3) In any particular case the Authority may direct that an aircraft registered in Grenada or operated by the holder of an air operator certificate issued pursuant to these Regulations shall carry such additional or special equipment or supplies as the Authority may specify for the purpose of facilitating the navigation of the aircraft, the carrying out of search and rescue operations, or the survival of the persons carried in the aircraft.

(4) The equipment carried in compliance with this Regulation shall be so installed or stowed and kept stowed, and so maintained and adjusted, as to be readily accessible and capable of being used by the person for whose use it is intended.

(5) The position of equipment provided for emergency use shall be indicated by clear markings in or on the aircraft and in particular in every aircraft operated by the holder of an air operator certificate issued pursuant to these Regulations.

(6) The holder of an air operator certificate shall provide for each passenger individually, or if the Authority so permits in writing, exhibited in a prominent position in every passenger compartment, a notice relevant to the aircraft in question containing the pictorial required by the provisions of Part 9 of the Schedule.

(7) All instruments and equipment installed or carried in an aircraft, whether or not in compliance with this Regulation, shall be so installed or stowed and so maintained and adjusted as not to be a source of danger in itself or to impair the airworthiness of the aircraft or the proper functioning of any equipment or services necessary for the safety of the aircraft.

(8) Without prejudice to sub-regulation (2), all navigational equipment when carried in an aircraft registered in Grenada (whether or not in compliance with these Regulations) shall be of a type approved by the Authority either generally or in relation to a class of aircraft or in relation to that aircraft and shall be installed in a manner so approved.

(9) An aircraft registered in Grenada, or operated by the holder of an air operator certificate issued pursuant to these Regulations, engaged on a flight for the purpose of commercial air transport shall carry navigational equipment in accordance with the requirements or air traffic services in the areas of operation as required by Part 7 of the Schedule, approved by the Authority under the requirements of the applicable Parts and used in accordance with any conditions subject to which that approval may have been given.

49. Radio equipment and requirements.—(1) A person shall not fly or operate an aircraft in or over Grenada unless it is so equipped with radio and radio navigation equipment as to comply with these Regulations or the law of the State in which the aircraft is registered and to enable communications to be made and the aircraft to be navigated, in accordance with the provisions of these Regulations.

(2) An aircraft shall be equipped with radio and radio navigation equipment in accordance with Part 7 of the Schedule.

(3) In any particular case the Authority may direct that an aircraft registered in Grenada or operated by the holder of an air operator certificate issued pursuant to these Regulations shall carry such additional or special radio or radio navigation equipment as the Authority may specify for the purpose of facilitating the navigation of the aircraft, the carrying out of search and rescue operations or the survival of the persons carried in the aircraft.

(4) Subject to such exceptions as may be prescribed, the radio and radio navigation equipment provided in compliance with this Regulation in an aircraft registered in Grenada or operated by the holder of an air operator certificate issued pursuant to these Regulations shall always be maintained in serviceable condition.

(5) All radio and radio navigation equipment installed in an aircraft registered in Grenada or operated by the holder of an air operator certificate issued pursuant to these Regulations or carried on such an aircraft for use in connection with the aircraft shall be of a type approved by the Authority in relation to the purpose for which it is to be used, and shall, be installed in a manner approved by the Authority and neither the equipment nor the manner in which it is installed shall be modified except with the approval of the Authority.

50. Minimum equipment requirements.—(1) A person shall not operate an aircraft pursuant to these Regulations unless the aircraft complies with the minimum instrument and equipment requirements of Part 7 of the Schedule, and in the case of a holder of an air operator certificate, the approved minimum equipment list, for the route, altitude, and type of operations being conducted.

(2) The Authority may, subject to such conditions as the Authority thinks fit, grant in respect of any aircraft or class of aircraft registered in Grenada an authorization to allow such aircraft to commence a flight in specified circumstances notwithstanding that any specified item of equipment, including radio apparatus, required pursuant to these Regulations to be carried in the circumstances of the intended flight is not carried or is not in a fit condition for use.

(3) An aircraft registered in Grenada or operated by the holder of an air operator certificate issued pursuant to these Regulations shall not commence a flight if any of the equipment, including radio apparatus, required by or under these Regulations to be carried in the circumstances of the intended flight is not carried or is not in a fit condition for use—

- (a) otherwise than under and in accordance with the terms of a special authorization which has been granted to the operator;
- (b) unless in the case of an aircraft to which the flight and operations manuals required thereby contain the particulars specified for such operations; and
- (c) in accordance with a minimum equipment list approved by the Authority, identifying the minimum equipment and condition for an aircraft to maintain the certificate of airworthiness in force and defining operational procedures necessary to deal with inoperative equipment and prescribing maintenance procedures necessary to maintain the required level of safety and secure any inoperative equipment.

CHAPTER 8
OPERATIONS

51. Application of Part 8 of the Schedule. Subject to the provisions of this Chapter, the provisions of Part 8 of the Schedule apply to the requirements for—

- (a) operations conducted by an airman licensed in Grenada while operating an aircraft registered in Grenada;
- (b) operations of an aircraft registered in a State other than Grenada by a holder of an air operator certificate issued in Grenada;
- (c) operations of an aircraft within Grenada by an airman or an air operator holding a certificate issued by a State other than Grenada;
- (d) for operations outside of Grenada by an airman or operator registered in Grenada unless compliance would result in a violation of the laws of the State in which the operation is conducted; and
- (e) any other matter specified in that Part.

52. Prohibition on operations.—(1) A person shall not operate an aircraft—

- (a) registered in Grenada;
- (b) in or over Grenada;
- (c) outside of Grenada, in the case of a person who is the holder of a valid air operator certificate issued pursuant to these Regulations;

unless the person complies with the requirements specified in sub-regulation (2).

(2) The requirements referred to in sub-regulation (1) are that—

- (a) the aircraft is in compliance with the aircraft requirements specified in these Regulations and Part 8 of the Schedule;
- (b) the flight crew comply with the flight crew requirements, duties and responsibilities specified in these Regulations including Part 8 and the Schedule;

- (c) the flight complies with the requirements specified in these Regulations including Part 8 of the Schedule for all passenger carrying operations;
- (d) the flight plans, flight planning and other preflight preparations comply with the requirements specified in these Regulations and Part 8 of the Schedule;
- (e) the flight is conducted in compliance with the flight rules specified in these Regulations including Part 8 of the Schedule unless, in the case of an aircraft being flown outside of Grenada, such compliance would result in non-compliance with a law or Regulation of the State over which it being flown.
- (f) the flight is conducted in compliance with the requirements specified in these Regulations for operations in controlled flight unless, in the case of an aircraft being flown outside of Grenada, such compliance would result in non-compliance with a law or Regulation of the State over which the aircraft is being flown.

(3) A person shall not recklessly or negligently cause or permit an aircraft to endanger any person or property.

(4) A person in an aircraft registered in Grenada or elsewhere, shall obey all lawful commands which the pilot in command of that aircraft may give for the purpose of securing the safety of the aircraft and of persons or property carried therein, or the safety, efficiency or regularity of air navigation.

(5) A person shall not while in an aircraft—

- (a) use any threatening, abusive or insulting words towards a member of the crew of the aircraft;
- (b) behave in a threatening, abusive, insulting or disorderly manner towards a member or the crew of the aircraft; or
- (c) intentionally interfere with the performance of the crew of an aircraft of his duties;

(6) A person shall not tamper with or remove any safety equipment on board an aircraft, unless so instructed by a crew member.

CHAPTER 9**AIR OPERATOR CERTIFICATION AND OPERATIONS**

53. Application of Part 9 of the Schedule. Subject to the provisions of this Chapter, the provisions of Part 9 of the Schedule apply to—

- (a) the carriage of passengers, cargo or mail for remuneration, hire or reward by persons whose principal place of business or permanent residence is located in Grenada;
- (b) the requirements for the original certification and continued validity of air operator certificates issued in Grenada; and
- (c) all commercial air transport operations by holders of air operator certificates for which Grenada is the State of the operator pursuant to the definitions provided in Annex 6 to the Chicago Convention.

54. Requirement for an air operator certificate.—(1) For the purposes of these Regulations a person shall be deemed to be engaged in providing commercial air transport to, from, in or over Grenada if that person or agent of that person—

- (a) has undertaken any form of advertising to carry passengers or property by aircraft to, from, in or over Grenada for remuneration or valuable consideration;
- (b) offers verbally or otherwise to carry passengers or property by aircraft to, from, in or over Grenada for remuneration or valuable consideration;
- (c) provides or advertises an arrangement for meals, lodging or travel, or any other “all-inclusive” method of pricing, for compensation, in which the travel by aircraft to, from, in or over Grenada is included at gratis or is compensated;
- (d) carries passengers or property by aircraft to, from, in or over Grenada for remuneration or valuable consideration.

(2) A person shall not engage in commercial air transport to, from, in or over Grenada, unless that person is a foreign air carrier in which case Chapter 10 applies or holds a valid air operator certificate issued in accordance with these Regulations and

Part 9 of the Schedule and the conditions subject to which the air operator certificate was issued are complied with and—

- (a) the initial certification requirements for commercial air transport operations pursuant to Part 9 of the Schedule are complete;
- (b) the operations are in conformity with the authorizations and limitations of the air operator certificate issued pursuant to the requirements of Part 9 of the Schedule;
- (c) the aircraft is specifically authorized by serial and registration number for the operations of the holder of the air operator certificate in accordance with Part 9 of the Schedule;
- (d) the operations are in conformity with the applicable requirements of the security program specified in Part 9 of the Schedule;
- (e) the aircraft is maintained in accordance with the applicable maintenance requirements of Parts 5, 6 and 9 of the Schedule;
- (f) the passenger-carrying requirements are complied with pursuant to Part 9 of the Schedule;
- (g) the assigned aviation personnel are qualified and current in conformity with the minimum qualification, training and checking of Part 9 of the Schedule;
- (h) the assigned aviation personnel are in conformity with the duty and flight time and minimum rest periods specified in Part 9 of the Schedule;
- (i) the flight is released in conformity with the flight release requirements specified in Part 9 of the Schedule;
- (j) the mass and balance and performance requirements specified in Part 9 of the Schedule are complied with.

55. Application for an air operator certificate. A person wishing to engage in commercial air transport to, from, in or over Grenada may in the form prescribed by the Authority apply to the Authority for an air operator certificate.

56. Grant of an air operator certificate.—(1) The Authority may grant to a person applying, an air operator certificate if the Authority is satisfied that person is fit, having regard in particular to his previous conduct, or if there is evidence of unlawful conduct in aviation or previous breaches of aviation regulations, is competent and capable, having regard to the person's previous conduct and experience, equipment, organization, staffing, maintenance and other arrangements, to secure the safe operation of aircraft of the types specified in the certificate on flights of the description and for the purposes so specified.

(2) In exercising the functions pursuant to sub-regulation (1), the Authority shall have regard to such of the following as are applicable—

- (a) the nationality of the applicant and whether the grant or refusal of the application is in the public interest;
- (b) any uneconomic duplication or uneconomic overlapping of air services that might result from the grant of the application;
- (c) the ability of the applicant to meet its financial obligations, actual or potential;
- (d) the likelihood of the applicant being able to provide air services which are satisfactory from the point of view of safety, regularity, frequency of operation, level of charges and general standard and efficiency and, in the case of an application for renewal or variation of a certificate, whether the applicant's existing air services are satisfactory;
- (e) whether or not the aircraft proposed to be used and the air services proposed to be provided are suited to the airports and airport facilities to be used;
- (f) any obligations imposed upon Grenada by international agreement or treaty;
- (g) any other matter which is, in the opinion of the Authority, relevant to the application.

(3) Without prejudice to the generality of sub-regulations (1) and (2)—

- (a) the applicant must possess a management organization capable of exercising operational control and supervision over any flight operated under the terms of its air operator certificate;

- (b) the applicant must have nominated an accountable manager, acceptable to the Authority, who has responsibility for ensuring that all maintenance relating to the operator's aircraft is carried out in accordance with the approved maintenance programme and to the standard required by the Authority; and
- (c) the applicant shall produce evidence that he has capacity to comply with the provisions of the Parts of the Schedule specifically applicable to a holder of an air operator certificate prior to issuance of the air operator certificate, including Parts 7, 8, 9 & 10 of the Schedule.

57. Conditions of an air operator certificate.—(1) An air operator certificate may be granted subject to such conditions as the Authority considers appropriate.

(2) An air operator certificate shall remain in force for the period specified in Part 9 of the Schedule, but may be reviewed by the Authority from time to time to determine that the holder is fit and qualified in accordance with the requirements of Part 9 of the Schedule.

(5) A holder of an air operator certificate shall maintain the required standards of operations established in these Regulations in the conduct of its commercial air transport operations.

58. Authority to maintain system of continued surveillance. The Authority shall establish a system of continued surveillance to ensure that the holder of an air operator certificate maintains the required standards of operations established in these Regulations.

59. Shipping and acceptance of dangerous goods.—(1) A person shall not on an aircraft, ship, cause to be shipped, accept for shipment or allow to be carried, any dangerous goods unless so authorised by the Authority.

(2) A person shipping articles or substances that may be dangerous goods shall declare such goods in the shipping papers and cause such articles to be so marked.

(3) A person shall not operate or cause to be operated an aircraft carrying dangerous goods unless such carriage is approved by the Authority.

(4) The approval of the Authority pursuant to this Regulation shall not have the effect of dispensing with any permission required under any other law in force in Grenada.

60. Munitions of war.—(1) An operator shall not carry or cause or allow to be carried on an aircraft, any munitions of war unless—

- (a) the munitions of war are carried with the written permission of the Authority and in accordance with any conditions relating thereto; and
- (b) the pilot in command of the aircraft is informed in writing by the operator before the flight commences of the type, weight or quantity and location of any such munitions of war on board or suspended beneath the aircraft and any conditions of the permission of the Authority.

(2) Notwithstanding sub-regulation (1) an operator shall not carry or cause or allow to be carried any weapon or munitions of war in any compartment or apparatus to which passengers have access.

(3) A person shall not carry or have in his or her possession or take or cause to be taken on board an aircraft, to suspend or cause to be suspended beneath an aircraft or to deliver or cause to be delivered for carriage thereon any weapon or munitions of war unless—

- (a) the weapon or munitions of war—
 - (i) is either part of the baggage of a passenger on the aircraft or consigned as cargo to be carried thereon;
 - (ii) is carried in a part of the aircraft, or in any apparatus attached to the aircraft inaccessible to passengers; or
 - (iii) in the case of a firearm, is unloaded; and
- (b) particulars of the weapon or munitions of war have been furnished by that passenger or by the consignor to the operator before the flight commences; and
- (c) the operator consents to the carriage of such weapon or munitions of war by the aircraft.

(4) Nothing in this Regulation shall apply to any weapon or munitions of war taken or carried on board an aircraft in Grenada registered in a State other than Grenada, if the weapon or munitions of war, as the case may be, may under the law of

the State in which the aircraft is registered be lawfully taken or carried on board for the purpose of ensuring the safety of the aircraft or of persons on board.

(5) For the purposes of this Regulation a “munitions of war” means any weapon, ammunition or article containing an explosive or any noxious liquid, gas or other thing which is designed or made for use in warfare or against persons, and includes parts, whether components or accessories, for such weapon, ammunition or article.

(6) The approval of the Authority pursuant to this Regulation shall not have the effect of dispensing with any permission required under any other law in force in Grenada.

CHAPTER 10

COMMERCIAL AIR TRANSPORT BY FOREIGN AIR OPERATORS WITHIN GRENADA

61. Application of Part 10 of the Schedule.—(1) Subject to sub-regulation (2), the provisions of Part 10 of the Schedule apply to the operation of any civil aircraft for the purpose of commercial air transportation operations by a person whose air operator certificate is issued or controlled by a licensing authority in a State other than Grenada (in these Regulations referred to as a “foreign air operator”).

(2) The provisions of Part 10 of the Schedule do not apply to aircraft when used by military, customs, and police services, which are not used for hire or reward.

62. Foreign air operator commercial air transport requirements. A foreign air operator shall not engage in commercial air transportation operations to, from, in or over Grenada contrary to the requirements of—

- (a) Part 10 of the Schedule;
- (b) the applicable paragraphs of Parts 7 and 8 of the Schedule; and
- (c) the standards contained in ICAO Annex 6, Parts I and III.

CHAPTER 11

AERIAL WORK

63. Application of Part 11 of the Schedule. Subject to the provisions of this Chapter, the provisions of Part 11 of the Schedule apply to aerial work within Grenada.

64. Requirement for certificate. A person shall not operate an aircraft in aerial work within Grenada, unless the person is the holder of a valid certificate for the purpose of that aerial work issued pursuant to these Regulations and to Part 11 of the Schedule and the conditions subject to which the certificate was issued are complied with.

65. Prohibition on dropping of articles. An aircraft shall not be used for the dropping of articles for the purposes of agriculture, horticulture or forestry or for training for the dropping of articles for any of such purposes, otherwise than in accordance with the terms of a certificate granted to the operator of the aircraft for the purposes of that aerial work pursuant to these Regulations.

66. Grant of certificate for aerial work.—(1) The Authority may grant a certificate for the purpose of aerial work to any person applying therefor if the Authority is satisfied that person is a fit person, having regard in particular to his previous conduct, or if there is evidence of unlawful conduct in aviation or previous breaches of aviation regulations, is a competent person to hold the certificate, having regard in particular to that person's previous conduct and experience, the equipment, organization, staffing and other arrangements for that purpose, to secure the safe operation of the aircraft specified in the certificate on flights for the purposes specified in the certificate.

(2) A certificate for the purpose of aerial work may be granted subject to such conditions as the Authority thinks fit including, conditions for ensuring that the aircraft and any article dropped from it do not endanger persons or property in the aircraft or elsewhere.

67. Duration of certificate for aerial work. A certificate for the purpose of aerial work shall remain in force for the period specified in the issued authorization, but may be reviewed by the Authority from time to time to determine whether the holder is fit and qualified in accordance with requirements of Part 11.

68. Aerial application manual.—(1) An applicant for and holder of a certificate for the purpose of aerial work shall make available to the Authority upon application and to every member of the operating staff upon the certificate being granted, an aerial application manual containing all such information and instructions as may be necessary to enable the operating staff to perform their duties.

(2) The holder of a certificate shall make such amendments of or additions to the manual as the Authority may require.

69. Towing, picking up and raising of persons and articles.—(1) Subject to the provisions of this Regulation and the requirements of Part 11 of the Schedule, an aircraft in flight over Grenada shall not, by means external to the aircraft, tow any article, or pick up or raise any person, animal or article, unless the certificate of airworthiness issued or rendered valid in respect of that aircraft under the law of the State in which the aircraft is registered, includes an express provision that it may be used for that purpose.

(2) Nothing in this Regulation shall—

- (a) prohibit the towing in a reasonable manner by an aircraft in flight of any radio aerial, any instrument which is being used for experimental purposes, or any signal apparatus required or permitted pursuant to these Regulations to be towed or displayed by an aircraft in flight;
- (b) prohibit the picking up or raising of any person, animal or article in an emergency or for the purpose of saving life.

70. Dropping of animals and articles.—(1) Subject to sub-regulation (3), articles and animals, whether or not attached to a parachute, shall not be dropped, or permitted to drop, from an aircraft in flight so as to endanger persons or property.

(2) Subject to sub-regulation (3), except in accordance with the terms of a certificate for the purpose of aerial work and the requirements of Part 11 of the Schedule, articles and animals, whether or not attached to a parachute, shall not be dropped, or permitted to drop, to the surface from an aircraft flying over Grenada.

(3) This Regulation shall not apply to the dropping of articles by, or with the authority of, the pilot in command of the aircraft in any of the following circumstances—

- (a) the dropping of articles for the purpose of saving life;
- (b) the jettisoning, in case of emergency, of fuel or other articles in the aircraft;
- (c) the dropping of articles solely for the purpose of navigating the aircraft in accordance with ordinary practice or with the provisions of these Regulations;
- (d) the dropping at an aerodrome of tow ropes, banners, or similar articles towed by the aircraft;

- (e) the dropping of articles for the purposes of public health or as a measure against weather conditions, surface icing or oil pollution, or for training for the dropping of articles for any such purposes, if the articles are dropped with the permission of the Authority and in accordance with any conditions subject to which that permission may have been given;
- (f) the dropping of wind drift indicators for the purpose of enabling parachute descents to be made if the wind drift indicators are dropped with the permission of the Authority and in accordance with any conditions subject to which that permission may have been given.

(4) For the purposes of this Regulation dropping includes projecting and lowering.

(5) Nothing in this Regulation shall prohibit the lowering of any article or animal from a helicopter to the surface, if the certificate of airworthiness issued or rendered valid in respect of the helicopter under the law of the State in which it is registered includes an express provision that it may be used for that purpose.

71. Dropping of persons.—(1) A person shall not drop, be dropped or permitted to drop to the surface or jump from an aircraft flying over Grenada except under and in accordance with the terms of an authorization granted by the Authority for that purpose.

(2) For the purposes of this Regulation dropping includes projecting and lowering.

(3) Notwithstanding the grant of an authorization pursuant to sub-regulation (1), a person shall not drop, be dropped or be permitted to drop from an aircraft in flight so as to endanger persons or property.

(4) An aircraft shall not be used for the purpose of dropping persons unless the certificate of airworthiness issued or rendered valid in respect of that aircraft under the law of the State in which the aircraft is registered includes an express provision that it may be used for that purpose and the aircraft is operated in accordance with the authorization granted by the Authority for that purpose.

(5) Every applicant for and every holder of an authorization pursuant to sub-regulation (1) shall make available to the Authority if requested to do so a parachuting manual and shall make such amendments or additions to such manual as the Authority may require.

(6) The holder of an authorization shall make available to every employee or person who is or may engage in parachuting activities conducted by that holder, the manual which shall contain all such information and instructions as may be necessary to enable such employees or persons to perform their duties.

(7) Without prejudice to any other provision of these Regulations the Authority may, for the purpose of this Regulation, accept reports furnished to the Authority by a person whom the Authority may approve, subject to such conditions as the Authority thinks fit, as qualified to furnish such reports.

(8) Nothing in this Regulation shall apply to the descent of persons by parachute from an aircraft in an emergency.

(9) Nothing in this Regulation shall prohibit the lowering of any person in an emergency or for the purpose of saving life.

(10) Nothing in this Regulation shall prohibit the lowering of any person from a helicopter to the surface in Grenada, if the certificate of airworthiness in respect of the helicopter under the law of the State in which it is registered includes an express provision that it may be used for that purpose.

72. Aerial photography and survey from aircraft.—(1) A person shall not operate an aircraft over Grenada for the purpose of aerial photography, aerial survey or for the purpose of any other form of aerial work except with an authorization of the Authority granted for that purpose to the operator or the charterer of the aircraft and in accordance with any conditions to which such authorization may be subject.

(2) Any breach by a person to whom an authorization has been granted pursuant to this Regulation of any condition to which that authorization is subject shall constitute a contravention of this Regulation.

73. Exhibitions of flying aircraft races or contests.—(1) A person shall not act as the organizer (in this Regulation referred to as ‘the exhibition organizer’) of an exhibition of flying, an aircraft race or contest at an organized event (in this Regulation referred to as an ‘organized event’) which event the exhibition organizer reasonably believes is likely to be attended by more than two hundred persons and which event consists wholly or partly of an exhibition of flying, aircraft race or contest unless at the time at which such an organized event commences the exhibition organizer has obtained the permission in writing of the Authority for that organized event and complies with any conditions therein specified and the requirements of Part 8 of the Schedule.

(2) The pilot in command of an aircraft intending to participate in an organized event for which a permission is required by virtue of sub-regulation (1) shall take all reasonable steps to satisfy himself or herself before he or she participates that—

- (a) the exhibition organizer has been granted such permission;
- (b) the flight can comply with any relevant conditions subject to which that permission is granted; and
- (c) the pilot has been granted an authorization appropriate to the intended flight.

(3) The pilot in command of an aircraft participating in an organized event for which permission required by sub-regulation (1) has been granted shall comply with any conditions subject to which that permission is granted.

(4) A person shall not act as pilot of an aircraft participating in an organized event for which permission is required pursuant to sub-regulation (1) unless the person holds an authorization appropriate to the intended flight granted to him or her by the Authority and he or she complies with any conditions thereof.

(5) The exhibition organizer shall not permit any person to act as pilot of an aircraft which participates in an organized event for which permission is required pursuant to sub-regulation (1) unless such person holds a display authorization appropriate to the intended flight granted by the Authority.

(6) The Authority shall grant the permission required pursuant to sub-regulation (1) to any person applying therefor if the Authority is satisfied that that person is a fit and competent person, having regard in particular to that person's previous conduct and experience, the organization, staffing and other arrangements for the activity, to safely organise the proposed exhibition of flying.

(7) The permission pursuant to sub-regulation (1) may be granted subject to such conditions, which may include conditions in respect of military aircraft, as the Authority thinks fit and shall, if there is continued compliance, remain in force for the period specified in the permission.

(8) The Authority shall, for the purposes of this Regulation, either unconditionally or subject to such conditions as the Authority thinks fit—

- (a) grant a display authorization authorizing the holder to act as pilot of an aircraft taking part in an exhibition of flying in respect of which a permission is required pursuant to sub-regulation (1) upon the Authority being satisfied that the applicant is a fit person to hold the authorization and is qualified by reason of his or her knowledge, experience, competence, skill, physical and mental fitness to fly in accordance therewith and for that purpose the applicant shall furnish such evidence and undergo such examinations and tests as the Authority may require of him or her; and
- (b) authorize a person to conduct such examinations or tests as the Authority may specify.

(9) A display authorization granted in accordance with this Regulation shall, if the Authority is satisfied that the person to whom it was granted remains in compliance with the authorisation, remain in force for the period indicated in the display authorization.

(10) An exhibition organizer shall not permit any military aircraft to participate in an exhibition of flying for which permission is required pursuant to sub-regulation (1) unless the organiser complies with the conditions specified in respect of military aircraft subject to which such permission is granted.

CHAPTER 12

74. Reserved

75. Reserved

CHAPTER 13

FLIGHT SAFETY DIVISION

76. Establishment and functions of a Flight Safety Division. The Authority shall establish a Flight Safety Division comprised of technically qualified aviation safety inspectors to conduct the necessary technical evaluations, inspections and investigations required to meet Grenada's ICAO responsibilities for safety oversight for—

- (a) registration of aircraft;
- (b) airworthiness of aircraft;

- (c) personnel licensing;
- (d) operations of aircraft;
- (e) aerial work;
- (f) commercial air transport; and
- (g) carriage of dangerous goods.

77. Delegation of powers to Director. The Authority shall appoint a person to be the Director of the Flight Safety Division and the Director of the Flight Safety Division shall have the delegated authority to issue any licence, authorization, rating, certificate, approval or other written document in support of the functions assigned to it and to perform such acts and to conduct such investigations on behalf of the Director General pursuant to these Regulations.

78. Issue of circulars, notices etc. The Flight Safety Division may by means of aviation information circulars, advisory circulars, aeronautical information publications, notices to airmen, notices of non compliance, and other documents develop, issue and revise instructions, directions, rules and procedures or prescribe requirements to give effect to the provisions of the Chicago Convention and the Annexes thereto and the Standards and Recommended Practices of ICAO as well as the provisions of the Act and of these Regulations, relating to the operation, use, possession, maintenance or operations of aircraft flying in or over Grenada or of aircraft registered in Grenada or of aircraft operated by the holder of an air operator certificate issued pursuant to these Regulations.

79. Authorizing credential.—(1) The aviation safety inspectors assigned to the Flight Safety Division shall have the status of authorized persons pursuant to these Regulations and shall be issued a unique credential for the performance of their functions.

(2) A person shall not possess or use these aviation safety inspector credentials unless—

- (a) that person is employed by the Eastern Caribbean Civil Aviation Authority to perform the functions of the Flight Safety Division; and
- (b) the person is using the credential in the performance of a specific function of the Flight Safety Division.

80. Powers and duties of Aviation Safety Inspector persons.—(1) An Aviation Safety Inspector, may carry out audits or surveillance or require any person to produce documents or any other article for the purpose of investigating or enforcing compliance with these Regulations.

(2) A person who is required in terms of sub-regulation (1) to produce a document or other article—

- (a) shall not make a statement that is false in any material particular;
- (b) shall produce the document or other article which is in his or her possession or control or to which he or she has access.

(3) An Aviation Safety Inspector may—

- (a) enter and inspect—
 - (i) any aerodrome, hangar or other place at which an aircraft is located or stored;
 - (ii) an aircraft; or
 - (iii) any organization performing tasks and services related to aviation safety; and
- (b) to inspect aircraft equipment, components, materials, facilities, personnel or crewmembers;

for the purpose of ensuring that the provisions of the Act and these Regulations have been, or are being complied with.

(4) Where it appears to an Aviation Safety Inspector that an aircraft is intended or likely to be flown in such circumstances that the flight would involve an offence against these Regulations or be a cause of danger to persons in the aircraft or to persons or property on the ground, the person may detain the aircraft or take such other action necessary for the purpose of inspecting the aircraft or causing the circumstances of the flight to be investigated.

(5) Where an aircraft has been detained pursuant to sub-regulation (4) it shall not be operated until the Authority, being satisfied that these Regulations are being complied with, approves or until such modifications or repairs have been effected as the Authority considers necessary to render the aircraft fit for flight.

(6) For the purpose of exercising his or her responsibilities under these Regulations any Aviation Safety Inspector shall be issued with and carry at all times a means of identification specifying the unique credential referred to in Regulation 79(1);

(7) A person shall not intentionally obstruct or impede any Aviation Safety Inspector acting in the exercise of his powers or the performance of his or her duties pursuant to these Regulations.

81. Access and inspection.—(1) The Authority may cause such evaluations, inspections, investigations, tests, experiments, or flight trials to be made as it considers necessary for the purposes of these Regulations.

(2) A person authorized in writing by the Authority to conduct inspections, investigations and observations referred to in sub-regulation (1) may, at any reasonable time, with free and uninterrupted access, inspect any aircraft, personnel, facilities, and records in operations subject to these Regulations.

(3) The Director General or any person authorized by the Director General in writing shall have the right of access at all reasonable times—

- (a) to any aerodrome for the purpose of inspecting the aerodrome or any aircraft on the aerodrome or any document which the Director General may, in terms of these Regulations, demand, or for the purpose of detaining the aircraft in terms of these Regulations;
- (b) to any place, whether public or private, where an aircraft is located for the purpose of inspecting the aircraft or any document which it or such person has power, in terms of these Regulations, to demand or for the purpose of detaining the aircraft in terms of these Regulations;
- (c) to any aircraft, for the purpose of checking, whilst in flight, the performance of the aircraft or any of its equipment and the efficiency of flight crew members in the performance of their duties:

Provided that the safety of commercial operations of the aircraft shall not be unduly prejudiced by the exercise of the right of access in terms of this Regulation.

82. Power to inspect and copy.—(1) An authorized person may inspect and copy any document issued pursuant to these Regulations.

(2) A person shall not obstruct, impede or otherwise interfere with the copying of the documents referred to in sub-regulation (1) by an authorized person.

83. Production of documents and records.—(1) A person involved or participating in an aviation activity shall, within a reasonable time after being requested to do so by an authorized person, cause to be produced to that person the documents which he or she is required to have, carry, complete or preserve during the course of his or her activities including airmen licences and medical certificates, operational and maintenance manuals and records as required by these Regulations and the Parts of the Schedule applicable to that activity.

(2) The holder of a document under these Regulations shall, within a reasonable time after being requested to do so by an authorized person, cause the document to be produced to that person.

(3) The requirements of sub-regulation (2) shall be deemed to have been complied with, except in relation to documents required by these Regulations to be carried in the aircraft or kept at an aerodrome, if the document requested is produced to the Flight Safety Division within five days after the request has been made.

84. Power to prevent aircraft flying.—(1) If it appears to the Authority or an authorized person that any aircraft is intended or likely to be flown—

- (a) in such circumstances that the flight would be a cause of danger to any person or property whether or not in the aircraft and in contravention of any provision of these Regulations or any directions issued pursuant to these Regulations; or
- (b) while in a condition unfit for the flight; or
- (c) in such circumstances that any provision under these Regulations or provision relating to the licensing of air transport in Grenada would be contravened in relation to the flight;

the Authority or the authorized person may direct the operator or the pilot in command of the aircraft that he or she is not to permit the aircraft to make the particular flight or any other flight of such description as may be specified in the direction, until the direction has been revoked by the Authority or by an authorized person, and the Authority or the authorized person may take such steps as are necessary to detain the aircraft.

(2) For the purposes of sub-regulation (1), the Authority or any authorized person may enter upon an aerodrome and inspect any aircraft.

CHAPTER 14

REPORTS, DOCUMENTS AND RECORDS

85. Mandatory reporting.—(1) The operator or pilot in command of an aircraft or a person who carries on the business of inspecting, manufacturing, repairing or overhauling such an aircraft, or any equipment or part thereof; or who signs a release to service, or release to service in respect of such an aircraft, part or equipment shall make the reports to the Authority—

- (a) which are specified in these Regulations including the applicable Parts of the Schedule; or
- (b) upon the Authority’s request for such information as specified in a notice in writing served upon the person, where the information is in this person’s possession or control and relates to a reportable occurrence which has been reported by the person or by another person to the Authority in accordance with this Regulation.

(2) The reports pursuant to sub-regulation (1), shall be made within such time, by such means, and shall contain such information as is so specified by the Authority and it shall be presented in such form as the Authority may require.

(3) In this Regulation “reportable occurrence” means the following—

- (a) an incident relating to the aircraft or any defect in or malfunctioning of the aircraft or any part or equipment of the aircraft, being an incident, malfunctioning or defect endangering, or which, if not corrected, would endanger, the aircraft, its occupants, or any other person;
- (b) a defect in or malfunctioning of any facility on the ground used or intended to be used for purposes of or in connection with the operation of an aircraft, being a defect or malfunctioning endangering, or which, if not corrected, would endanger, an aircraft or its occupants.

(4) Subject to sub-regulation (1)(a), nothing in this Regulation shall require a person to report any occurrence which the person has reason to believe has been or will be reported by another person to the Authority in accordance with this Regulation.

(5) A person shall not make any report under this Regulation which he or she knows or has reason to believe is false in any material particular.

86. Documents to be carried. The operator or pilot in command of an aircraft shall not fly in or over Grenada unless the aircraft carries the documents which it is required to carry under these Regulations or the law of the State in which it is registered:

Provided that in the case of an aircraft registered in Grenada, if the flight is intended to begin and end at the same aerodrome and does not include passage over the territory of any State other than Grenada, the documents may be kept at that aerodrome instead of being carried in the aircraft.

87. Preservation of documents.—(1) A person required pursuant to these Regulations and the applicable Parts of the Schedule to preserve any document or record shall continue to preserve that document or record, and in the event of his or her death the duty to preserve the document or record shall fall upon his or her designated representative.

(2) A person assigned under these Regulations and the applicable Parts to preserve any document or record shall continue to preserve that document or record until such time as the responsibility may be transferred to another assigned person.

88. Offences relating to documents and records.—(1) A person shall not with intent to deceive—

- (a) use any certificate, licence, rating, authorization, approval, permission, exemption or other document issued or required by or under these Regulations which has been forged, altered, revoked or suspended, or to which he or she is not entitled; or
- (b) lend any certificate, licence, rating, authorization, approval, permission, exemption or other document issued or having effect or required by or under these Regulations to, or allow it to be used by, any other person; or
- (c) make any false representation for the purpose of procuring for himself or any other person the grant, issue, renewal or variation of any such certificate, licence, rating, authorization, approval, permission or exemption or other document.

(2) A person shall not intentionally—

- (a) damage, alter or render illegible any record; or

- (b) knowingly make, or procure or assist in the making of, any false entry in or material omission from a record; or
- (c) destroy a record during the period for which it is required under these Regulations to be preserved.

(3) All entries made in hand writing in a record shall be made in ink or indelible pencil.

(4) A person shall not issue or purport to issue any certificate for the purposes of these Regulations or any directions made thereunder unless the person is authorized to do so under these Regulations and has satisfied himself that all statements in the certificate are correct.

CHAPTER 15

ENFORCEMENT OF REGULATIONS

89. Provisional action by Authority. Where any of these Regulations are contravened the Director General may, if the Director General thinks fit, provisionally and pending inquiry take action to enforce the Regulations that have been contravened, including—

- (a) the re-examination of the original certification basis or competence;
- (b) the imposition of monetary penalties for the contravention of Regulations made under section 49 of the Act;
- (c) the variation, suspension or revocation of a document; and
- (d) the prevention of flying.

90. Variation, suspension cancellation and refusal to renew documents.—(1) Subject to sub-regulation (5), the Director General may, on sufficient grounds being shown to his satisfaction after due inquiry, vary, suspend or revoke a document.

(2) Save as provided by paragraph (3), the Director General may exercise his or her powers under sub-regulation (1) only after notifying the holder of a document of the intention to do so and after due consideration of the case.

(3) The holder or any person having the possession or custody of any document, which has been varied, suspended or revoked pursuant to these Regulations shall surrender it to the Director General within the time specified by the Director General.

(4) The breach of any condition subject to which any document was issued, other than a licence issued in respect of an aerodrome, shall, in the absence of provision to the contrary in the document, render the document invalid during the continuance of the breach.

(5) Notwithstanding Regulation 89 the Director General may vary a document if he is satisfied that it is in the interests of aviation safety to do so, whether or not there has been a contravention of these Regulations.

(6) In particular, and without prejudice to the generality of the foregoing, the Authority may exercise its powers pursuant to sub-regulation (1) if it appears to the Authority that the person to whom the document was granted has committed a breach of any condition to which it is subject.

91. Breaches, offences and penalties.—(1) If any provision of these Regulations or any directions issued pursuant to these Regulations is contravened in relation to an aircraft, the operator of that aircraft and the pilot in command thereof shall without prejudice to the liability of any other person under these Regulations for that contravention be deemed for the purposes of the following provisions of this Regulation to have contravened that provision unless he or she proves that the contravention occurred without his consent or connivance and that he or she exercised all due diligence to prevent that contravention.

(2) If it is proved that an act or omission of any person which would otherwise have been a contravention of these Regulations was due to any cause not avoidable by the exercise of reasonable care by that person the act or omission shall be deemed not to be a contravention by that person of that provision.

(3) Where a person is charged with contravening any provision of these Regulations by reason of that person having been a member of the flight crew of an aircraft on a flight for the purpose of commercial air transport or aerial work the flight shall be treated, without prejudice to the liability of any other person under these Regulations, as not having been for that purpose if he or she proves that he or she did not know or suspect that the flight was for that purpose.

(4) A person who contravenes any of these Regulations commits an offence and is liable on summary conviction to imprisonment for six months or a fine of \$5,000 or both.

92. Reviews and Appeals. A person affected by the determination of either the Director General or a person appointed by the Minister to conduct a review shall have the right of appeal in accordance with section 39 of the Act.

CHAPTER 16**GENERAL**

93. Fees.—(1) The Director General shall by notice published in the *Gazette* prescribe the fees for the issue, validation, renewal, extension or variation of any document, including the issue of a copy thereof, or the undergoing of any examination, test, inspection or investigation or the grant of any permission or approval, required by, or for the purpose of these Regulations.

(2) Where an application is made in connection with which a fee is chargeable pursuant to these Regulations, the applicant shall be required before the application is considered to pay the whole fee or fees so chargeable.

(3) If, after a fee has been paid, the application is withdrawn by the applicant or otherwise ceases to have effect or is refused by the Authority, the Authority may, subject to the following sub-regulations refund the amount of the fee or part of the fee.

(4) Subject to sub-regulation (5), where the fee paid is wholly or to any extent attributable to a fee chargeable in respect of an investigation which would have been carried out in connection with the application if it had not been so withdrawn or ceased to have effect or been refused but which has not been carried out by reason only of such withdrawal, cesser or refusal, the Authority may refund the amount of the fee so attributable or, in a case where an investigation has been partially completed, so much of that amount as in the opinion of the Authority is reasonable having regard to the stage to which the investigation has progressed at the time of such withdrawal, cesser or refusal.

(5) If in any case the amount paid by the applicant is not sufficient to cover the fee, as ultimately assessed, chargeable in respect of any investigation in so far as the same has been carried out at the time when the application is withdrawn by the applicant or otherwise ceases to have effect or is refused by the Director General, the amount representing the balance of such fee shall be payable by the applicant.

94. Validation of documents. The Authority shall be able to make reasonable requirements regarding the validation of documents issued by another contracting State as provided for in Part 1 of the Schedule.

95. Extra-territorial effect of regulations. Except where the context otherwise requires, the provisions of these Regulations shall be applied in accordance with section 3 of the Act.

96. Application of regulations to aircraft not registered in Grenada. The Director General may by directions in writing addressed to the owner or operator of an aircraft, being an aircraft not registered in Grenada, but for the time being under the management of a person who, or of persons each of whom, is qualified to hold a legal or beneficial interest by way of ownership in an aircraft registered in Grenada, ensure compliance with these Regulations.

97. Waiver. The Director General may issue a waiver from any of the requirements of these Regulations in accordance with section 49 of the Act.

98. Deviation. The Director General may issue a deviation from any of the requirements of these Regulations in accordance with section 49 of the Act.

99. Exemption. The Director General may issue an exemption from any of the requirements of these Regulations in accordance with section 49 of the Act.

100. Power to prohibit or restrict flying.—(1) Where the Authority deems it necessary in the public interest to prohibit flying by reason of—

- (a) the intended gathering or movement of a large number of persons;
- (b) the intended holding of an aircraft race or contest or of an exhibition in flying; or
- (c) national defense or any other reason affecting the public interest;
- (d) the Authority may by notice in writing published in the *Gazette* issue directions prohibiting, restricting or imposing conditions on flight by any aircraft, whether or not registered in Grenada, in any airspace over Grenada, or by aircraft registered in Grenada, in any other airspace, being airspace in respect of which the Government of Grenada has in pursuance of international arrangements undertaken to provide navigation services for aircraft.

(2) Directions issued pursuant to this Regulation may apply either generally or in relation to any class of aircraft.

101. Non-application to ultra small aircraft. The provisions of these Regulations shall not apply to or in relation to—

- (a) a balloon which at any stage of its flight is not more than 2 meters in any linear dimension including any basket or other equipment attached to the balloon;

- (b) a kite weighing not more than 2 kg;
- (c) an aircraft weighing not more than 7 kg without its fuel; or
- (d) a parascending parachute.

102. Transitional.—(1) Subject to the following sub-regulations, any person who on the date these Regulations come into operation holds a valid document issued under the law in force on that date for the registration, operation or maintenance of an aircraft shall be deemed to hold a document in accordance with these Regulations for a period not exceeding twelve months from the date these Regulations come into operation, unless the document expires prior to the end of that period.

(2) Within three months from the date these Regulations come into operation or before a document expires, every holder of a document referred to in sub-regulation (1) shall supply to the Director General full details of his or her document and apply to the Director General for a new document pursuant to these Regulations.

(3) Where the Director General, having reviewed a document supplied pursuant to sub-regulation (2), is satisfied that the document was validly issued under the law in force in Grenada before the commencement of these Regulations, the Director General shall, within six months of the date of such notification issue a document to that person for at least the unexpired term of the original document but otherwise subject to conditions determined by the Director General.

(4) If the Director General is not satisfied, for any reason, that a document notified to it pursuant to sub-regulation (2) was validly issued or that the holder of the document is still qualified to hold the document, it shall so notify the person concerned and the document in question shall expire on the date of notification.

103. Repeal of Civil Aviation Regulations.—(1) The Civil Aviation (Air Navigation) Regulations, Chapter 54A, other than the provisions set out in sub-regulation (2), are repealed.

(2) The following are the provisions referred to in sub-regulation (1)—

- (a) Regulation 31: Aircraft not registered in the Territory;
- (b) Regulation 53: Stowaways;

- (c) Regulation 73: Aerodromes: public transport of passengers and instruction in flying;
- (d) Regulation 74: Use of Government aerodromes;
- (e) Regulation 75: Licensing of aerodromes;
- (f) Regulation 76: Radio equipment at aerodromes;
- (g) Regulation 77: Records at aerodromes;
- (h) Regulation 78: Charges at aerodromes licensed for public use;
- (i) Regulation 79: Use of aerodromes by aircraft of Contracting States;
- (j) Regulation 80: Noise and vibration caused by aircraft on aerodromes;
- (k) Regulation 81: Aeronautical lights;
- (l) Regulation 82: Dangerous lights;
- (m) Regulation 83: Customs airports;
- (n) Regulation 84: Aviation fuel at aerodromes;
- (o) Regulation 85: Restriction with respect to carriage for hire or reward in aircraft registered outside the Territory;
- (p) Regulation 86: Restriction with respect to aerial photography and survey from aircraft registered outside the Territory;
- (q) Regulation 87: Flights over any foreign country;
- (r) Schedule 13 Rules of the Air and Air Traffic Control.

(3) The Civil Aviation (Flight Safety) Regulations, 2020, SRO No. 3 of 2020 are repealed.

(4) The Civil Aviation (Flight Safety) Directives, 2020, SRO No. 7 of 2020 are repealed.

SCHEDULE
(Parts 1-11)

PART 1
GENERAL POLICIES, PROCEDURES, AND DEFINITIONS

1.1 RULES OF CONSTRUCTION

1.1.1.1 APPLICABILITY

- (a) These regulations shall apply to all persons operating or maintaining the following—
 - (1) an aircraft registered in Grenada;
 - (2) an aircraft registered in another Contracting State that is operated by a person licensed by Grenada, and must be maintained in accordance with the standards of the aircraft State of Registry, wherever that maintenance is performed;
 - (3) an aircraft of other Contracting States operating in Grenada.
- (b) Those regulations addressing persons certificated under any Part of these regulations apply also to any person who engages in an operation governed by any Part of these regulations without the appropriate certificate, operations specification, or similar document required as part of the certification.
- (c) The regulations addressing general matters establish minimum standards for all aircraft operated in Grenada. Specific standards applicable to the holder of a certificate shall apply if they conflict with a more general regulation.
- (d) All foreign air operators who conduct commercial air transport into, from or within Grenada, shall be governed by the provisions of the Operations Specification issued by the Authority, and by those provisions in Parts 7, 8, and 10 that specifically address commercial air transport. Regulations that address AOC holders apply only to operators certificated by Grenada.

1.1.1.2 ORGANISATION OF REGULATIONS

- (a) These regulations are subdivided into five hierarchical categories—
 - (1) Part refers to the primary subject area.

- (2) Subpart refers to any subdivision of a Part.
 - (3) Section refers to any subdivision of a Subpart.
 - (4) Subsection refers to the title of a regulation and can be a subdivision of a Subpart or Section,
 - (5) Paragraph refers to the text describing the regulations. All paragraphs are outlined alphanumerically in the following hierarchical order: (a), (1), (i), (A).
- (b) Definitions used throughout these regulations are organised as follows—
- (1) all Definitions appear in Part 1, Subsection 1.1.1.3;
 - (2) definitions applicable only to one Part also appear at the beginning of that Part; and
 - (3) definitions contained in the Civil Aviation Act of Grenada are presented therein, and not in these regulations
- (c) Acronyms used within each Part are defined at the beginning of those Parts and if a definition is supplied, a note will indicate the Part where the definition is located.
- (d) Notes appear in Subsections to provide exceptions, explanations and examples to individual requirements.
- (e) Subsections may refer to Implementing Standards, which provide additional detailed requirements that support the purpose of the subsection, and where specifically referenced by the subsection, gain the legal force and effect of the referring subsection. The rules of construction, Subsection 1.1.1.1, apply to Implementing Standards.

1.1.1.3 DEFINITIONS

- (a) For the purpose of these regulations, the following definitions shall apply—
- (1) “Accelerate-stop distance available (ASDA)” means the length of the take-off run available plus the length of the stopway, if provided.

- (2) “Acceptable” means a rule of construction in this part that means the Authority has reviewed the method, procedure, or policy and has neither objected to nor approved its proposed use or implementation.
- (3) “Acceptable means of compliance” means a method of accomplishing a specific task where the method has been approved by the Authority.
- (4) “Acceptance checklist” as it relates to dangerous goods means a document used to assist in carrying out a check on the external appearance of packages of dangerous goods and their associated documents to determine that all appropriate requirements have been met.
- (5) “Acclimatised” means when a crewmember has spent 3 consecutive local nights on the ground within a time zone, which is 2 hours wide and is able to take uninterrupted nights sleep. The crewmember will remain acclimatised thereafter until a duty period finishes at a place where local time differs by more than 2 hours from that at the point of departure.
- (6) “Accountable manager” means—
 - (i) the person who has corporate authority for ensuring that all prescribed actions are performed to the standard required by the Authority; and
 - (ii) any other person within the organisation who the accountable manager, upon approval by the Authority, may delegate in writing all or part of his responsibility.
- (7) “Accountable manager (Maintenance)” means the manager who has corporate authority for ensuring that all maintenance, preventive maintenance, and modification required by the aircraft owner/operator can be financed and carried out to the standard required by the Authority. The accountable manager may delegate to another person in the organisation, in writing, to become the accountable manager, when authorised by the Authority.
- (8) “Accountable manager (training)” means the manager who has corporate authority for ensuring that all training can be financed and carried out to the standard required by the

Authority. The accountable manager may delegate, in writing, to another person in the organisation to become the accountable manager when authorised by the Authority.

- (9) “Accredited medical conclusion” means the conclusion reached by one or more medical experts acceptable to the Authority for the purposes of the case concerned, in consultation with other experts as necessary.
- (10) “Accredited representative” as it relates to an aircraft accident, means a person designated by a State, on the basis of his or her qualifications, for the purpose of participating in an investigation conducted by another party.
- (11) “Acrobatic flight” means manoeuvres intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.
- (12) “Acts of unlawful interference” means acts or attempted acts such as to jeopardise the safety of civil aviation and air transport, including—
 - (i) Unlawful seizure of aircraft;
 - (ii) Destruction of an aircraft in service;
 - (iii) Hostage-taking on board aircraft or at aerodromes;
 - (iv) Forcible intrusion on board an aircraft, at an aerodrome, or on the premises of an aeronautical facility;
 - (v) Introduction on board an aircraft or at an aerodrome of a weapon or hazardous device or material intended for criminal purposes;
 - (vi) Use of an aircraft in service for the purpose of causing death, serious bodily injury, or serious damage to property or the environment; and
 - (vii) Communication of false information such as to jeopardise the safety of an aircraft in flight or on the ground, or of passengers, crew, ground personnel, or the general public, at an aerodrome or on the premises of a civil aviation facility.

- (13) “Adapted competency model” means a group of competencies with their associated descriptions and performance criteria adapted from an ICAO competency framework that an organisation uses to develop competency-based training and assessment for a given role.
- (14) “ADS agreement” means an ADS reporting plan that establishes the conditions of ADS data reporting (i.e. data required by the air traffic services or control unit and frequency of ADS reports that have to be agreed to prior to the provision of the ADS services).
- (15) “ADS contract” means by which the terms of an ADS agreement will be exchanged between the ground system and the aircraft, specifying under what conditions ADS reports would be initiated, and what data would be contained in the reports.

Note: The term “ADS contract” is a generic term meaning variously, ADS event contract, ADS demand contract, ADS periodic contract or an emergency mode. Ground forwarding of ADS reports may be implemented between ground systems.

- (16) “Advanced flight training device” means a flight training device that has a cockpit that accurately replicates a specific make, model, and type of aircraft cockpit, and handling characteristics that accurately model the aircraft handling characteristics.
- (17) “Advisor” As it relates to an aircraft accident, means a person appointed by a State on the basis of his or her qualifications, for the purpose of assisting its accredited representative in an investigation.
- (18) “Advisory airspace” means an airspace of defined dimensions, or designated route, within which air traffic advisory service is available.
- (19) “Advisory route” means a designated route along which air traffic advisory service is available.
- (20) “Aerial work” means an aircraft operation in which an aircraft is used for specialised services such as agriculture,

construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

- (21) “Aerobatic / acrobatic flight” means manoeuvres intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed not necessary for normal flight.
- (22) “Aerodrome” means a defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part, for the arrival, departure and surface movement of aircraft.
- (23) “Aerodrome control service” means air traffic control service for aerodrome traffic.
- (24) “Aerodrome flight information service (AFIS)” means a directed traffic information and operational information service provided within an aerodrome flight information zone to all radio equipped aircraft, to assist in the safe and efficient conduct of flight.
- (25) “Aerodrome operating minima” means the limits of usability of an aerodrome for—
 - (i) take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;
 - (ii) Landing in 2D instrument approach operations, expressed in terms of visibility and/or RVR, MDA/H, and if necessary, cloud conditions; and
 - (iii) Landing in 3D instrument approach operations, expressed in terms of visibility and/or RVR and DA/H, as appropriate to the type and/or category of operation.
- (26) “Aerodrome traffic” means all traffic on the manoeuvring area of an aerodrome and all aircraft flying in the vicinity of an aerodrome.

Note: An aircraft is in the vicinity of an aerodrome when it is in, entering, or leaving an aerodrome traffic circuit.

- (27) “Aeronautical experience” means pilot time obtained in an aircraft, approved flight simulator, or approved flight-training

device for meeting the training and flight time requirements of these regulations.

- (28) “Aeronautical Information Publication (AIP)” is a publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.
- (29) “Aeronautical product” means any aircraft, aircraft engine, propeller, or subassembly, appliance, material, part, or component to be installed thereon.
- (30) “Aeronautical Station” is a land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.
- (31) “Aeroplane” means a power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.
- (32) “Aeroplane flight manual” means a manual, associated with the certificate of airworthiness, containing limitations within which the aeroplane is to be considered airworthy, and instructions and information necessary to the flight crew members on the safe operation of the aeroplane.
- (33) “Aeroplane system” means all elements of equipment necessary for the control and performance of a particular major function. It includes both the equipment specifically provided for the function in question and other basic related aeroplane equipment, such as that required to supply power for the equipment operation. The engine is not considered to be an aeroplane system.
- (34) “Agreement summary”. When an aircraft is operating under an Article 83 bis agreement between the State of Registry and another State, the agreement summary is a document transmitted with the Article 83 bis agreement registered with the ICAO Council that identifies succinctly and clearly which functions and duties are transferred by the State of Registry to that other State.

Note: The other State in the above definition refers to either the State of the Operator for commercial air transport

operations or, for general aviation operations, to the State of the principal location of a general aviation operator.

- (35) “Agricultural aircraft operation” means the operation of an aircraft for the purpose of—
- (i) Dispensing any substance intended for plant nourishment, soil treatment, propagation of plant life, or pest control, or
 - (ii) Engaging in dispensing activities directly affecting agriculture, horticulture, or forest preservation, but not including the dispensing of live insects.
- (36) “Air-ground control radio station” means an aeronautical telecommunication station having primary responsibility for handling communications pertaining to the operation and control of aircraft in a given area.
- (37) “Air navigation facility” means any facility used in, available for use in, or designed for use in aid of air navigation, including aerodromes, landing areas, lights, any apparatus or equipment for disseminating weather information, for signalling, for radio directional finding, or for radio or other electrical communication, and any other structure or mechanism having a similar purpose for guiding or controlling flight in the air or the landing and take-off of aircraft.
- (38) “Air Operator” means any organisation which undertakes to engage in commercial air transport, whether directly or indirectly or by a lease or any other arrangement.
- (39) “Air operator certificate (AOC)” means a certificate authorizing an operator to carry out specified commercial air transport operations.
- (40) “Air-taxiing” means movement of a helicopter/VTOL above the surface of an aerodrome, normally in ground effect and at a ground speed normally less than 37km/h (20kt).

Note: The actual height may vary, and some helicopters may require air-taxiing above 8m (25ft) AGL to reduce ground effect turbulence or provide clearance for cargo slingloads.

- (41) “Air traffic” means all aircraft in flight or operating on the manoeuvring area of an aerodrome.
- (42) “Air traffic advisory service” means a service provided within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on IFR flight plans.
- (43) “Air Traffic Control” means a service that promotes the safe, orderly, and expeditious flow of air traffic at aerodromes and during the approach, departure, and en route environments.
- (44) “Air traffic control clearance” means authorisation for an aircraft to proceed under conditions specified by an air traffic control unit.
- (45) “Air Traffic Control (ATC) facility” means a building holding the persons and equipment responsible for providing ATC services (e.g., airport tower, approach control, centre). May also be called air traffic control unit.
- (46) “Air traffic control service” means a service provided for the purpose of—
 - (i) preventing collisions between aircraft on the manoeuvring area, between aircraft and obstructions; and
 - (ii) expediting and maintaining an orderly flow of air traffic.
- (47) “Air traffic control unit” is a generic term meaning variously, area control centre, approach control unit or aerodrome control tower.
- (48) “Air traffic services airspaces” means airspaces of defined dimensions, alphabetically designated, within which specific types of flights may operate and for which air traffic services and rules of operation are specified.
- (49) “Air traffic services reporting office” means a unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure.
- (50) “Air traffic service (ATS) surveillance service” means a service provided directly by means of an ATS surveillance system.

- (51) “Air traffic service (ATS) surveillance system” means a generic term meaning variously, ADSB, PSR, SSR, or any comparable ground-based system that enables the identification of aircraft.
- (52) “Air traffic services unit” is a generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.
- (53) “Airborne collision avoidance system (ACAS)” is an aircraft system based on secondary surveillance radar (SSR) transponder signals which operates independently of ground based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.
- (54) “Aircraft” means any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth’s surface.
- (55) “Aircraft accident” means an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which—
 - (i) A person is fatally or seriously injured as a result of—
 - Being in the aircraft;
 - (A) Direct contact with any part of the aircraft, including parts which have become detached from the aircraft; or
 - (B) Direct exposure to jet blast, except when the injuries are from natural causes, selfinflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew.
 - (ii) The aircraft sustains damage or structural failure which adversely affects the structural strength, performance or flight characteristics of the aircraft, and would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing

tips, antennas, tires, brakes, fairings, small dents or puncture holes in the aircraft skin; or the aircraft is missing or is completely inaccessible.

- (56) “Aircraft avionics” means a term designating any electronic device – including its electrical part – for use in an aircraft, including radio, automatic flight control and instrument systems.
- (57) “Aircraft category” means the classification of aircraft according to specified basic characteristics (e.g., aeroplane, helicopter, glider, free balloon).
- (58) “Aircraft certificated for single-pilot operation” means a type of aircraft which the State of Registry has determined, during the certification process, can be operated safely with a minimum crew of one pilot.
- (59) “Aircraft certificated for multi-pilot operation” means a type of aircraft which the State of Registry has determined, during the certification process, can be operated safely with a minimum crew of two pilots.
- (60) “Aircraft component” means any component part of an aircraft up to and including a complete powerplant and/or any operational/emergency equipment.
- (61) “Aircraft engine” means any engine used, or intended to be used, for propulsion of aircraft and includes all parts, appurtenances, and accessories thereof other than propellers.
- (62) “Aircraft operating manual” means a manual, acceptable to the State of the Operator, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft.
- (63) “Aircraft piracy” means any actual or attempted seizure or exercise of control, by force or violence, or by any other form of intimidation, with wrongful intent, of an aircraft within the jurisdiction of Grenada.
- (64) “Aircraft required to be operated with a co-pilot” means a type of aircraft that is required to be operated with a co-pilot as specified in the flight manual or by the air operator certificate.

- (65) “Aircraft security check” means an inspection of the interior of an aircraft to which passengers may have had access and an inspection of the hold for the purpose of discovering suspicious objects, weapons, explosives, or other dangerous devices, articles, or substances.
- (66) “Aircraft security search” means a thorough inspection of the interior and exterior of an aircraft for the purpose of discovering suspicious objects, weapons, explosives, or other dangerous devices, articles, or substances.
- (67) “Aircraft type” means all aircraft of the same basic design.
- (68) “Aircraft Technical Log” means a document carried on an aircraft for recording defects and malfunctions discovered during operation and for recording details of all maintenance carried out whilst the aircraft is operating between scheduled visits to the base maintenance facility. It also contains operating information relevant to flight safety and maintenance data that the operating crew need to know. A technical log contains two independent sections: a journey record section and an aircraft maintenance record section.
- (69) “Airframe” means the fuselage, booms, nacelles, cowlings, fairings, airfoil surfaces (including rotors but excluding propellers and rotating airfoils of a powerplant), and landing gear of an aircraft and their accessories and controls.
- (70) “Airman” this term refers to—
- (i) any individual who engages, as the person in command or as pilot, mechanic, or member of the crew, or who navigates an aircraft while the aircraft is underway;
 - (ii) any individual in charge of the inspection, maintenance, overhauling, or repair of aircraft, and any individual in charge of the inspection, maintenance, overhauling, or repair of aircraft, aircraft engines, propellers, or appliances; or
 - (iii) any individual who serves in the capacity of flight operations officer.

- (71) “Airmanship” means the consistent use of good judgement and well-developed knowledge, skills and attitudes to accomplish flight objectives.
- (72) “Airship” means a power driven lighter-than-air aircraft.
- (73) “Airside” means the movement area of an aerodrome and adjacent terrain and buildings, or portions thereof, access to which is controlled.
- (74) “Airway” a control area or portion thereof established in the form of a corridor.
- (75) “Airworthiness approval tag (AAT)” means a tag that shall be attached to a part. The tag shall include the part number, serial number, and current life status of the part. Each time the part is removed from a type-certificated product, a new tag shall be created or the existing tag shall be updated with the current life status. The AAT has two distinct purposes: (1) as an approval for return to service of an aeronautical product or assembly after maintenance, overhaul, modification, repair, or inspection; and (2) for shipping of a newly manufactured part.
- (76) “Airworthiness data” means any information necessary to ensure that an aircraft or aircraft component can be maintained in a condition such that airworthiness of the aircraft, or serviceability of operational and emergency equipment, as appropriate, is assured.
- (77) “Airworthiness directive” is continuing airworthiness information that applies to the following products: aircraft, aircraft engines, propellers, and appliances. An airworthiness directive is mandatory if issued by the State of Design.
- (78) “Airworthiness release” is a certification signed by a licensed mechanic indicating that work was performed in accordance with the maintenance manual, was inspected by a licensed mechanic, and the aircraft was found satisfactory for safe operation.
- (79) “Airworthy” means the status of an aircraft, engine, propeller, or part when it conforms to its approved design and is in a condition for safe operation.

- (80) “Alerting service” means a service provided to notify appropriate organisations regarding aircraft in need of search and rescue aid, and assist such organisations as required.
- (81) “Alteration” the alteration of an aircraft/aeronautical product in conformity with an approved standard.
- (82) “Alternate Aerodrome” means an aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing. Alternate aerodromes include the following—
- (i) Take-off alternate. An alternate aerodrome at which an aircraft can land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure;
 - (ii) En-route alternate. an aerodrome at which an aircraft would be able to land after experiencing an abnormal or emergency condition while en route;
 - (iii) ETOPS en-route alternate. a suitable and appropriate alternate aerodrome at which an aeroplane would be able to land after experiencing an engine shutdown or other abnormal or emergency condition while en route in an ETOPS operation;
 - (iv) Destination alternate. an alternate aerodrome to which an aircraft may proceed should it become either impossible or inadvisable to land at the aerodrome of intended landing.

Note: The aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for that flight.

- (83) “Alternate Heliport” means a heliport to which a helicopter may proceed when it becomes either impossible or inadvisable to proceed to or to land at the heliport of intended landing. Alternate heliports include the following—
- (i) Take-off alternate. An alternate heliport at which a helicopter can land should this become necessary

shortly after takeoff and it is not possible to use the heliport of departure.

- (ii) En-route alternate. A heliport at which a helicopter would be able to land after experiencing an abnormal or emergency condition while en route.
- (iii) Destination alternate. An alternate heliport to which a helicopter may proceed should it become either impossible or inadvisable to land at the heliport of intended landing.

Note — The heliport from which a flight departs may be an en-route or a destination alternate heliport for that flight.

- (84) “Alternative means of compliance” means an approved alternative to prescribed approaches, which has been demonstrated to consistently achieve or exceed the desired outcomes as intended through regulation.
- (85) “Altimetry system error (ASE)” means the difference between the altitude indicated by the altimeter display, assuming a correct altimeter barometric setting, and the pressure altitude corresponding to the undisturbed ambient pressure.
- (86) “Altitude” means the vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL).
- (87) “AMT Course” means a training course for AMT maintenance ratings (airframe/powerplant).
- (88) “Annexes to the Chicago Convention” means the documents issued by the International Civil Aviation Organisation (ICAO) containing the Standards and Recommended Practices applicable to civil aviation.
- (89) “Anticipated operating conditions” means those conditions which are known from experience or which can be reasonably envisaged to occur during the operational life of the aircraft, taking into account the operations for which the aircraft is made eligible, the conditions so considered being relative to the meteorological state of the atmosphere, to the configuration of terrain, to the functioning of the aircraft, to

the efficiency of personnel and to all the factors affecting safety in flight. Anticipated operating conditions do not include—

- (i) those extremes which can be effectively avoided by means of operating procedures; and
- (ii) those extremes which occur so infrequently that to require the Standards to be met in such extremes would give a higher level of airworthiness than experience has shown to be necessary and practical.

(90) “Anti-collision light” means—

- (i) in relation to a rotorcraft, a flashing red light;
- (ii) in relation to any other aircraft, a flashing red or flashing white light.

Note — in both cases, the light shall be showing in all directions for the purpose of enabling the aircraft to be more readily detected by pilots of distant aircraft;

(91) “Appliances” means Instruments, equipment, apparatus, parts, appurtenances, or accessories, of whatever description, which are used, or are capable of being or intended to be used, in the navigation, operation, or control of aircraft in flight (including parachutes and including communication equipment and any other mechanism or mechanisms installed in or attached to aircraft during flight), and which are not part or parts of aircraft, aircraft engines, or propellers.

(92) “Approach and landing phase — helicopters” means that part of the flight from 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or from the commencement of the descent in the other cases, to landing or to the balked landing point.

(93) “Appropriate authority”—

- (i) Regarding flight over the high seas: means the relevant authority of the State of Registry;
- (ii) Regarding flight other than over the high seas: means the relevant authority of the State having sovereignty over the territory being overflown.

- (94) “Approach and landing operations using instrument approach procedures” Instrument approach and landing operations are classified as follows—
- (i) Non-precision approach and landing operations means an instrument approach and landing which utilizes lateral guidance but does not utilize vertical guidance;
 - (ii) Approach and landing operations with vertical guidance means an instrument approach and landing which utilizes lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations;
 - (iii) Precision approach and landing operations means an instrument approach and landing using precision lateral and vertical guidance with minima as determined by the category of operation.

Note— Lateral and vertical guidance refers to the guidance provided either by—

- a ground-based navigation aid; or
- computer generated navigation data.

Categories of precision approach and landing operations—

- (i) Category I (CAT I) operation means a precision instrument approach and landing with a decision height not lower than 60 m (200 ft) and with either a visibility not less than 800 m or a runway visual range not less than 550 m;
- (ii) Category II (CAT II) operation means a precision instrument approach and landing with a decision height lower than 60 m (200 ft), but not lower than 30 m (100 ft), and a runway visual range not less than 350 m;
- (iii) Category IIIA (CAT IIIA) operation means a precision instrument approach and landing with—
 - (A) a decision height lower than 30 m (100 ft) or no decision height; and

- (B) a runway visual range not less than 200 m;
- (iv) Category IIIB (CAT IIIB) operation means a precision instrument approach and landing with—
 - (A) a decision height lower than 15 m (50 ft) or no decision height; and
 - (B) a runway visual range less than 200 m but not less than 50 m;
- (v) Category IIIC (CAT IIIC) operation. means a precision instrument approach and landing with no decision height and no runway visual range limitations.

Note: Where decision height (DH) and runway visual range (RVR) fall into different categories of operation, the instrument approach and landing operation would be conducted in accordance with the requirements of the most demanding category (e.g. an operation with a DH in the range of CAT IIIA but with an RVR in the range of CAT IIIB would be considered a CAT IIIB operation or an operation with a DH in the range of CAT II but with an RVR in the range of CAT I would be considered a CAT II operation).

- (95) “Approach control service” means air traffic control service for arriving or departing controlled flights.
- (96) “Approach control unit” means a unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more aerodromes.
- (97) “Appropriate airworthiness requirements” means the comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting State for the class of aircraft, engine or propeller under consideration.
- (98) “Appropriate ATS or ATC authority” means the relevant authority designated by Grenada responsible for providing air traffic services in the airspace concerned.

- (99) “Approval for return to service” means a document that contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the AMO Procedures Manual or under an equivalent system.
- (100) “Approved” means accepted by a Contracting State as suitable for a particular purpose.
- (101) “Approved by the Authority” means approved by the Authority directly or in accordance with a procedure approved by the Authority.
- (102) “Approved curriculum” means a set of special training courses in an area of specialisation offered by an ATO and approved by the Authority.
- (103) “Approved data” means technical information approved by the Authority.
- (104) “Approved continuous maintenance program” means a maintenance program approved by the State of Registry.
- (105) “Approved Maintenance Organisation (AMO)” means an organisation approved to perform specific aircraft maintenance activities by the Authority. These activities may include the inspection, overhaul, maintenance, repair and/or modification and release to service of aircraft or aeronautical products.
- (106) “Approved standard” means a manufacturing, design, maintenance, or quality standard approved by the Authority.
- (107) “Approved Training Organisation (ATO)” means an organisation approved by the Authority, to perform flight crew training and other training approved by the Authority.
- (108) “Approved Training Organisation (ATO) Procedures Manual” means a manual containing procedures, instructions, and guidance for use by personnel of an ATO in the execution of their duties in meeting the requirements of the certificate. It may be a combined manual or may be separated into a Training Manual and a Procedures Manual.

- (i) Training manual a manual containing the training goals, objectives, standards, syllabi, and curriculum for each phase of the approved training course.
 - (ii) Procedures manual a manual containing procedures, instructions, and guidance for use by personnel of the ATO in the execution of their duties in meeting the requirements of the certificate
- (109) “Approved training” means training carried out under special curricula and supervision approved by the Authority.
- (110) “Apron” means a defined area, on a land aerodrome, intended to accommodate aircraft for purposes of fuelling, parking, maintenance, loading or unloading passengers, mail or cargo.
- (111) “Area control centre” means a unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.
- (112) “Area control service” means air traffic control service for controlled flights in control areas.
- (113) “Area Navigation (RNAV)” means a method of navigation that permits aircraft operations on any desired flight path within the coverage of station-referenced navigation aids or within the limits of the capability of self-contained aids, or a combination of these.
- (114) “Article” means any item, including but not limited to, an aircraft, airframe, aircraft engine, propeller, appliance, accessory, assembly, subassembly, system, subsystem, component, unit, product, or part.
- (115) “ATS or ATC route” means a specified route designed for channeling the flow of air traffic as necessary for the provision of air traffic services, defined by route specifications that include an ATS or ATC route designator, the track to or from significant points (way points), distance between significant points, reporting requirements, and as determined by the appropriate ATS or ATC authority, the lowest safe altitude.
- (116) “Authorised instructor” means a person who—

- (i) holds a valid ground instructor certificate issued under Part 2 when conducting ground training;
 - (ii) holds a current flight instructor certificate issued under Part 2 when conducting ground training or flight training; or
 - (iii) is authorised by the Authority to provide ground training or flight training under Part 2 and Part 3.
- (117) “Authorized person” means any person authorized by the Minister either generally or in relation to a particular case of class of cases, and references to a person authorized by the Minister include reference to the holder, for the time being, of any office designated by the Minister.
- (118) “Authority” means the civil aviation authority responsible for the oversight of civil aviation in Grenada.
- (119) “Automatic dependent surveillance (ADS)” means a surveillance technique in which aircraft automatically provide, via a data link, data derived from on-board navigation and position-fixing systems, including aircraft identification, four-dimensional position and additional data as appropriate.
- (120) “Automatic dependent surveillance – broadcast (ADS-B)” is a means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in broadcast mode via a data link.
- (121) “Automatic dependent surveillance – contract (ADS-C)” is a means by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, via a data link, specifying under what conditions ADS-C reports would be initiated, and what data would be contained in the reports.
- (122) “Automatic deployable flight recorder (ADFR)” means combination flight recorder that is installed on the aircraft and is capable of automatically deploying from the aircraft.

Note: This could include the cockpit voice recorder or flight data recorder.

- (123) "Aviation Maintenance Technician" means a person approved by the Authority to perform defined maintenance upon aeronautical products; the term "aviation maintenance technician" as used herein can include persons similarly qualified and referred to as "licensed mechanic," "certificated (certified) mechanic," "aviation maintenance engineer," "licensed engineer," or by other terms, all of which mean an aviation maintenance license holder.
- (124) "Aviation medical assessor" means a physician, appointed by the Licensing Authority, who is qualified and experienced in the practice of aviation medicine and competent in evaluating and assessing medical conditions of flight safety significance.
- (125) "Aviation medical examiner" means a physician with training in aviation medicine and practical knowledge and experience of the aviation environment who is designated by the Authority to conduct medical examinations of fitness of applicants for licences or ratings for which medical requirements are prescribed.
- (126) "Balloon" means a non-power-driven lighter-than-air aircraft.
- (127) "Banner" means an advertising medium supported by a temporary framework attached externally to the aircraft and towed behind the aircraft.
- (128) "Behaviour detection" means within an aviation security environment, the application of techniques involving the recognition of behavioural characteristics, including physiological or gestural signs indicative of anomalous behaviour, to identify persons who may pose a threat to civil aviation.
- (129) "Cabin Crew" means a person employed to facilitate the safety of passengers, whose duties are detailed by the AOC holder or the aircraft commander.
- (130) "Cabin crew member" means a crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crew member.

- (131) “Calendar day” means the period of elapsed time, using Co-ordinated Universal Time or local time, that begins at midnight and ends 24 hours later in the next midnight.
- (132) “Calendar month” means a period of a month beginning and ending with the dates that are conventionally accepted as marking the beginning and end of a numbered month (as January 1 through January 31 in the Gregorian calendar).
- (133) “Calendar year” means a period of a year beginning and ending with the dates that are conventionally accepted as marking the beginning and end of a numbered year (as January 1 through December 31 in the Gregorian calendar).
- (134) “Calibration” means a set of operations, performed in accordance with a definite documented procedure that compares the measurement performed by a measurement device or working standard with a recognised bureau of standards for the purpose of detecting and reporting or eliminating adjustment errors in the measurement device, working standard, or aeronautical product tested.
- (135) “Cargo” means any property carried on an aircraft other than mail, stores, and accompanied or mishandled baggage.
- (136) “Cargo aircraft” means any aircraft carrying goods or property but not passengers. In this context the following are not considered to be passengers—
- (i) a crewmember;
 - (ii) an operator’s employee permitted by, and carried in accordance with, the instructions contained in the Operations Manual;
 - (iii) an authorised representative of an Authority;
 - (iv) a person with duties in respect of a particular shipment on board.
- (137) “Causes” As it relates to an aircraft accident or incident means actions, omissions, events, conditions, or a combination thereof which led to the accident or incident. (ICAO Annex 13).

- (138) “Ceiling” means the height above the ground or water of the base of the lowest layer of cloud below 6,000 metres (20,000 feet) covering more than half the sky.
- (139) “Certificate of airworthiness” means a certificate issued by the State of Registry when an aircraft has been deemed fit and safe for flight and in conformity with the type design approved by the State of Design and maintained in accordance with the continuing airworthiness requirements of the State of Registry.
- (140) “Certify as airworthy” means the act of completing an approval for return to service, by a properly authorised person after the maintenance, overhaul, modification, repair, or inspection of an aircraft or aeronautical product, by which the aircraft or aeronautical part is cleared for use in flight as meeting the requirements of the certificate of airworthiness of Grenada.
- (141) “Certificated Approved Maintenance Organisation” means approved by the Authority.
- (142) “Certificate of airworthiness” includes any validation thereof and any flight manual, performance schedule or other document, whatever its title, incorporated by reference in that certificate relating to the certificate of airworthiness.
- (143) “Certify as airworthy” means the required maintenance record entry completed by a properly authorised person after the modification, overhaul, repair, or the inspection of an aircraft, or aeronautical product required by the Authority.
- (144) “Certifying staff” means those personnel who are appropriately authorised by a procedure approved by the Authority to certify aircraft or aircraft components for release to service.
- (145) “Change-over- point” means the point at which an aircraft navigating on an ATC route segment defined by reference to very high frequency omni-directional radio ranges is expected to transfer its primary navigational references from the facility behind the aircraft to the next facility ahead of the aircraft.
- (146) “Chicago Convention” (“Convention”) means the Convention on International Civil Aviation concluded in Chicago, U.S.A. in 1944, in effect, 1947. The Articles of the Chicago Convention govern the actions of the contracting States in matters of

international civil aviation directly and through the Annexes to the Convention, which set forth ICAO Standards and Recommended Practices.

- (147) "Check person (aeroplane)" means a person who is qualified and permitted, to conduct flight checks or instruction in an aeroplane and evaluations only in a flight simulator, or in a flight training device for a particular type aeroplane, for a particular AOC holder.
- (148) "Check person (helicopter)" means a person who is qualified and permitted, to conduct flight checks or instruction in a helicopter and evaluations only in a flight simulator, or in a flight training device for a particular type helicopter, for a particular AOC holder.
- (149) "Check person (simulator)" means a person who is qualified to conduct flight checks or instruction only in a flight simulator or a flight training device for a particular type aircraft, for a particular AOC holder.
- (150) "Citizen of Grenada" refers to one of the following—
- (iii) An individual who is a citizen of Grenada;
 - (ii) A partnership of which each member is a citizen of Grenada; or
 - (iii) A corporation or association created or organised and authorised under the laws of Grenada.
- (151) "Civil aircraft" means any aircraft other than a public aircraft.
- (152) "Civil aviation" means the operation of any civil aircraft for the purpose of general aviation operations, aerial work or commercial air transport operations.
- (153) "Class A airspace", "Class B airspace", "Class C airspace", "Class D airspace" and "Class E airspace" means airspace respectively notified as such, in accordance with the appropriate International Civil Aviation Organization definition.
- (154) "Clearance limit" means the point to which an aircraft is granted an air traffic control clearance.

- (155) “Cockpit audio recording system (CARS)” means a device that uses a combination of microphones and other audio and digital inputs to collect and record the aural environment of the flight deck and communications to, from, and between the pilots. Source: Current edition of EUROCAE ED-155, Minimum Operational Performance Specification for Lightweight Flight Recording Systems, paragraph 1-1.5.1.
- (156) “Combined vision system (CVS)” means a system to display images from a combination of an EVS and an SVS.
- (157) “Command and control (C2) link” means the data link between the RPA and the RPS for the purposes of managing the flight.
- (158) “Commercial air transport” means an aircraft operation involving the transport of passengers, cargo, or mail for remuneration or hire that is not considered aerial work.
- (159) “Common mark” means a mark assigned by ICAO to the common mark registering authority registering aircraft of an international operating agency on other than a national basis.
- Note: All aircraft of an international operating agency that are registered on other than a national basis will bear the same common mark.
- (160) “Common mark registering authority” means the authority maintaining the non-national register or, where appropriate, the part thereof, in which aircraft of an international operating agency are registered.
- (161) “Company materials (COMAT)” means operator material carried on an operator’s aircraft for the operator’s own purposes.
- (162) “Competency” means a dimension of human performance that is used to reliably predict successful performance on the job. A competency is manifested and observed through behaviours that mobilise the relevant knowledge, skills, and attitudes to carry out activities or tasks under specified conditions.
- (163) “Competency-based training and assessment” means training and assessment that are characterised by a performance orientation, emphasis on standards of performance and their

measurement, and the development of training to the specified performance standards.

Note: This training process is derived from a job and task analysis and focuses on the achievement of well-defined, benchmarked standards of performance as opposed to training programmes that simply focus on the acquisition of prescribed levels of experience

- (164) Competency standard. A level of performance that is defined as acceptable when assessing whether or not competency has been achieved.
- (165) “Complex aeroplane” means any aeroplane that has retractable landing gear, flaps, and a controllable pitch propeller; or a turbo-jet powered aircraft; or in the case of a seaplane, flaps and a controllable pitch propeller.
- (166) “Competent authority” means, in relation to any State, the authority responsible under the law of that State for promoting the safety of civil aviation.
- (167) “Composite” means structural materials made of substances, including, but not limited to, wood, metal, ceramic, plastic, fiber-reinforced materials, graphite, boron, or epoxy, with built-in strengthening agents that may be in the form of filaments, foils, powders, or flakes, of a different material.
- (168) “Computer system” means any electronic or automated system capable of receiving, storing, and processing external data, and transmitting and presenting such data in a usable form for the accomplishment of a specific function.
- (169) Conditions. Anything that may qualify a specific environment in which performance will be demonstrated.
- (170) “Configuration” (as applied to the aeroplane). means a particular combination of the positions of the moveable elements, such as wing flaps and landing gear, etc., that affect the aerodynamic characteristics of the aeroplane.
- (171) “Configuration deviation list (CDL)” is a list established by the organization responsible for the type design with the approval of the State of Design which identifies any external parts of an aircraft type which may be missing at the commencement of a

flight, and which contains, where necessary, any information on associated operating limitations and performance correction.

- (172) “Congested area” as it relates to a city, town or settlement, is any area which is substantially used for residential, commercial or recreational purposes.
- (173) “Congested hostile environment” means a hostile environment within a congested area.
- (174) “Consignment” means one or more packages of dangerous goods accepted by an operator from one shipper at one time and at one address, receipted for in one lot and moving to one consignee at one destination address.
- (175) “Contaminated runway” means a runway is contaminated when a significant portion of the runway surface area (whether in isolated areas or not) within the length and width being used is covered by one or more of the substances listed in the runway surface condition descriptors.
- (176) “Continuing airworthiness” means the set of processes by which an aircraft or aeronautical product complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life.
- (177) “Continuing airworthiness maintenance programme” means a maintenance programme approved by the State of Registry.
- (178) “Continuing airworthiness records” means records that are related to the continuing airworthiness status of an aircraft or aeronautical product.
- (179) “Continuous descent final approach (CDFA)” means a technique, consistent with stabilised approach procedures, for flying the FAS of an instrument NAP procedure as a continuous descent, without level-off, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare manoeuvre should begin for the type of aircraft flown; for the FAS of an NPA procedure followed by a circling approach, the CDFA technique applies until circling approach minima (circling OCA/H) or visual flight manoeuvre altitude/height are reached.

- (180) “Contactable” (for the purpose of Flight Duty Times) means a short period of time during the day, other than a day-off, during which a crewmember is required to be contactable for the purpose of giving notification of a duty period which will commence not less than 10 hours ahead. The contactable period shall not cover more than 2.5 hours.
- (181) “Contracting State” means any State, including Grenada, which is party to the Chicago Convention.
- (182) “Control area” means a controlled airspace extending upwards from a specified limit above the earth.
- (183) “Control zone” means a controlled airspace extending upwards from the surface of the earth to a specified upper limit.
- (184) “Controlled aerodrome” means an aerodrome at which air traffic control service is provided to aerodrome traffic.
- (185) “Controlled airspace” means an airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.
- (186) “Controller-pilot data link communications (CPDLC)” is a means of communication between controller and pilot, using data link for ATC communications.
- (187) “Contracting States” means all States that are signatories to the Convention on International Civil Aviation (Chicago Convention).
- (188) “Controlled flight” means a flight which is subject to an air traffic control clearance.
- (189) “Controlled flight into terrain (CFIT)” occurs when an airworthy aircraft is flown, under the control of a qualified pilot, into terrain, water, or an obstacle with inadequate awareness on the part of the pilot of the impending collision.
- (190) “Controller-pilot data link communications (CPDLC)” a means of communication between controller and pilot, using data link for ATC communications.

- (191) "Convention on International Civil Aviation (Chicago Convention)" means the Convention on International Civil Aviation concluded in Chicago, Illinois, of the United States of America, in 1944, in effect, 1947. The Articles of the Chicago Convention govern the actions of the Contracting States in matters of international civil aviation safety directly and through the Annexes to the Chicago Convention, which set forth the ICAO SARPs.
- (192) "Control System" means a system by which the flight path, attitude, or propulsive force of an aircraft is changed, including the flight, engine and propeller controls, the related system controls and the associated operating mechanisms.
- (193) "Conversion" is the action taken by Grenada in issuing its own licence on the basis of a licence issued by another Contracting State for use on aircraft registered in Grenada.
- (194) "Core curriculum" means a set of courses approved by the Authority, for use by an ATO and its satellite ATOs. The core curriculum consists of training that is required for licensing or aircraft ratings. It does not include training for tasks and circumstances unique to a particular user.
- (195) "Corporate aviation" means the non-commercial operation or use of aircraft by a company for the carriage of passengers or goods as an aid to the conduct of company business, flown by (a) professional pilot(s) employed to fly the aircraft.
- (196) "Course" means a programme of instruction to teach knowledge, skills, and/or competencies in a particular area or subject or to maintain existing qualifications.
- (197) "Courseware" means instructional material developed for each course or curriculum, including lesson plans and other aids such as computer software programs, audiovisual programmes, workbooks, and handouts.
- (198) "Co-pilot" means a licensed pilot serving in any piloting capacity other than as pilot-in-command but excluding a pilot who is on board the aircraft for the sole purpose of receiving flight instruction.

Note: Co-pilot as here defined, is synonymous with the term "second-in-command" or "SIC".

- (199) “Credit” means recognition of alternative means or prior qualifications.
- (200) “Crew Member” means a member of the flight crew or a Cabin Crew member or any person required to perform duties on an aircraft in flight.
- (201) “Crew Resource Management” means a program designed to improve the safety of flight operations by optimising the safe, efficient, and effective use of human resources, hardware, and information through improved crew communication and co-ordination.
- (202) “Cross country” means a flight between a point of departure and a point of arrival following a pre-planned route using standard navigation procedures.
- (203) “Cross-country time” means that time a pilot spends in flight in an aircraft which includes a landing at a point other than the point of departure and, for the purpose of meeting the crosscountry time requirements for a private pilot licence (except with a rotorcraft rating), commercial pilot licence, or an instrument rating, includes a landing at an aerodrome which must be a straightline distance of more than 50 nautical miles from the original point of departure.
- (204) “Cruise climb” means an aircraft cruising technique resulting in a net increase in altitude as the aircraft mass decreases.
- (205) “Cruise relief pilot” means a flight crew member who is assigned to perform pilot tasks during cruise flight, to allow the pilot in- command or a co-pilot to obtain planned rest.
- (206) “Cruising level” means a level maintained during a significant portion of a flight.
- (207) “Critical engine” means the engine whose failure would most adversely affect the performance or handling qualities of an aircraft.
- (208) “Critical phases of flight” means those portions of operations of an aircraft which involve taxiing, takeoff, landing and all flight operations below 10,000 feet, except cruise flight.

- (209) “Critical power unit(s)” means a power unit, the failure of which has the most adverse effect on the aircraft characteristics relative to the case under consideration.

Note: On some aircraft there may be more than one equally critical power unit. In that case, the phrase “the critical power unit” means one of those critical power units.

- (210) “Current flight plan” means the flight plan, including changes, if any, brought about by subsequent clearances.
- (211) “Curriculum” means a set of courses in an area of specialisation offered as part of a training programme.
- (212) “Danger area” is an airspace of defined dimensions within which activities dangerous to the flight of the aircraft may exist at specified times.
- (213) “Dangerous goods” means articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions or which are classified according to those Instructions.
- (214) “Dangerous goods accident” means an occurrence associated with and related to the transport of dangerous goods by air that results in fatal or serious injury to a person or major property or environmental damage.
- (215) “Dangerous goods incident” means an occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods, not necessarily occurring on board an aircraft, which results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardises an aircraft or its occupants is deemed to constitute a dangerous goods incident.
- (216) “Dangerous goods transport document” means a document specified by the ICAO Technical Instructions for the Safe Transportation of Dangerous Goods by Air. It is completed by the person who offers dangerous goods for air transport and contains information about those dangerous goods. The document bears a signed declaration indicating that the

dangerous goods are fully and accurately described by their proper shipping names and UN numbers (if assigned) and that they are correctly classified, packed, marked, labelled and in a proper condition for transport.

Note.— See definition below for Technical Instructions.

- (217) “Data link communications” means a form of communication intended for the exchange of messages via a data link.
- (218) “Days Off” means periods available for leisure and relaxation free from all duties. A single day off will include two local nights. Consecutive days off shall include a further local night for each additional consecutive day off. A rest period may be included as part of a day off.
- (220) “Deadhead Transportation” means time spent in transportation on aircraft to or from a crew member’s home station.
- (220) “Decision altitude (DA) or decision height (DH)” means a specified altitude or height in a 3D instrument approach operation at which a missed approach shall be initiated if the required visual reference to continue the approach has not been established.

Note 1.— Decision altitude (DA) is referenced to mean sea level and decision height (DH) is referenced to the threshold elevation.

Note 2.— The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In Category III operations with a decision height the required visual reference is that specified for the particular procedure and operation.

Note 3.— For convenience where both expressions are used they may be written in the form “decision altitude/ height” and abbreviated “DA/H”

- (221) “Defined point after take-off (DPATO)” means the point, within the take-off and initial climb phase, before which the helicopter’s ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

Note.— Defined points apply to helicopters operating in performance Class 2 only)

- (222) “Defined point before landing (DPBL)” means the point, within the approach and landing phase, after which the helicopter’s ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

Note.— Defined points apply to helicopters operating in performance Class 2 only

- (223) “Design landing mass” means the maximum mass of the aircraft at which, for structural design purposes, it is assumed that it will be planned to land.
- (224) “Design take-off mass” means the maximum mass at which the aircraft, for structural design purposes, is assumed to be planned to be at the start of the take-off run.
- (225) “Design taxiing mass” means the maximum mass of the aircraft at which structural provision is made for load liable to occur during use of the aircraft on the ground prior to the start of take-off.
- (226) “Designated examiner” means any person designated by the Authority to act as a representative of the Authority in examining, inspecting, and testing persons for the purposes of issuing licences, ratings, or certificates.
- (227) “Designated postal operator” means any governmental or non-governmental entity officially designated by a UPU member country to operate postal services and to fulfil the related obligations arising from the acts of the UPU Convention on its territory.
- (228) “Detect and avoid” means the capability to see, sense, or detect conflicting traffic or other hazards and take the appropriate action.
- (229) “Directly in Charge” as it relates to an Approved Maintenance Organisation in Part 6 - means an appropriately licensed

person having the responsibility for the work of an approved maintenance organisation that performs maintenance, preventive maintenance, alterations, or other functions affecting aircraft airworthiness. A person directly in charge does not need to physically observe and direct each worker constantly but must be available for consultation on matters requiring instruction or decision from higher authority.

- (230) “Discrete source damage” means structural damage of the aeroplane that is likely to result from impact with a bird, uncontained fan blade failure, uncontained engine failure, uncontained high energy rotating machinery failure, or similar causes.
- (231) “Disruptive passenger” means a passenger who fails to respect the rules of conduct at an aerodrome or on board an aircraft or to follow the instructions of aerodrome personnel or crew members and thereby disturbs the good order and discipline at the aerodrome or on board the aircraft.
- (232) “Dispatch Crew” means a fully qualified and current flight crew/Cabin Crew authorised to carry out pre-flight duties as defined by the AOC holder.
- (233) “Document” means a civil aviation document referred to in, or issued or validated under these Regulations or the Regulations of any other State and includes, a licence, rating, authorization, permit and certificate and a copy of the document.
- (234) “Dry lease” means the lease of an aircraft without the crew.
- (235) “Dry runway” means a runway is considered dry if its surface is free of visible moisture and not contaminated within the area intended to be used.
- (236) “Dual instruction time” means flight time during which a person is receiving flight instruction from a properly authorised pilot on board the aircraft.
- (237) “Duplicate Inspection” means an inspection first made and certified by one qualified person and subsequently made and certified by a second qualified person; (Described in IS: 5.6.1.5).

- (238) “Duty” means any continuous period during which a crewmember is required to carry out any task associated with the business of the operator.
- (239) “Duty period” as it relates to an air operator, means a period which starts when flight or cabin crew personnel are required by an operator to report for or to commence a duty and ends when that person is free from all duties.
- (240) “Duty time” means the total time from the moment a person identified in these regulations begins, immediately after a rest period, any work on behalf of the certificate holder until that person is free from all restraint associated with that work.
- (241) “ECCAA” means the Eastern Caribbean Civil Aviation Authority whose headquarters is in Antigua and Barbuda.
- (242) “Economic poison” means any substance or mixture of substances intended for—
- (i) Preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds, and other forms of plant or animal life or viruses, except viruses on or in living human beings or other animals, which the Grenada may declare to be a pest, and (ii) Use as a plant regulator, defoliant or desiccant.
- (243) “Effective length of the runway” means the distance for landing of an aircraft from the point at which the obstruction clearance plane associated with the approach end of the runway intersects the centreline of the runway to the far end.
- (244) “Electronic flight bag (EFB)” means an electronic information system, consisting of equipment and applications for flight crew, that allows for the storing, updating, displaying, and processing of EFB functions to support flight operations or duties.
- (245) “Elevated heliport” means a heliport located on a raised structure on land.
- (246) “Emergency Locator Transmitter (ELT)” means a generic term describing equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be

automatically activated by impact or be manually activated.
An ELT may be any of the following—

- (i) Automatic fixed ELT. means an automatically activated ELT which is permanently attached to an aircraft;
 - (ii) Automatic portable ELT. means an automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft;
 - (iii) Automatically deployable ELT. means an ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and in some cases, also be hydrostatic sensors. Manual deployment is also provided;
 - (iv) Survival ELT. means an ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors;
 - (v) ELT battery useful life. means the length of time after its date of manufacture or recharge that the battery or battery pack may be stored under normal environmental conditions without losing its ability to allow the ELT to meet the applicable performance standards;
 - (vi) ELT battery expiration date. means the date of battery manufacture or recharge plus one half of its useful life.
- (247) “Enhanced Ground Proximity Warning (EGPWS)” means a forward looking warning system that uses the terrain data base for terrain avoidance.
- (248) “Enhanced vision system (EVS)” means a system to display electronic real-time images of the external scene achieved through the use of image sensors.

Note: EVS does not include night vision imaging systems.

- (249) “En-route phase” means that part of the flight from the end of the take-off and initial climb phase to the commencement of the approach and landing phase.

Note.— Where adequate obstacle clearance cannot be guaranteed visually, flights must be planned to ensure that

obstacles can be cleared by an appropriate margin. In the event of failure of the critical power-unit, operators may need to adopt alternative procedures

- (250) “Error” As it relates to the flight crew, means an action or inaction by the flight crew that leads to deviations from organisational or flight crew intentions or expectations.
- (251) “Error management” means the process of detecting errors and responding to them with countermeasures that reduce or eliminate the consequences of errors, and mitigate the probability of further errors or undesired states.
- (252) “Estimated off-block time” means the estimated time at which the aircraft will commence movement associated with departure.
- (253) “Estimated time of arrival” For IFR flights, means the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that approach procedure will be commenced, or if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome. For VFR flights, the time at which it is estimated that the aircraft will arrive over the aerodrome.

Note.— The actual time of leaving the holding point will depend upon the approach clearance.

- (254) “Evaluator” means a person employed by a certified Aviation Training Organisation who performs tests for licensing, added ratings, authorisations, and proficiency checks that are authorised by the certificate holder’s training specification, and who is authorised by the Authority to administer such checks and tests.
- (255) “Examiner”. means any person authorised by the Authority to conduct a pilot proficiency test, a practical test for a licence or rating, or a knowledge test under these regulations.
- (256) “Exception” As it relates to dangerous goods in Part 9 - is a provision in ICAO Annex 18 which excludes a specific item of dangerous goods from the requirements normally applicable to that item.

- (257) “Expected approach time” means the time at which ATC expects that an arriving aircraft, following a delay, will leave the holding point to complete its approach for a landing.
- (258) “Extended diversion time operations (EDTO)” means any operation by an aeroplane with two or more turbine engines where the diversion time to an en route alternate aerodrome is greater than the threshold time established by the State of the Operator.
- (259) “Extended diversion time operations (EDTO) critical fuel” means the fuel quantity necessary to fly to an en route alternate aerodrome considering, at the most critical point on the route, the most limiting system failure.
- (260) “Extended diversion time operations (EDTO) significant system” means an aeroplane system whose failure or degradation could adversely affect the safety particular to an EDTO flight or whose continued functioning is specifically important to the safe flight and landing of an aeroplane during an EDTO diversion.
- (261) “Extended overwater operation (Part 7)” as it relates to single-engine land planes, means an operation over water at a distance of more than 185 km (100 nm) from land suitable for making an emergency landing. In the case of multi-engine land planes, more than 370 km (200 nm) from land suitable for making an emergency landing, with the capability of continuing flight with one engine inoperative.
- (262) “Extended overwater operation (Part 8)” as it relates to aircraft other than helicopters, means an operation over water at a horizontal distance of more than 50 nm from the nearest shoreline; and to helicopters, an operation over water at a horizontal distance of more than 50 nm from the nearest shoreline and more than 50 nm from an offshore heliport structure.
- (263) “Facility” as used in Part 6, Approved Maintenance Organisations - means a physical plant, including land, buildings, and equipment, which provides the means for the performance of maintenance, preventive maintenance, or modifications of any article.

- (264) “Factor of safety” means a design factor used to provide for the possibility of loads greater than those assumed, and for uncertainties in design and fabrication.
- (265) “Fatal injury” as it relates to an aircraft accident, is any injury which results in death within 30 days of the accident.
- (266) “Fatigue” means a physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase, and/or workload (mental and/or physical activity) that can impair a person’s alertness and ability to perform safety-related operational duties.
- (267) “Fatigue risk management system (FRMS)” means a data-driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge as well as operational experience, that aims to ensure relevant personnel are performing at adequate levels of alertness.
- (268) “Filed flight plan” means the flight plan as filed with an air traffic service unit by the pilot or a designated representative, without any subsequent changes.
- (269) “Final approach and take-off area (FATO)” means a defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. Where the FATO is to be used by helicopters operating in performance Class 1, the defined area includes the rejected take-off area available.
- (270) “Final approach segment (FAS)” means the segment of an IAP in which alignment and descent for landing are accomplished.
- (271) “Finding” means a conclusion by audit personnel that demonstrates nonconformity with a specific standard.
- (272) “Fireproof” means the capability to withstand the application of heat by a flame for a period of 15 minutes.

Note: The characteristics of an acceptable flame can be found in ISO 2685, Aircraft – Environmental test procedure for airborne equipment – Resistance to fire in designated fire zones.

(273) “Fireproof material” means a material capable of withstanding heat as well as or better than steel when the dimensions in both cases are appropriate for the specific purpose.

(274) “Fire resistant” means the capability to withstand the application of heat by a flame for a period of 5 minutes.

Note: The characteristics of an acceptable flame can be found in ISO 2685, Aircraft – Environmental test procedure for airborne equipment – Resistance to fire in designated fire zones.

(275) “Flight(s)” means the period from takeoff to landing.

(276) “Flight crew” means those members of the crew of an aircraft who act as pilot or flight engineer.

(277) “Flight crewmember” means a licensed crewmember charged with duties essential to the operation of an aircraft during flight time.

(278) “Flight data analysis” is a process of analysing recorded flight data in order to improve the safety of flight operations.

(279) “Flight duty period” means a period that commences when a flight or cabin crew member is required to report for duty that includes a flight or a series of flights and that finishes when the aircraft finally comes to rest and the engines are shut down at the end of the last flight on which he or she is a crew member.

(280) “Flight duty period” means the total time from the moment a flight crew member commences duty, immediately subsequent to a rest period and prior to making a flight or a series of flights, to the moment the flight crew member is relieved of all duties having completed such flight or series of flights.

(281) “Flight information centre” means a unit established to provide flight information service and alerting service.

(282) “Flight information region” means an airspace of defined dimensions within which flight information service and alerting service are provided.

- (283) “Flight information service” means a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.
- (284) “Flight level” means a surface of constant atmospheric pressure which is related to a specific pressure datum, 1,013.2 hectopascals (hPa), and is separated from other surfaces by specific pressure intervals.
- (285) “Flight manual” means a manual, associated with the certificate of airworthiness, containing limitations within which the aircraft is to be considered airworthy, and instructions and information necessary to the flight crew members for the safe operation of the aircraft.
- (286) “Flight operations officer/flight dispatcher” means a person designated by the operator to engage in the control and supervision of flight operations, suitably qualified in accordance with Annex 1, who supports, briefs and/or assists the pilot-in-command in the safe conduct of the flight.
- (287) “Flight plan” means—
- (i) specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft;
 - (ii) full information on all items comprised in the flight plan description, covering the whole route of a flight; or
 - (iii) limited information required when the purpose is to obtain a clearance for a minor portion of a flight such as to cross an airway, to take off from, or to land at a controlled aerodrome.
- (288) “Flight Recorder” means any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

Note.— This could include the Cockpit Voice Recorder (CVR) or Flight Data Recorder (FDR).

- (289) “Flight safety documents system” means a set of interrelated documentation established by the operator, compiling and organizing information necessary for flight and ground

operations, and comprising, as a minimum, the operations manual and the operator's maintenance control manual.

(290) "Flight simulation training device" means any one of the following three types of apparatus in which flight conditions are simulated on the ground—

- (i) a flight simulator, which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated;
- (ii) a flight procedures trainer, which provides a realistic flight deck environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class;
- (iii) a basic instrument flight trainer, which is equipped with appropriate instruments, and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions.

(291) "Flight status" means an indication of whether a given aircraft requires special handling by air traffic services units or not.

(292) "Flight time" means the period of time that the aircraft moves under its own power for the purpose of flight and ends when the aircraft comes to rest after it is parked, with engine(s) shut down if applicable.

Note.— Flight time as here defined is synonymous with the term "block-to-block" time or "chock-to-chock" time in general usage, which is measured from the time an aircraft moves from the loading point until it stops at the unloading point .

(293) "Flight time— aeroplane" means the total time from the moment an aeroplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight.

- (294) “Flight time—helicopter” means the total time from the moment a helicopter’s rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.
- (295) “Flight time—glider” means the total time occupied in flight, whether being towed or not, from the moment the glider first moves for the purpose of taking off until the moment it comes to rest at the end of the flight.
- (296) “Flight training” means training, other than ground training, received from an authorised instructor in flight in an aircraft.
- (297) “Flight training device” means a device that—
- (i) is a full-size replica of the instruments, equipment, panels, and controls of an aircraft, or set of aircraft, open or in an enclosed cockpit, including the hardware and software for the systems installed, that is necessary to simulate the aircraft in ground and flight operations;
 - (ii) need not have a force (motion) cueing or visual system; and
 - (iii) has been evaluated, qualified, and approved by the Authority.

Note: A set of aircraft are those that share similar performance characteristics, such as similar airspeed and altitude operating envelopes, similar handling characteristics, and the same number and type of propulsion systems.

- (298) “Flight Training Equipment” means flight simulators, flight training devices, and aircraft.
- (299) “Flight visibility” the visibility forward from the cockpit of an aircraft in flight.
- (300) “Flying hours” in these Regulations flying hours is synonymous with flight time.
- (301) “Foreign air operator” means any operator, not being a Grenada air operator, which undertakes, whether directly or indirectly or by lease or any other arrangement, to engage in

commercial air transport operations within the borders or airspace of Grenada, whether on a scheduled or charter basis.

- (302) “Foreign Authority” means the civil aviation authority that issues and oversees the Air Operator Certificate of a foreign air operator.
- (303) “Freight container” means any type of freight container, aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.
- (304) “Freight container in the case of radioactive material transport” means an article of transport equipment designed to facilitate the transport of packaged goods by one or more modes of transport without intermediate reloading. It shall be of a permanent enclosed character, rigid and strong enough for repeated use, and shall be fitted with devices facilitating its handling, particularly in transfer between aircraft and from one mode of transport to another. A small freight container is one that has either an overall outer dimension less than 1.5 m or an internal volume of not more than 3 m³. Any other freight container is considered to be a large freight container.
- (305) “General aviation operation” means an aircraft operation other than a commercial air transport operation or an aerial work operation.
- (306) “Glider” means a non-power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces, which remain, fixed under given conditions of flight.
- (307) “Ground handling” means services necessary for an aircraft’s arrival at, and departure from, an airport, other than air traffic services.
- (308) “Ground Proximity Warning System (GPWS)” is a warning system that uses radar altimeters to alert the pilots of hazardous flight conditions relating to the aircraft’s proximity to the ground.
- (309) “Ground visibility” means the visibility at an aerodrome, as reported by an accredited observer.

- (310) “Gyroplane” means a heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors which rotate freely on substantially vertical axes.
- (311) “Handling agent” means an agency which performs on behalf of the operator some or all of the latter's functions including receiving, loading, unloading, transferring or other processing of passengers or cargo.
- (312) “Handover” means the act of passing piloting control from one RPS to another.
- (313) “Hazard” means a condition or an object with the potential to cause injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function.
- (314) “Heading” means the direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North (true, magnetic, compass or grid).
- (315) “Heavier-than-air aircraft” means any aircraft deriving its lift in flight chiefly from aerodynamic forces.
- (316) “Height” means the vertical distance of a level, a point or an object considered a point, measured from a specified datum.
- (317) “Helicopter” means a heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axis.
- (318) “Helicopter Category A” means a multi-engine helicopter designed with engine and system isolation features specified in ICAO Annex 8, Part IVB, and capable of operations using take-off and landing data scheduled under a critical engine failure concept that assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected take-off.
- (319) “Helicopter Category B” means a single-engine or multi-engine helicopter that does not meet Category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event of an engine failure, and a forced landing is assumed.

- (320) “Helicopter Class 1” means a helicopter with performance such that, in case of critical engine failure, it is able to land on the rejected take-off area or safely continue the flight to an appropriate landing area, depending on when the failure occurs.
- (321) “Helicopter Class 2” means a helicopter with performance such that, in case of critical engine failure, it is able to safely continue the flight, except when the failure occurs prior to a defined point after take-off or after a defined point before landing, in which case a forced landing may be required.
- (322) “Helicopter Class 3” means a helicopter with performance such that, in case of engine failure at any point in the flight profile, a forced landing must be performed.
- (323) “Helideck” means a heliport located on a floating or fixed offshore structure.
- (324) “Heliport” means an aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters.

Note 1.— Throughout this Part, when the term “heliport” is used, it is intended that the term also applies to aerodromes primarily meant for the use of aeroplanes.

Note 2.— Helicopters may be operated to and from areas other than heliports.

- (325) “Heliport operating minima” means the limits of usability of a heliport for—
- (i) Take-off, expressed in terms of RVR and/or visibility and, if necessary, cloud conditions;
 - (ii) Landing in 2D instrument approach operations, expressed in terms of visibility and/or RVR, MDA/H, and if necessary, cloud conditions; and
 - (iii) Landing in 3D instrument approach operations, expressed in terms of visibility and/or RVR and DA/H as appropriate to the type and/or category of the operation.

- (326) “High-performance aeroplane” means an aeroplane with an engine of more than 200 horsepower.
- (327) “High Speed Aural Warning” means a speed warning that is required for turbine-engined airplanes and airplanes with a V_{MO}/M_{MO} greater than $0.80 V_{DF}/M_{DF}$ or V_D/M_D .
- (328) “Holdover time” means the estimated time de-icing/anti-icing fluid will prevent the formation of frost or ice and the accumulation of snow on the protected surfaces of an aircraft. Holdover time begins when the final application of de-icing or anti-icing fluid commences and expires when the de-icing or anti-icing fluid applied to the aircraft loses its effectiveness.
- (329) “Hostile environment” means an environment in which—
- (i) a safe forced landing cannot be accomplished because the surface and surrounding environment are inadequate; or
 - (ii) the helicopter occupants cannot be adequately protected from the elements; or
 - (iii) search and rescue response/capability is not provided consistent with anticipated exposure; or
 - (iv) there is an unacceptable risk of endangering persons or property on the ground.
- (330) “Housing” as it relates to Approved Maintenance Organisations - means buildings, hangers, and other structures to accommodate the necessary equipment and materials of a maintenance organisation that—
- (i) Provide working space for the performance of maintenance, preventive maintenance, or modifications for which the maintenance organisation is approved and rated; and
 - (ii) Provide structures for the proper protection of aircraft, airframes, aircraft engines, propellers, appliances, components, parts, and subassemblies thereof during disassembly, cleaning, inspection, repair, modification, assembly, and testing; and

- (iii) Provide for the proper storage, segregation, and protection of materials, parts, and supplies.
- (331) “Human Factors principles” means principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.
- (332) “Human performance” means human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.
- (333) “ICAO” is an abbreviation for the International Civil Aviation Organisation.
- (334) “ICAO competency framework”. Developed by ICAO, it is a selected group of competencies for a given aviation discipline. Each competency has an associated description and observable behaviours.
- (335) “IFR” is an abbreviation for instrument flight rules.
- (336) “IFR flight” means a flight conducted in accordance with the instrument flight rules.
- (337) “Implementing Standards (IS)” the Implementing Standards provide detailed requirements that support the intent of a Regulation presented in a Part and, by reference, have the force and effect of the governing Regulations.
- (338) “Incident” means an occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations.
- (339) “Includes” is a rule of construction that means “includes but is not limited to”.
- (340) “Incompatible” as it relates to dangerous goods, are goods which if mixed, would be liable to cause a dangerous evolution of heat or gas or produce a corrosive substance.
- (341) “Inspection” means the examination of an aircraft or aeronautical product to establish conformity with a standard approved by the Authority.

(342) “Instructions for continuing airworthiness” means a set of descriptive data, maintenance planning, and accomplishment instructions, developed by a design approval holder in accordance with the certification basis for the product, providing operators with the necessary information for the development of their own maintenance programme and accomplishment instructions.

(343) “Instrument approach categories”—

- (i) Category I (CAT I) operation. A precision instrument approach and landing with a DH not lower than 60 m (200 ft) and with either a visibility not less than 800 m or an RVR not less than 550 m.
- (ii) Category II (CAT II) operation. A precision instrument approach and landing with a DH lower than 60 m (200 ft), but not lower than 30 m (100 ft), and an RVR not less than 300 m.
- (iii) Category III (CAT III) operation. A DH lower than 30 m (100 ft) or no DH and an RVR less than 300m or no RVR limitations.

(344) “Instrument approach operations” means an approach and landing using instruments for navigation guidance based on an IAP. There are two methods for executing instrument approach operations—

- (i) A 2D instrument approach operation, using lateral navigation guidance only; and
- (ii) A 3D instrument approach operation, using both lateral and vertical navigation guidance.

Note: Lateral and vertical navigation guidance refers to the guidance provided either by: (a) a ground-based radio navigation aid; or (b) computer-generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these.

(345) “Instrument approach procedure (IAP)” means a series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial

approach fix or, where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en route obstacle clearance criteria apply. IAPs are classified as follows—

- (i) Non-precision approach (NPA) procedure. An IAP designed for 2D instrument approach operations Type A.
 - (ii) Approach procedure with vertical guidance (APV). A PBN IAP designed for 3D instrument approach operations Type A.
 - (iii) Precision approach (PA) procedure. An IAP based on navigation systems (ILS, MLS, GLS, and SBAS CAT I) designed for 3D instrument approach operations Type A or B.
- (346) “Instrument meteorological conditions (IMC)” means meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.
- (347) “Instrument flight time” means time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points.
- (348) “Instrument ground time” means time during which a pilot is practising, on the ground, simulated instrument flight in a flight simulation training device approved by the Authority.
- (349) “Instrument time” means time in which cockpit instruments are used as the sole means for navigation and control, which may be instrument flight time or instrument ground time.
- (350) “Instrument training” means training which is received from an authorised instructor under actual or simulated instrument meteorological conditions.
- (351) “Integrated survival suit” means a survival suit which meets the combined requirements of the survival suit and life jacket.

- (352) “Interchange agreement” means a leasing agreement which permits an air carrier to dry lease and take or relinquish operational control of an aircraft at an airport.
- (353) “International commercial air transport” means the carriage by aircraft of persons or property for remuneration or hire or the carriage of mail between any two or more countries.
- (354) “International operating agency” means an agency of the kind contemplated in Article 77 of the Convention on International Civil Aviation.
- (355) “Investigation” as relates to an aircraft accident or incident, means a process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and, when appropriate, the making of safety recommendations.
- (356) “Investigator-in-charge” as relates to an aircraft accident or incident, means a person charged, on the basis of his or her qualifications, with the responsibility for the organisation, conduct and control of an investigation.
- (357) “Isolated aerodrome” means a destination aerodrome for which there is no destination alternate aerodrome suitable for a given aeroplane type.
- (358) “Journey log” means a form signed by the PIC of each flight that records the registration of the aircraft, the name of each crew member and their duty assignments, the type of flight, the date, place and time of arrival and departure.
- (359) “Knowledge test” means a test on the aeronautical knowledge areas required for an airman license or rating that can be administered in written form or by a computer.
- (360) “Land” when used as a verb in relation to an aircraft, includes alighting on water.
- (361) “Land distance available (LDA)” means the length of runway that is declared available and suitable for the ground run of an aeroplane landing.

- (362) “Landing area” means that part of a movement area intended for the landing or takeoff of an aircraft.
- (363) “Landing decision point (LDP)” means the point used in determining the Class 1 helicopter’s landing performance from which, an engine failure having been recognised at this point, the landing may be safely continued or a balked landing initiated.
- Note.— LDP applies only to helicopters operating in performance Class 1.
- (364) “Landing surface” means that part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft landing in a particular direction.
- (365) “Large aeroplane” means an aeroplane having a maximum certified take-off mass of 5,700 kg. (12,500 lbs.), or more.
- (366) “Late Finish / Early Start” means any duty that is carried out within any part of the period 01:00 to 06:59 hours local time, to which a crewmember is acclimatised.
- (367) “Level” means a generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.
- (368) “Level 1 Aviation Training Organisation (ATO)” means a flight training facility which conducts all or substantially all of each flight training course using aircraft.
- (369) “Level 2 Aviation Training Organisation (ATO)” means a flight training facility which conducts all or substantially all of each flight training course using simulation media which are qualified and approved by the Authority.
- (370) “Licence” includes any certificate of competency or certificate of validity issued with the licence or required to be held in connection with the licence by the law of the State in which the licence is granted.
- (371) “Licensing Authority” means the Authority designated by a Contracting State as responsible for the licensing of personnel.

Note: In these regulations, the Licensing Authority is deemed to have been given the following responsibilities by the Contracting State—

- Assessment of an applicant’s qualifications to hold a licence or rating;
- Issue and endorsement of licences and ratings;
- Designation and authorisation of approved persons;
- Approval of training courses;
- Approval of the use of FSTDs and authorisation for their use in gaining the experience or demonstrating the skill required for the issue of a licence or rating; and
- Validation of licences issued by other Contracting States.

- (372) “Life-limited part” means any part for which a mandatory replacement limit is specified in the type design, the Instructions for Continued Airworthiness, or the maintenance manual.
- (373) “Lighter-than-air aircraft” means any aircraft supported chiefly by its buoyancy in the air.
- (374) “Likely” means in the context of the medical requirements for licensing in Part 2 of these regulations, likely means a probability of occurring that is unacceptable to the medical assessor.
- (375) “Limit loads” means the maximum loads assumed to occur in the anticipated operating conditions.
- (376) “Line check” means a check given to a pilot by a check pilot to evaluate the pilot’s operational competency during line operating flight time, in an aircraft type he or she is qualified to fly, over a route and area in which the AOC holder is authorised to operate.
- (377) “Life-limited part” means any part for which a mandatory replacement limit is specified in the type design, the Instructions for Continued Airworthiness, or the maintenance manual.
- (378) “Lighter-than-air aircraft” means any aircraft supported chiefly by its buoyancy in the air.

- (379) “Limit loads” means the maximum loads assumed to occur in the anticipated operating conditions.
- (380) “Line maintenance” means any unscheduled maintenance resulting from unforeseen events, or scheduled checks that contain servicing and/or inspections that do not require specialised training, equipment or facilities.
- (381) “Line operating flight time” means the flight time recorded by the PIC or Co-Pilot while in commercial air transport service for an AOC holder.
- (382) “Line Operational Simulation” means simulation conducted using operational-oriented flight scenarios that accurately replicate interaction among flightcrew members and between flightcrew members and dispatch facilities, other crewmembers, air traffic control, and ground operations.
- (383) “Line Operational Flight Training (LOFT)” means training in a simulator with a complete crew using representative flight segments which contain normal, abnormal, and emergency procedures that may be expected in line operations.
- (384) “Load factor” means the ratio of a specified load to the weight of the aircraft, the former being expressed in terms of aerodynamic forces, inertia forces, or ground reactions.
- (385) “Local Night” means a period of 8 hours falling between 21:00 and 07:00 hours local time.
- (386) “Logbook” in the case of an aircraft logbook, engine logbook or variable pitch propeller logbook, or personal flying logbook, includes a record kept either in a book, or by any other means approved by the Minister in the particular case.
- (387) “Long Range Overwater Flights” means routes on which an aeroplane may be over water and at more than a distance corresponding to 120 minutes at cruising speed or 740 km (400 NM), whichever is the lesser, away from land suitable for making an emergency landing.
- (388) “Low Altitude Wind Shear Warning and Guidance System” means a system that will issue a warning of low altitude wind shear and in some cases provide the pilot with guidance information of the escape manoeuvre.

- (389) Low-visibility operations (LVO). Approach operations in RVRs less than 550 m and/or with a DH less than 60 m (200 ft) or take-off operations in RVRs less than 400 m.
- (390) “Mach Number Indicator” is an indicator that shows airspeed as a function of the Mach number.
- (391) “Maintenance” means the performance of tasks on an aircraft, engine, propeller or associated part required to ensure the continuing airworthiness of an aircraft engine, propeller or associated part including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.
- (392) “Maintenance Control Manual” is a document that describes the operator’s procedures necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator’s aircraft on time and in a controlled and satisfactory manner.
- (393) “Maintenance Organisation’s Procedures Manual” is a document endorsed by the head of the maintenance organisation that details the maintenance organisation’s structure and management responsibilities, scope of work, description of facilities, maintenance procedures, and quality assurance programme or equivalent system of inspections.
- (394) “Maintenance programme” is a document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability programme, necessary for the safe operation of those aircraft to which it applies.
- (395) “Maintenance records” means records that set out the details of the maintenance carried out on an aircraft, engine, propeller or associated part.
- (396) “Maintenance release” means a document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner in accordance with appropriate airworthiness requirements.
- (397) “Major alteration” means an alteration not listed in the aircraft, aircraft engine, or propeller specifications –

- (i) that might appreciably affect weight, balance, structural strength, performance, powerplant, operations, flight characteristics, or other qualities affecting airworthiness; or
 - (ii) that cannot be done by elementary operations.
- (398) “Major modification” means with respect to an aeronautical product for which a TC has been issued, a change in the type design that has an appreciable effect, or other than a negligible effect, on the mass and balance limits, structural strength, powerplant operation, flight characteristics, reliability, operational characteristics, or other characteristics or qualities affecting the airworthiness or environmental characteristics of an aeronautical product.
- (399) “Major repair” means a repair that;
 - (i) if improperly done might appreciably affect mass, balance, structural strength, performance, powerplant, operations, flight characteristics, or other qualities affecting airworthiness or
 - (ii) is not done according to accepted practices or cannot be done by elementary operations.
- (400) “Manoeuvring area” means that part of an aerodrome to be used for the takeoff, landing and taxiing of aircraft, excluding aprons.
- (401) “Master minimum equipment list (MMEL)” means a list established—
 - (i) for a particular aircraft type by the manufacturer with the approval of the State of Manufacture containing items, one or more of which is permitted to be unserviceable at the commencement of a flight and may be associated with special operating conditions, limitations or procedures; and
 - (ii) to provide the basis for development, review and approval by the Authority of an individual operator's MEL.

- (402) “Materially modified aircraft” means aircraft having powerplants installed other than those for which it is certified or modifications to the aircraft or its components that materially affect flight characteristics.
- (403) “Maximum certificated take-off mass” means the maximum permissible take-off mass of the aircraft according to the certificate of airworthiness, the flight manual, or other official document.
- (404) “Maximum diversion time” means maximum allowable range, expressed in time, from a point on a route to an en route alternate aerodrome.
- (405) “Maximum mass” means maximum certificated take-off mass.
- (406) “Maximum total weight authorized” in relation to an aircraft means the maximum total weight of the aircraft and its contents at which the aircraft may take off anywhere in the world, in the most favorable circumstances, in accordance with the certificate of airworthiness in force in respect of the aircraft.
- (407) “May” is a rule of construction that indicates that discretion can be used when performing an act described in a regulation.
- (408) “Measurement Device” means a calibrated calibrator, standard, equipment and test equipment that is intended to be used to test, measure, or calibrate other measurement devices. It is not to be used to test, measure, or calibrate an aeronautical product.
- (409) “Medical assessment” means the evidence issued by a Contracting State that the licence holder meets specific requirements of medical fitness.
- (410) “Medical certificate” means a document issued by the Authority as acceptable evidence of physical fitness as required for certain personnel licence holders.
- (411) “Meteorological information” means a meteorological report, analysis, forecast, and any other statement relating to existing or expected meteorological conditions.

- (412) “Military aircraft” means a naval, military or air force aircraft of any State and any aircraft in respect of which there is in force a certificate issued by the Minister that the aircraft is to be treated, for the purposes of these Regulations, as a military aircraft.
- (413) “Minimum descent altitude (MDA) or minimum descent height (MDH)” means a specified altitude or height in a 2D instrument approach operation or circling approach operation below which descent must not be made without the required visual reference.

Note 1: MDA is referenced to MSL and MDH is referenced to the aerodrome elevation or to the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. An MDH for a circling approach is referenced to the aerodrome elevation.

Note 2: The required visual reference means that section of the visual aids or of the approach area that should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position in relation to the desired flight path. In the case of a circling approach, the required visual reference is the runway environment.

Note 3: For convenience, when both expressions are used they may be written in the form “minimum descent altitude/height” and abbreviated “MDA/H.”

- (414) “Minimum equipment list (MEL)” is a list which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the MMEL established for the aircraft type.
- (415) “Minister” means the Minister responsible for civil aviation.
- (416) “Minor modification” means a modification other than a major modification.
- (417) “Modification” means the alteration of an aircraft/aeronautical product in conformity with an approved standard.

- (418) Monitoring. A cognitive process to compare an actual to an expected state.

Note: Monitoring is embedded in the competencies for a given role within an aviation discipline, which serve as countermeasures in the threat and error management model. It requires knowledge, skills, and attitudes to create a mental model and to take appropriate action when deviations are recognised.

- (419) “Movement area” is that part of an aerodrome to be used for takeoff, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).
- (420) “Navigable airspace” means the airspace above the minimum altitudes of flight prescribed in these regulations (Part 8) and includes airspace needed to ensure safety in the takeoff and landing of aircraft.
- (421) “Navigation of aircraft” means a function which includes the piloting of aircraft.
- (422) “Navigation specification” means a set of aircraft and flight crew requirements needed to support PBN operations within a defined airspace. There are two kinds of navigation specifications—
- (i) Required navigation performance (RNP) specification. A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP (e.g., RNP 4, RNP APCH).
 - (ii) Area navigation (RNAV) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV (e.g., RNAV 5, RNAV 1).
- (423) “Night” means the hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise. Civil twilight ends in the evening when the centre of the sun's disc is 6 degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon.

- (424) “Non-congested hostile environment” means a hostile environment outside a congested area.
- (425) “Non-hostile environment” means an environment in which—
- (i) a safe forced landing can be accomplished because the surface and surrounding environment are adequate;
 - (ii) the helicopter occupants can be adequately protected from the elements.
 - (iii) search and rescue response/capability is provided consistent with anticipated exposure; and (iv) the assessed risk of endangering persons or property on the ground is acceptable.

Note.— Those parts of a congested area satisfying the above requirements are considered non-hostile

- (426) “Non-precision approach (NPA) procedure” means an IAP designed for 2D instrument approach operations Type A.
- (427) “Observable behaviour (OB)”. A single role-related behaviour that can be observed and may or may not be measurable.
- (428) “Obstacle clearance altitude (OCA) or obstacle clearance height (OCH)” means the lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable, used in establishing compliance with appropriate obstacle clearance criteria.

Note 1: Obstacle clearance altitude is referenced to mean sea level and obstacle clearance height is referenced to the threshold elevation or in the case of non-precision approaches to the aerodrome elevation or the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. An obstacle clearance height for a circling approach is referenced to the aerodrome elevation.

Note 2: For convenience when both expressions are used they may be written in the form “obstacle clearance altitude/height” and abbreviated “OCA/H”.

- (429) “Obstruction clearance plane” means a plane sloping upward from the runway at a slope of 1:20 to the horizontal, and tangent to or clearing all obstructions within a specified area surrounding the runway as shown in a profile view of that area. In the plane view, the centreline of the specified area coincides with the centreline of the runway, beginning at the point where the obstruction clearance plane intersects the centreline of the runway and proceeding to a point at least 1,500 feet from the beginning point. Thereafter, the centreline coincides with the takeoff path over the ground for the runway (in the case of takeoffs) or with the instrument approach counterpart (for landings), or where the applicable one of these paths has not been established, it proceeds consistent with turns of at least 4,000 foot radius until a point is reached beyond which the obstruction clearance plane clears all obstructions. This area extends laterally 200 feet on each side of the centreline at the point where the obstruction clearance plane intersects the runway and continues at this width to the end of the runway; then it increases uniformly to 500 feet on each side of the centreline at a point 1,500 feet from the intersection of the obstruction clearance plane with the runway; thereafter, it extends laterally 500 feet on each side of the centreline.
- (430) “Offshore operations” means operations which routinely have a substantial proportion of the flight conducted over sea areas to or from offshore locations. Such operations include, but are not limited to, support of offshore oil, gas and mineral exploitation and sea-pilot transfer; (434) “Operating base” means the location from which operational control is exercised.

Note: An operating base is normally the location where personnel involved in the operation of the aeroplane work and where the records associated with the operation are located. An operating base has a degree of permanency beyond that of a regular point of call.

- (431) “Operation” an activity or group of activities which are subject to the same or similar hazards and which require a set of equipment to be specified, or the achievement and maintenance of a set of pilot competencies, to eliminate or mitigate the risk of such hazards.

Note.— Such activities could include, but would not be limited to, offshore operations, heli-hoist operations or emergency medical service.

- (432) “Operating position” means an air traffic control function performed within or directly associated with a control facility.
- (433) “Operational control” means the exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.
- (434) “Operational flight plan” means the operator's plan for the safe conduct of the flight based on considerations of aircraft performance, other operating limitations, and relevant expected conditions on the route to be followed and at the aerodromes or heliports concerned.
- (435) “Operations manual” means a manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.
- (436) “Operations specifications” are part of an operator's certificate (air operator certificate, approved training organization certificate, approved maintenance organization certificate, etc.) that is used to administer safety standards and define the provisions and limitations within which the operator may conduct business operations. Operations specifications are issued by the Authority and considered a legal, contractual agreement between the Authority and the operator.
- (437) “Operator” means a person, organisation or enterprise engaged in or offering to engage in an aircraft operation.
- (438) “Operations in performance Class 1” means a helicopter operations with performance such that, in the event of critical engine failure, performance is available to enable the helicopter to safely continue the flight to an appropriate landing area, unless the failure occurs prior to reaching the take-off decision point or after passing the LDP, in which cases the helicopter must be able to land within the rejected take-off or landing area.
- (439) “Operations in performance Class 2” means a helicopter operations with performance such that, in the event of critical

engine failure, performance is available to enable the helicopter to safely continue the flight to an appropriate landing area, except when the failure occurs early during the take-off manoeuvre or late in the landing manoeuvre, in which cases a forced landing may be required.

- (440) “Operations in performance Class 3” means a helicopter operations with performance such that, in the event of an engine failure at any time during the flight, a forced landing will be required
- (441) “Operations Manual (OM)” is a manual containing procedures, instructions, and guidance for use by operational personnel in the execution of their duties.
- (442) “Operations specifications (AOC)” means the authorisations including specific approvals, conditions, and limitations associated with the AOC and subject to the conditions in the OM.

Note: Operations specifications are issued by the Authority and are considered a legal, contractual agreement between the Authority and the air operator.

- (443) “Operations specifications (AMO)” is a part of the AMO certificate used to administer safety standards and define the terms, conditions, and limitations within which the AMO shall conduct business operations.

Note: Operations specifications are issued by the Authority and are considered a legal, contractual agreement between the Authority and the AMO.

- (444) “Operator” a person, organisation, or enterprise engaged in or offering to engage in an aircraft operation. The person who causes or authorises the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft, and/or the PIC.

Note: In the context of RPA, an aircraft operation includes the RPAS.

- (445) “Organisation responsible for the type design” means the organisation that holds the TC, or an equivalent document, for an aircraft, engine, or propeller type, issued by a Contracting State.

- (446) “Overhaul” means the restoration of an aircraft/aeronautical product using methods, techniques, and practices acceptable to the Authority, including disassembly, cleaning, and inspection as permitted, repair as necessary, and reassembly; and tested in accordance with approved standards and technical data, or in accordance with current standards and technical data acceptable to the Authority, which have been developed and documented by the State of Design, holder of the type certificate, supplemental type certificate, or a material, part, process, or appliance approval under Parts Manufacturing Authorisation (PMA) or Technical Standard Order (TSO).
- (447) “Overpack” means an enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage;
- (448) “Package” means the complete product of the packing operation consisting of the packaging and its contents prepared for transport.
- (449) “Packaging” means receptacles and any other components or materials necessary for the receptacle to perform its containment function.
- (450) “Parascending parachute” means a parachute which is towed by cable in such a manner as to cause it to ascend.
- (451) “Passenger” means a person other than a member of the crew.
- (452) “Passenger aircraft” means an aircraft that carries any person other than a crew member, an operator’s employee in an official capacity, an authorized representative of an appropriate national authority or a person accompanying a consignment or other cargo.
- (453) “Passenger exit seats” means those seats having direct access to an exit, and those seats in a row of seats through which passengers would have to pass to gain access to an exit, from the first seat inboard of the exit to the first aisle inboard of the exit. A passenger seat having “direct access” means a seat from which a passenger can proceed directly to the exit without entering an aisle or passing around an obstruction.

- (454) “Performance-based communication (PBC)” means communication based on performance specifications applied to the provision of ATS.

Note: An RCP specification includes communication performance requirements that are allocated to system components in terms of the communication to be provided and the associated transaction time, continuity, availability, integrity, safety, and functionality needed for the proposed operation in the context of a particular airspace concept.

- (455) “Performance-based navigation (PBN)” means area navigation based on performance requirements for aircraft operating along an ATS route, on an IAP, or in a designated airspace.

Note: Performance requirements are expressed in navigation specifications (RNAV specification, RNP specification) in terms of accuracy, integrity, continuity, availability, and functionality needed for the proposed operation in the context of a particular airspace concept.

- (456) “Performance-based surveillance (PBS)” means surveillance based on performance specifications applied to the provision of ATS.

Note: An RSP specification includes surveillance performance requirements that are allocated to system components in terms of the surveillance to be provided and the associated data delivery time, continuity, availability, integrity, accuracy of the surveillance data, safety, and functionality needed for the proposed operation in the context of a particular airspace concept.

- (457) “Performance Class 1 helicopter” means a helicopter with performance such that, in case of engine failure, it is able to land on the rejected take-off area or safely continue the flight to an appropriate landing area.

- (458) “Performance Class 2 helicopter” means a helicopter with performance such that, in case of engine failure, it is able to safely continue the flight, except when the failure occurs prior to a defined point after take-off or after a defined point before landing, in which cases a forced landing may be required.

- (459) “Performance Class 3 helicopter” means a helicopter with performance such that, in case of engine failure at any point in the flight profile, a forced landing must be performed.
- (460) “Performance criteria” means statements used to assess whether the required levels of performance have been achieved for a competency. A performance criterion consists of an observable behaviour, condition(s), and a competency standard.
- (461) “Person” means any individual, firm, partnership, corporation, company, association, joint stock association, or body politic, including any trustee, receiver, assignee, or other similar representative of these entities.
- (462) “Pilot flying (PF)”. The pilot whose primary task is to control and manage the flight path. The secondary tasks of the PF are to perform non-flight-path-related actions (radio communications, aircraft systems, other operational activities, etc.) and to monitor other crew members.
- (463) “Pilot in command” means the pilot responsible for the operation and safety of the aircraft during flight time. The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.
- (464) “Pilot-in-command (PIC) under supervision” means a CP performing, under the supervision of the PIC, the duties and functions of a PIC, in accordance with a method of supervision acceptable to the Licensing Authority.
- (465) “Pilot monitoring (PM)”. The pilot whose primary task is to monitor the flight path and its management by the PF. The secondary tasks of the PM are to perform non-flight-path-related actions (radio communications, aircraft systems, other operational activities, etc.) and to monitor other crew members.
- (466) “Pilot time” means that time a person—
- (i) serves as a required pilot;

- (ii) receives training from an authorised instructor in an aircraft, approved flight simulator, or approved flight training device; or
 - (iii) gives training as an authorised instructor in an aircraft, approved flight simulator, or approved flight-training device.
- (467) “Point of no return” means the last possible geographic point at which an aircraft can proceed to the destination aerodrome as well as to an available en route alternate aerodrome for a given flight.
- (468) “Pilot (to)” means to manipulate the flight controls of an aircraft during flight time.
- (469) “Policy” means a document containing a position or stance regarding a specific issue.
- (470) “Procedure” means a step-by-step logical progression of actions and decisions to achieve an objective.
- (471) “Process” means a set of interrelated or interacted activities that transforms inputs into outputs.
- (472) “Powered-lift” means a heavier-than-air aircraft capable of vertical takeoff, vertical landing, and low speed flight that depends principally on engine-driven lift devices or engine thrust for lift during these flight regimes and on nonrotating airfoil(s) for lift during horizontal flight.
- (473) “Powerplant” means an engine that is used or intended to be used for propelling aircraft. It includes turbo superchargers, appurtenances, and accessories necessary for its functioning, but does not include propellers.
- (474) “Power-unit” means a system of one or more engines and ancillary parts which are together necessary to provide thrust, independently of the continued operation of any other power unit(s), but not including short period thrust producing devices.
- (475) “Practical test” means a competency test on the areas of operations for a license, certificate, rating, or authorisation that is conducted by having the applicant respond to

questions and demonstrate manoeuvres in flight, in an approved flight simulator, or in an approved flight training device, or in a combination of these.

- (476) “Pre-flight inspection” means the inspection carried out before flight to insure that the aircraft is fit for the intended flight.
- (477) “Preliminary report” is the communication used for the prompt dissemination of data obtained during the early stages of the investigation.
- (478) “Prescribed” means a rule of construction that means the Authority has issued written policy or methodology which imposes either a mandatory requirement, if the written policy or methodology states “shall,” or a discretionary requirement if the written policy or methodology states “may”.
- (479) “Pressure-altitude” is an atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.
- (480) “Pressurised aircraft” means for airman-licensing purposes, an aircraft that has a service ceiling or maximum operating altitude, whichever is lower, above 25,000 feet MSL and which is provided with means of maintaining in any compartment a pressure greater than that of the surrounding atmosphere.
- (481) “Preventative maintenance” means simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations as described in IS: 5.1.1.2(a)(5).
- (482) “Primary Standard” means a standard defined and maintained by a State Authority and used to calibrate secondary standards.
- (483) “Problematic use of substances” means the use of one or more psychoactive substances by aviation personnel in a way that—
 - (i) Constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and/or
 - (ii) Causes or worsens an occupational, social, mental or physical problem or disorder.

- (484) “Prohibited area” as it relates to flight, is an airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.
- (485) “Proper shipping name” means the name to be used to describe a particular article or substance in all shipping documents and notifications and, where appropriate, on packaging.
- (486) “Propeller” means a device for propelling an aircraft that has blades on a powerplant driven shaft and that, when rotated, produces by its action on the air, a thrust approximately perpendicular to its plane of rotation. It includes control components normally supplied by its manufacturer, but does not include main and auxiliary rotors or rotating airfoils of powerplants.
- (487) “Psychoactive substances” means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.
- (488) “Psychosis” means a mental disorder in which the individual has manifested delusions, hallucinations, grossly bizarre or disorganised behaviour, or other commonly accepted symptoms of this condition; or the individual may reasonably be expected to manifest delusions, hallucinations, grossly bizarre or disorganised behaviour, or other commonly accepted symptoms of this condition.
- (489) “Public aircraft” means an aircraft used exclusively in the service of any government or of any political jurisdiction thereof, including the Government of Grenada, but not including any government owned aircraft engaged in operations which meet the definition of commercial air transport operations.
- (490) “Quality assurance” quality assurance, as distinguished from quality control, involves activities in the business, systems, and technical audit areas. A set of predetermined, systematic actions which are required to provide adequate confidence that a product or service satisfies quality requirements.
- (491) “Quality control” means the regulatory inspection process through which actual performance is compared with

standards, such as the maintenance of standards of manufactured aeronautical products, and any difference is acted upon.

- (492) “Quality system” means documented organisational procedures and policies; internal audit of those policies procedures; management review and recommendation for quality improvements.
- (493) “Radiotelephony” is a form of radio communication primarily intended for the exchange of information in the form of speech.
- (494) “Rated air traffic controller” means an air traffic controller holding a licence and valid ratings appropriate to the privileges to be exercised.
- (495) “Rating” means an authorisation entered on or associated with a license or certificate and forming part thereof, stating special conditions, privileges or limitations pertaining to such license or certificate.
- (496) “Rebuild” means the restoration of an aircraft/aeronautical product by using methods, techniques, and practices acceptable to the Authority, when it has been disassembled, cleaned, inspected as permitted, repaired as necessary, reassembled, and tested to the same tolerances and limits as a new item, using either new parts or used parts that conform to new part tolerances and limits. This work will be performed by only the manufacturer or an organisation approved by the manufacturer, and authorised by the State of Registry.
- (497) “Record” means anything in which information of any description is recorded.
- (498) “Reference Standard” means a standard that is used to maintain working standards.
- (499) “Remote co-pilot (CP)” means a licensed remote pilot serving in any piloting capacity other than as remote PIC but excluding a remote pilot who is in the RPS for the sole purpose of receiving flight instruction.
- (500) “Remote flight crew member” means a licensed flight crew member charged with duties essential to the operation of an RPAS during a flight duty period.

- (501) “Remotely piloted aircraft (RPA)” means an unmanned aircraft that is piloted from an RPS.
- (502) “Remotely piloted aircraft system (RPAS)” means an RPA, its associated RPSs, the required C2 links, and any other components as specified in the type design.
- (503) “Remote pilot” means a person charged by the operator with duties essential to the operation of an RPA and who manipulates the flight controls, as appropriate, during flight time.
- (504) “Remote pilot-in-command (PIC)” means the remote pilot designated by the operator as being in command and charged with the safe conduct of a flight.
- (505) “Remote pilot station (RPS)” means the component of the RPAS containing the equipment used to pilot the RPA.
- (506) “Rendering (a Certificate of Airworthiness) valid” means the action taken by a Contracting State, as an alternative to issuing its own certificate of airworthiness, in accepting a certificate of airworthiness issued by any other Contracting State as the equivalent of its own certificate of airworthiness. Also referred to as validation.
- (507) “Rendering (a licence) valid” means the action taken by a Contracting State, as an alternative to issuing its own licence, in accepting a licence issued by any other Contracting State as the equivalent of its own licence. Also referred to as validation.
- (508) “Renewal of licence, rating, authorisation, or certificate” means the administrative action taken within the period of validity of a licence, rating, authorisation, or certificate that allows the holder to continue to exercise the privileges of a licence, rating, authorisation, or certificate for a further specified period contingent upon the fulfilment of specified requirements.
- (509) “Repair” means;
- (i) The restoration of an aircraft, engine, propeller, or associated part to an airworthy condition in accordance

with the appropriate airworthiness requirements, after it has been damaged or subjected to wear;

- (ii) The restoration of an aeronautical product to an airworthy condition as defined by the appropriate airworthiness requirements;
 - (iii) The restoration of an aeronautical product to an airworthy condition to ensure that the aircraft continues to comply with the design aspects of the appropriate airworthiness requirements used for the issuance of the type certificate for the respective aircraft type, after it has been damaged or subjected to wear.
- (510) “Repetitive flight plan (RPL)” means a flight plan related to a series of frequently recurring, regularly operated individual flights with identical basic features, submitted by an operator for retention and repetitive use by ATC units.
- (511) “Replacement” in relation to any part of an aircraft or its equipment includes the removal and replacement of that part whether or not by the same part, and whether or not any work is done on it; but does not include the removal and replacement of a part which is designed to be removable solely for the purpose of enabling another part to be inspected, repaired, removed or replaced or cargo to be loaded.
- (512) “Reporting point” means a specified geographical location in relation to which the position of the aircraft can be reported.
- (513) “Reporting Time” means the time at which a crew member is required by the AOC holder to report for any duty.
- (514) “Required communication performance (RCP)” is a statement of the performance requirements for operational communication in support of specific ATM functions.
- (515) “Required communication performance (RCP) specification” means a set of requirements for ATS provision and associated ground equipment, aircraft capability, and operations needed to support PBC.
- (516) “Required communication performance type (RCP type)” is a label (e.g. RCP 240) that represents the values assigned to RCP

parameters for communication transaction time, continuity, availability and integrity.

- (517) “Required navigation performance (RNP)” is a statement of the navigation performance necessary for operation within a defined airspace.

Note.— Navigation performance and requirements are defined for a particular RNP type and/or application

- (518) “Required surveillance performance (RSP) specification” means a set of requirements for ATS provision and associated ground equipment, aircraft capability, and operations needed to support PBS.

- (519) “Rest period” means a continuous and defined period of time, subsequent to and/or prior to duty, during which flight or cabin crew members are free of all duties.

- (520) “Restricted area” as it relates to airspace, is an airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

- (521) “RNP type” means a containment value expressed as a distance in nautical miles from the intended position within which flights would be for at least 95 per cent of the total flying time.

Example.— RNP 4 represents a navigation accuracy of plus or minus 7.4 km (4 NM) on a 95 per cent containment basis.

- (522) “Rotorcraft” means a power-driven heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors.

- (523) “Rotorcraft flight manual” is a manual, associated with the certificate of airworthiness, containing limitations within which the rotorcraft is to be considered airworthy, and instructions and information necessary to the flight crew members of the safe operation of the rotorcraft.

- (524) “Rotorcraft load combinations” means configurations for external loads carried by rotorcraft—

- (i) Class A – external load fixed to the rotorcraft, which cannot be jettisoned, does not extend below the landing gear and is used to transport cargo;
 - (ii) Class B – external load suspended from the rotorcraft, which can be jettisoned, and is transported free of land or water during rotorcraft operations;
 - (iii) Class C – external load suspended from the rotorcraft, which can be jettisoned, but remains in contact with land or water during rotorcraft operation;
 - (iv) Class D - external load suspended from the rotorcraft for the carriage of persons.
- (525) “Rostered / Planned Duty” means a duty period, or series of duty periods, with stipulated start and finish times, notified to crews in advance.
- (526) “Rostering Period” means a number of consecutive weeks (2 to 6 weeks normally 4 weeks).
- (527) “RPA observer” means a trained and competent person designated by the operator, who, by visual observation of the RPA, assists the remote pilot in the safe conduct of the flight.
- (528) “Runway” is a defined rectangular area on a land aerodrome prepared for the landing and takeoff of aircraft.
- (529) “Runway-holding position” means a designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorised by the aerodrome control tower.
- (530) “Runway visual range (RVR)” means the range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.
- (531) “Safe forced landing” means unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface.

- (532) “Safety” means the state in which risks associated with aviation activities, related to or in direct support of the operations of aircraft, are reduced and controlled to an acceptable level.
- (533) “Safety data” means a defined set of facts or set of safety values collected from various aviation related sources, which when analysed is used to maintain or improve safety.

Note: Such safety data is collected from proactive or reactive safety-related activities, including—

- Accident or incident investigations; □
 - Safety reporting; □
 - Continuing airworthiness reporting; □
 - Operational performance monitoring; □
 - Inspections, audits, and surveys; or □
 - Safety studies and reviews. □
- (534) “Safety information” means safety data processed, organised, or presented in a given context so as to make it useful for the purpose of sharing, exchanging, or retaining for safety management.
- (535) “Safety management system” means a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.
- (536) “Safety oversight” means a function, performed by a State, that ensures that aviation licence, certificate, authorisation, or approval holders comply with safety-related standards, regulations, and associated procedures and includes the assessment of the service providers’ SMS where necessary.
- (537) “Safety performance” means a State or service provider’s safety achievement as defined by its safety performance targets and safety performance indicators.
- (538) “Safety performance indicator” means a data-based parameter used for monitoring and assessing safety performance.
- (539) “Safety performance target” means a State or service provider’s planned or intended target for a safety performance indicator over a given period that aligns with the safety objectives.

- (540) “Safety programme” means an integrated set of regulations and activities aimed at improving safety.
- (541) “Safety recommendation” as it relates to accident investigation is a proposal of the accident investigation authority of the State conducting the investigation, based on information derived from the investigation made with the intention of preventing accidents or incidents.
- (542) “Safety risk” means the predicted probability and severity of the consequences or outcomes of a hazard.
- (543) “Safety-sensitive personnel” means persons who might endanger aviation safety if they perform their duties and functions improperly including, but not limited to, crew members, aircraft maintenance personnel and air traffic controllers.
- (544) “Satellite approved training organisation” means an ATO at a location other than ATO’s principal place of business.
- (545) “Satisfactory evidence” means a set of documents or activities that a Contracting State accepts as sufficient to show compliance with an airworthiness requirement.
- (546) “Scheduled Duty” means the allocation of a specific flight or flights or other duties to a crew member within the pre-notified rostered series of duty periods.
- (547) “Screening” means the application of technical or other means that are intended to identify and/or detect weapons, explosives, or other dangerous devices, articles, or substances that may be used to commit an act of unlawful interference.
- (548) “Secondary Standards” means a standard maintained by comparison with a primary standard.
- (549) “Security” means safeguarding civil aviation against acts of unlawful interference. This objective is achieved by a combination of measures and human and material resources.
- (550) “Security audit” means an in-depth compliance examination of all aspects of the implementation of the national civil aviation security programme.

- (551) “Security control” means a means by which the introduction of weapons, explosives, or other dangerous devices, articles, or substances that may be used to commit an act of unlawful interference can be prevented.
- (552) “Security inspection” means an examination of the implementation of relevant national civil aviation security programme requirements by an airline, aerodrome, or other entity involved in security.
- (553) “Security restricted area” means those areas of the airside of an aerodrome that are identified as priority risk areas where in addition to access control, other security controls are applied. Such areas will normally include, inter alia, all commercial aviation passenger departure areas between the screening checkpoint and the aircraft; the ramp; baggage make-up areas, including those where aircraft are being brought into service and screened baggage and cargo are present; cargo sheds; mail centres; and airside catering and aircraft cleaning premises.
- (554) “Security survey” means an evaluation of security needs, including the identification of vulnerabilities that could be exploited to carry out an act of unlawful interference, and the recommendation of corrective actions.
- (555) “Security test” means a covert or overt trial of an aviation security measure that simulates an attempt to commit an unlawful act.
- (556) “Sector” means the time between the aircraft first moves under its own power, takes off, lands and comes to rest on the designated parking position.
- (557) “Series of flights” means consecutive flights that—
- (i) Begin and end within a period of 24 hours; and
 - (ii) Are all conducted by the same PIC.
- (558) “Serious incident” means an incident involving circumstances indicating that an accident nearly occurred.
- (559) “Serious injury” means an injury which is sustained by a person in an accident and which—

- (i) requires hospitalisation for more than 48 hours, commencing within seven days from the date the injury was received;
 - (ii) results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
 - (iii) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
 - (iv) involves injury to any internal organ; or
 - (v) involves second or third degree burns, or any burns affecting more than 5% of the body surface; or
 - (vi) involves verified exposure to infectious substances or injurious radiation.
- (560) “Shall” indicates a mandatory requirement.
- (561) “Signal area” means an area on an aerodrome used for the display of ground signals.
- (562) “Sign a maintenance release” means to certify that maintenance work has been completed satisfactorily in accordance with appropriate airworthiness requirements by issuing the approval for return to service referred to in Parts 6 and 9 of these regulations.
- (563) “Signature” is an individual’s unique identification used as a means of authenticating a record entry or record. A signature may be hand-written, electronic, or any other form acceptable to the Authority.
- (564) “Significant” means in the context of the medical provisions in subpart 2. of these regulations, significant means to a degree or of a nature that is likely to jeopardise flight safety.
- (565) “Skill test” means a competency test on the areas of operations for a licence, certificate, rating, or authorisation that is conducted with actual demonstrations and by having the applicant respond to questions.

- (566) “Small aeroplane” means an aeroplane having a maximum certified take-off mass of less than 5,700 kg. (12,500 lbs.).
- (567) “Solo flight” means flight time during which a student pilot is the sole occupant of the aircraft, or that flight time during which the student acts as a PIC of a gas balloon or an airship requiring more than one flight crewmember.
- (568) “Solo flight time” means flight time during which a student pilot is the sole occupant of an aircraft.
- (569) “Solo flight time – remotely piloted aircraft (RPA) systems” means flight time during which a student remote pilot is controlling the RPAS, acting solo.
- (570) “Spare parts” means any parts, appurtenances, and accessories of aircraft (other than aircraft engines and propellers), of aircraft engines (other than propellers), of propellers, and of appliances, maintained for installation or use in an aircraft, aircraft engine, propeller, or appliance, but which at the time are not installed therein or attached thereto.
- (571) “Special VFR flight” means a VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.
- (572) “Specialised maintenance” means any maintenance not normally performed by an AMO (e.g., tire retreating, plating, etc.).
- (573) “Speciality curriculum” means a set of courses that is designed to satisfy a requirement of the Civil Aviation Regulations and that is approved by the Authority for use by a particular Level 2 ATO or satellite Level 2 ATO. The speciality curriculum includes training requirements unique to one or more Level 2 ATO clients.
- (574) “Specific operating provisions” (Maintenance) means the Specific Operating Provisions which describe the ratings (Class and/or Limited) in detail and which will contain or reference material and process specifications used in performing repair work, along with any limitations applied to the maintenance organisation. The accountable manager and the Authority sign this document.

- (575) “Split Duty” means a Flying Duty Period that consists of two or more sectors, separated by less than a minimum rest period.
- (576) “Standard” means an object, artifact, tool, test equipment, system, or experiment that stores, embodies, or otherwise provides a physical quantity, which serves as the basis for measurement of the quantity. It also includes a document describing the operations and process that must be performed in order for a particular end to be achieved.
- (577) Specific approval. An approval that is documented in the operations specifications for commercial air transport operations or in the list of specific approvals for non-commercial operations.
- (578) “Standard atmosphere” means an atmospheric unit of reference defined as follows—
- (i) the air is a perfect dry gas;
 - (ii) the physical constants are—

Sea level mean molar mass:	$M_0 = 28.964420 \times 10^{-3} \text{ kg mol}^{-1}$
Sea level atmospheric pressure:	$P_0 = 1013.250 \text{ hPa}$
Sea level temperature:	$t_0 = 15^\circ\text{C}$ and $T_0 = 288.15 \text{ K}$
Sea level atmospheric density:	$p_0 = 1.2250 \text{ kg m}^{-3}$
Temperature of the ice point:	$T_i = 273.15 \text{ K}$
Universal gas constant:	$R^* = 8.31432 \text{ JK}^{-1}\text{mol}^{-1}$

- (iii) the temperature gradients are—

Geopotential altitude (km)		Temperature gradient
From	To	(Kelvin per standard geopotential kilometre)

-5.0	11.0	-6.5
11.0	20.0	0.0
20.0	32.0	+1.0
32.0	47.0	+2.8
47.0	51.0	0.0
51.0	71.0	-2.8
71.0	80.0	-2.0

- (579) “Standby Duty” means a period during which the company places restraints on a crewmember who would otherwise be off duty.
- (580) “State of Design” means the Contracting State which approved the original type certificate and any subsequent supplemental type certificates for an aircraft, or which approved the design of an aeronautical product or appliance.
- (581) “State of Destination” means as relating to dangerous goods, the State in the territory of which the dangerous goods consignment is finally to be unloaded from an aircraft.
- (582) “State of Manufacture” means the Contracting State, under whose authority an aircraft was assembled, approved for compliance with the type certificate and all extant supplemental type certificates, test flown and approved for operation. The state of manufacture may or may not also be the state of design.
- (583) “State of Occurrence” means the State in the territory of which an accident or incident occurs.
- (584) “State of Origin” as it relates to dangerous goods, the State in which dangerous goods were first loaded on an aircraft.
- (585) “State of Registry” means the Contracting State on whose registry an aircraft is entered.
- (586) “State of the Aerodrome” means the State in whose territory the aerodrome is located.
- (587) “State of the Operator”. The State in which the operator’s principal place of business is located or, if there is no such place of business, the operator’s permanent residence.

- (588) “State of the principal location of a general aviation operator”. The State in which the operator of a general aviation aircraft has its principal place of business or, if there is no such place of business, its permanent residence.
- (589) “State safety programme (SSP)” means an integrated set of regulations and activities aimed at improving safety.
- (590) “Substance” means alcohol, sedatives, hypnotics, anxiolytics, hallucinogens, opioids, cannabis, inhalants, central nervous system stimulants such as cocaine, amphetamines, and similarly acting sympathomimetics, phencyclidine or similarly acting arylcyclohexylamines, and other psychoactive drugs and chemicals.
- (591) “Substance abuse” means—
- (i) the use of a substance in a situation in which that use was physically hazardous, if there has been at any other time an instance of the use of a substance also in a situation in which that use was physically hazardous;
 - (ii) a verified positive drug test result acquired under an anti-drug program or internal program of the Grenada government; or
 - (iii) misuse of a substance that the Authority, based on case history and qualified medical judgement relating to the substance involved, finds makes the applicant unable to safely perform the duties or exercise the privileges of the airman certificate applied for or held; or may reasonably be expected, for the maximum duration of the airman medical certificate applied for or held, to make the applicant unable to perform those duties or exercise those privileges.
- (592) “Substance dependence” means a condition in which a person is dependent on a substance, other than tobacco or ordinary xanthine-containing (e.g., caffeine) beverages, as evidenced by increased tolerance; manifestation of withdrawal symptoms; impaired control of use; or continued use despite damage to physical health or impairment of social, personal, or occupational functioning.

- (593) "Substantial damage" means damage or failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. Engine failure or damage limited to an engine if only one engine fails or is damaged, bent failings or cowlings, dented skin, small punctured holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips are not considered "substantial damage" for the purpose of substantial damage relating to an aircraft accident.
- (594) "Suitable Accommodation" means a well-furnished bedroom, which is subject to minimum noise, is well ventilated and has the facility to control the level of light and temperature.
- (595) "Surveillance" means the State activities through which the State proactively verifies through inspections and audits that aviation licence, certificate, authorisation, or approval holders continue to meet the established requirements and function at the level of competency and safety required by the State.
- (596) "Syllabus (training)" means the detailed summary or outline describing the main points of a course.
- (597) "Synthetic flight trainer" see Flight simulation training device.
- (598) "Synthetic vision system (SVS). A system to display data-derived synthetic images of the external scene from the perspective of the flight deck.
- (599) "Take-off and initial climb phase" means that part of the flight from the start of take-off to 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or to the end of the climb in the other cases.
- (600) "Takeoff decision point" means the point used in determining takeoff performance of a Class 1 helicopter from which, should an engine failure occur at this point, either a rejected takeoff may be made or a takeoff safely continued.
- (601) "Take-off safety speed for Category A rotorcraft (VTOSS)" means as it pertains to rotary-wing aircraft, the minimum speed at which climb shall be achieved with the critical engine

inoperative, the remaining engines operating within approved operating limits.

- (602) "Take-off surface" means that part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft taking off in a particular direction.
- (603) "Target level of safety (TLS)" means a generic term representing the level of risk which is considered acceptable in particular circumstances.
- (604) "Taxiing" means movement of an aircraft on the surface of an aerodrome under its own power, excluding takeoff and landing.
- (605) "Taxiway" means a defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including—
 - (i) Aircraft stand taxilane. A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only;
 - (ii) Apron taxiway. A portion of a taxiway system located on an apron and intended to provide a through taxi route across the apron;
 - (iii) Rapid exit taxiway. A taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.
- (606) "Technical instructions" means the latest effective edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc. 9284-AN/905), including the supplement and any addendum, approved and published by decision of the Council of the ICAO. The term "Technical Instructions" is used in this Part.
- (607) "Technical log" means a document carried on an aircraft for recording defects and malfunctions discovered during operation and for recording details of all maintenance carried

out whilst the aircraft is operating between scheduled visits to the base maintenance facility. It also contains operating information relevant to flight safety and maintenance data that the operating crew need to know. A technical log contains two independent sections: a journey record section and an aircraft maintenance record section.

- (608) “Terminal control area” means a control area normally established at the confluence of ATC routes in the vicinity of one or more major aerodromes.
- (609) “Terrain Awareness Warning System” means a system that provides the flight crew with sufficient information and alerting to detect a potentially hazardous terrain situation and so the flight crew may take effective action to prevent a controlled flight into terrain (CFIT) event.
- (610) “Threat” as it relates to flight, events or errors that occur beyond the influence of the flight crew, increase operational complexity and which must be managed to maintain the margin of safety.
- (611) “Threat management” means the process of detecting threats and responding to them with countermeasures that reduce or eliminate the consequences of threats, and mitigate the probability of errors.
- (612) “Threshold time” means the range, expressed in time, established by the State of the Operator, to an en route alternate aerodrome, where any time beyond requires a specific approval for EDTO from the State of the Operator.
- (613) “Tools, Equipment and Test Equipment” means equipment used for the performance of maintenance or calibration on an aircraft or aeronautical product. See also working standard.
- (614) “Total estimated elapsed time” means for IFR flights, the estimated time required from takeoff to arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the destination aerodrome, to arrive over the destination aerodrome. For VFR flights, the estimated time required from takeoff to arrive over the destination aerodrome.

- (615) “Total vertical error (TVE)” means the vertical geometric difference between the actual pressure altitude flown by an aircraft and its assigned pressure altitude (flight level).
- (616) “Track” means the projection on the earth’s surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North (true, magnetic or grid).
- (617) “Traceability” means a characteristic of a calibration, analogous to a pedigree. A traceable calibration is achieved when each Measurement Device and Working Standard, in a hierarchy stretching back to the National Standard, was itself properly calibrated, and the results properly documented. The documentation provides the information needed to show that all calibrations in the chain of calibrations were properly performed.
- (618) “Traffic avoidance advice” is advice provided by an air traffic services unit specifying manoeuvres to assist a pilot to avoid a collision.
- (619) “Traffic information” means information issued by an air traffic services unit to alert a pilot to other known or observed air traffic which may be in proximity to the position or intended route of flight and to help the pilot avoid a collision.
- (620) “Training manual” is a manual containing the training goals, objectives, standards syllabi, and curriculum for each phase of the approved training course.
- (621) “Training procedures manual” is a manual containing procedures, instructions and guidance for use by personnel in the execution of their duties in meeting the requirements of the certificate.
- (622) “Training program” means a program that consists of courses, courseware, facilities, flight training equipment and personnel necessary to accomplish a specific training objective. It may include a core curriculum and a specialty curriculum.
- (623) “Training time” means the time spent receiving any kind of approved training from an authorised instructor.

- (624) “Training to proficiency” means the process of the check airman administering each prescribed manoeuvre and procedure to a pilot as necessary until it is performed successfully during the training period.
- (625) “Training specifications” means a document issued to a certified Aviation Training Organisation by the Authority that prescribes that organisation’s training, checking, and testing authorisations and limitations, and specifies training program requirements.
- (626) “Transfer cargo and mail” means cargo and mail departing on an aircraft other than that on which it arrived.
- (627) “Transfer Standard” means any standard that is used to compare a measurement process, system, or device at one location or level with another measurement process, system or device at another location or level.
- (628) “Transition altitude” means the altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes.
- (629) “Transfer Standard” means any standard that is used to compare a measurement process, system, or device at one location or level with another measurement process, system or device at another location or level.
- (630) “Travelling time” means all time spent by a crewmember transiting between the place of rest and the place of reporting for duty.
- (631) “Type Certificate” is a document issued by a Contracting State to define the design of an aircraft type and to certify that this design meets the appropriate airworthiness requirements of that State.
- (632) “Type design” means the set of data and information necessary to define an aircraft, engine, or propeller type for the purpose of airworthiness determination.
- (633) “Ultimate load” means the limit load multiplied by the appropriate factor of safety.

- (634) “UN number” means the four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods to identify a substance or a particular group of substances.
- (635) “Undesired aircraft state” occurs when the flight crew places the aircraft in a situation of unnecessary risk.
- (636) “Unidentified baggage” means baggage at an aerodrome, with or without a baggage tag, that is not picked up by or identified with a passenger.
- (637) “Unit load device” means any type of aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.
- (638) “Unmanned free balloon” means a non-power-driven, unmanned, lighter-than-air aircraft in free flight.
- (639) “Unpredictability” means the implementation of security measures in order to increase their deterrent effect and their efficiency by applying them at irregular frequencies, in different locations, and/or with varying means, in accordance with a defined framework.
- (640) “Validation” means the action taken by one State as an alternative to issuing its own licence or certificate, in accepting a licence or certificate issued by another Contracting State as the equivalent of its own licence or certificate for use on aircraft registered in the first State.
- (641) “Visibility” means visibility for aeronautical purposes is the greater of—
- (i) The greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognized when observed against a bright background;
 - (ii) The greatest distance at which lights in the vicinity of 1,000 candelas can be seen and identified against an unlit background.
- (642) “Visual meteorological conditions (VMC)” means meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

- (643) “Vital Point” means any point on an aircraft at which single mal-assembly could lead to catastrophe, i.e. result in loss of aircraft and/or in fatalities.
- (644) “VFR flight” means a flight conducted in accordance with the visual flight rules.
- (645) “VTOSS” means the minimum speed at which climb shall be achieved with the critical power-unit inoperative, the remaining powerunits operating within approved operating limits.
- Note.— The speed referred to above may be measured by instrument indications or achieved by a procedure specified in the flight manual
- (646) “Week” means a period of 7 consecutive days starting at (..) time Local on a (..) day of the week. (Insert time and day of the week, as required ;)
- (647) “Wet Lease” means the lease of an aircraft with crew and other back-up.
- (648) “Wet runway” means a runway is considered wet if its surface is covered by any visible dampness or water up to and including 3 mm deep within the intended area of use.
- (649) “Working Standard” means a calibrated standard that is used in the performance of maintenance and/or calibrations in any work area for the purpose of forming the basis for product acceptance or for making a finding of airworthiness (approval for return to service) to an aircraft or aeronautical product. A working standard may be maintained by comparison with primary standards, secondary standards, reference standards or transfer standards, as appropriate. A working standard is not to be used to test, measure, or calibrate other working standards or measurement devices.

1.2 **GENERAL ADMINISTRATIVE RULES GOVERNING TESTING, LICENSES AND CERTIFICATES**

1.2.1.1 **DISPLAY AND INSPECTION OF LICENSES AND CERTIFICATES**

- (a) Pilot License—

- (1) To act as a pilot of a civil aircraft registered in Grenada, a person shall have in his or her physical possession or readily accessible in the aircraft a valid pilot license.
- (2) To act as a pilot of a civil aircraft of foreign registry within Grenada, a person shall be the holder of a valid pilot license issued by the State of Registry and have the pilot license in his or her physical possession or readily accessible in the aircraft.
- (b) Flight instructor rating: A person who holds a flight instructor rating shall have that license, or any other documentation acceptable to the Authority, in his or her physical possession or readily accessible in the aircraft when exercising the privileges of that rating.
- (c) Other airman license: A person required by any part of these regulations to have an airman's license shall have it in his or her physical possession or readily accessible in the aircraft or at the work site when exercising the privileges of that license.
- (d) Medical certificate: A person required by any part of these regulations to have a current medical certificate shall have it in his or her physical possession or readily accessible in the aircraft or at the work site when exercising the privileges of that certificate.
- (e) Pilot School certificate and Aviation Maintenance Technician School certificate: The holder of a Pilot School certificate or a provisional Pilot School certificate or Aviation Maintenance Technician School certificate shall display that certificate in a place in the school that is normally accessible to the public and that is not obscured.
- (f) Training Centre Certificate: The holder of a Training Centre certificate shall prominently display that certificate in a place accessible to the public in the principal business office of the training centre.
- (g) Aircraft Airworthiness Certificate: An owner or operator of an aircraft shall display that certificate in the cabin of the aircraft or at the entrance to the aircraft flight deck.
- (h) Approved Maintenance Organisation (AMO) Certificate: The holder of an AMO certificate shall prominently display that certificate in a place accessible to the public in the principal business office of the AMO.

- (i) Inspection of license: A person who holds an airman or crewmember license, medical certificate, or authorisation required by these regulations shall present it for inspection upon a request from—
 - (1) the Authority; or
 - (2) any national or local law enforcement officer.

1.2.1.2 CHANGE OF NAME

- (a) A holder of a license or certificate issued under these regulations may apply to change the name on a license or certificate.
- (b) The holder under paragraph 1.2.1.2 (a) shall include with any such request—
 - (1) the current license or certificate; and
 - (2) a copy of the marriage license, court order, or other document verifying the name change.
- (c) The Authority shall return to the airman the documents specified in paragraph 1.2.1.2 (b) of this subsection.

1.2.1.3 CHANGE OF ADDRESS

- (a) A holder of an airman license or pilot school, training centre, or aviation maintenance school certificate who has made a change in permanent mailing address may not, after 30 days from that date, exercise the privileges of the license or certificate unless he or she has notified the Authority in writing of the new permanent mailing address, or current residential address if the permanent mailing address includes a post office box number.

1.2.1.4 REPLACEMENT OF A LOST OR DESTROYED AIRMAN LICENSE, OR MEDICAL CERTIFICATE, OR KNOWLEDGE TEST REPORT

- (a) An applicant who has lost or destroyed one of the following documents issued under these regulations shall request a replacement in writing from the office designated by the Authority—
 - (1) an airman license;
 - (2) a medical certificate;
 - (3) a knowledge test report.

- (b) The airman or applicant shall state in the request letter—
 - (1) the name of the airman or applicant;
 - (2) the permanent mailing address, or if the permanent mailing address includes a post office box number, the person's current residential address;
 - (3) the social security number or equivalent national identification number;
 - (4) the date and place of birth of the airman or applicant; and
 - (5) any available information regarding the—
 - (i) grade, number, and date of issuance of the license, and the ratings, if applicable;
 - (ii) date of the medical examination, if applicable; and
 - (iii) date the knowledge test was taken, if applicable.
- (c) After receiving a facsimile from the Authority confirming that the lost or destroyed document was issued, an airman may carry the facsimile in lieu of the lost or destroyed document for up to 60 days pending the airman's receipt of a duplicate document.

1.2.1.5 FALSIFICATION, REPRODUCTION, OR ALTERATION OF APPLICATIONS, CERTIFICATES, LOGBOOKS, REPORTS, OR RECORDS

- (a) A person shall not make or cause to be made concerning any license, certificate, rating, qualification, or authorisation, an application for or duplicate thereof, issued under these regulations—
 - (1) any fraudulent or intentionally false statement;
 - (2) any fraudulent or intentionally false entry in any logbook, record, or report that these regulations require, or used to show compliance with any requirement of these regulations;
 - (3) any reproduction for fraudulent purpose; or any alteration.

- (b) A person who commits any act prohibited under paragraph 1.2.1.5 (a) of this section may have his or her airman license, rating, certificate, qualification, or authorisation revoked or suspended.

1.2.1.6 SURRENDER, SUSPENSION, OR REVOCATION OF LICENSE OR CERTIFICATE

- (a) A license or certificate issued under these regulations shall cease to be effective if it is surrendered, suspended, or revoked.
- (b) Where a certificate or a license issued under these regulations has been suspended or revoked, the holder of such a licence or a certificate shall, upon a request made by the Authority, return that license or certificate to the Authority.

1.2.1.7 REAPPLICATION AFTER REVOCATION

- (a) Unless otherwise authorised by the Authority, a person whose license, certificate, rating, or authorisation has been revoked shall not apply for any license, certificate, rating, or authorisation for 1 year after the date of revocation.

1.2.1.8 REAPPLICATION AFTER SUSPENSION

- (a) Unless otherwise authorised by the Authority, a person whose license has been suspended shall not apply for any license, rating, or authorisation during the period of suspension.

1.2.1.9 VOLUNTARY SURRENDER OR EXCHANGE OF LICENSE

- (a) The holder of a license or certificate issued under these regulations may voluntarily surrender it for—
 - (1) cancellation;
 - (2) issuance of a lower grade license; or
 - (3) another license with specific ratings deleted.
- (b) An applicant requesting voluntary surrender of a license shall include the following signed statement or its equivalent: "This request is made for my own reasons, with full knowledge that my (insert name of license or rating, as appropriate) may not be reissued to me unless I again pass the tests prescribed for its issuance."

1.2.1.10 PROHIBITION ON PERFORMANCE DURING MEDICAL DEFICIENCY

- (a) A person who holds a current medical certificate issued under these regulations shall not act in a capacity for which that medical certificate is required while that person—
- (1) knows or has reason to know of any medical condition that would make the person unable to meet the requirements for the required medical certificate; or
 - (2) is taking medication or receiving other treatment for a medical condition that results in the person being unable to meet the requirements for the required medical certificate.

1.2.1.11 DRUG AND ALCOHOL TESTING AND REPORTING

- (a) An employee who performs any function requiring a license, rating, qualification, or authorisation prescribed by these regulations directly or by contract for a certificate holder under the provisions of these regulations may—
- (1) be denied any license, certificate, rating, qualification, or authorisation for a period of up to 1 year after the date of such refusal; and
 - (2) have his or her license, certificate, rating, qualification, or authorisation issued under these regulations suspended or revoked.
- (b) A person subject to these regulations who is convicted for the violation of any local or national statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, or depressant or stimulant drugs or substances, shall—
- (1) be denied any license, certificate, rating, qualification, or authorisation issued under these regulations for a period of up to 1 year after the date of final conviction; or
 - (2) have his or her license, certificate, rating, qualification, or authorisation issued under these regulations suspended or revoked.

- (c) A person subject to these regulations who refuses to submit to a test to indicate the percentage by weight of alcohol in the blood, when requested by a law enforcement officer, or refuses to furnish or to authorise the release of the test results requested by the Authority shall—
 - (1) be denied any license, certificate, rating, qualification, or authorisation issued under these regulations for a period of up to 1 year after the date of that refusal; or
 - (2) have his or her license, certificate, rating, qualification, or authorisation issued under these regulations suspended or revoked.

1.3 EXEMPTIONS

1.3.1 Applicability

- (a) This subpart prescribes procedures for the application, review, and denial or issuance of exemptions from the Civil Aviation Act, as amended.

1.3.2 General

- (a) Any interested person may apply to the Authority for an exemption from these regulations.
- (b) Only the Authority may issue exemptions, and no person may take or cause to be taken any action not in compliance with these regulations unless the Authority has issued an applicable exemption to that person.
- (c) Exemptions will be granted by the Authority only in extraordinary circumstances.

1.3.3 Application for Exemption

- (a) Applications for exemptions shall be submitted at least 60 days in advance of the proposed effective date, to obtain timely review.
- (b) The application shall contain the applicant's—
 - (1) Name;
 - (2) Street address and mailing address, if different;

- (3) Telephone number;
 - (4) Fax number, if available;
 - (5) Email address, if available; and
 - (6) Agent for all purposes related to the application.
- (c) In addition to paragraph 1.3.3(b) of this subsection, the application shall contain—
 - (1) A citation of the specific requirement from which the applicant seeks relief;
 - (2) A description of the type of operations to be conducted under the proposed exemption;
 - (3) The proposed duration of the exemption;
 - (4) An explanation of how the exemption would be in the public interest, that is, how it would benefit the public as a whole;
 - (5) A detailed description of the alternative means by which the applicant will ensure a level of safety equivalent to that established by the regulation in question;
 - (6) A review and discussion of any known safety concerns with the regulation, including information about any relevant accidents or incidents of which the applicant is aware; and
 - (7) If the applicant seeks to operate under the proposed exemption outside of Grenada airspace, an indication of whether the exemption would contravene any provision of the ICAO SARPs.
- (d) If the applicant is not a citizen or legal resident of Grenada, the application shall specify a Grenada agent for service.
- (e) If the applicant seeks emergency processing, the application shall contain supporting facts and reasons that the application was not timely filed and the reasons it is an emergency. The Authority may deny an application if the Authority finds that the applicant has not justified the failure to apply in a timely fashion.

1.3.4 Review, Publication, Notification, and Extension of the Exemption**1.3.4.1 INITIAL REVIEW BY THE AUTHORITY**

- (a) The Authority will review the application for accuracy and compliance with the requirements of 1.3.3 of this part.
- (b) The Authority will notify the applicant and take no further action until the applicant complies with the requirements of 1.3.3 of this part have been met.

1.3.4.2 EVALUATION OF THE REQUEST

- (a) After initial review, if the filing requirements have been satisfied, the Authority will conduct a technical evaluation of the request, to include—
 - (1) A determination of whether an exemption would be in the public interest.
 - (2) A determination of whether the applicant's proposal would provide a level of safety equivalent to that established by the regulation.
Note: If it appears to the Authority that a technical evaluation of the request would impose a significant burden on the Authority's technical resources, the Authority may deny the exemption on that basis.
 - (3) A determination, if the applicant seeks to operate under the exemption outside of Grenada airspace, of whether a grant of the exemption would contravene the provisions of the applicable ICAO SARPs.
 - (4) A recommendation, based on the preceding elements, of whether the request may be granted or denied, and of any conditions or limitations that shall be part of the exemption.

1.3.4.3 NOTIFICATION OF DETERMINATION

- (a) The Authority will notify the applicant by formal letter of the decision to grant or deny the request for exemption as well as the duration of the exemption and any conditions or limitations to the exemption.

- (b) The Authority shall publish the exemption and duration of the exemption.
- (c) If the request is for emergency relief, the Authority will notify the applicant as soon as possible after processing the application.
- (d) If the exemption affects a significant population of the aviation community of Grenada, the Authority will also publish the summary in its AIP.

1.3.4.4 GRANT OF THE EXEMPTION TO OTHER INTERESTED PARTIES

- (a) If the Authority determines that an exemption may be granted, other persons or organisations may apply to the Authority to be included in the relief granted.
- (b) Such applications shall be in accordance with the requirements of 1.3.3 of this part.
- (c) If the Authority determines that the request merits the exemption to the applicant, it will notify the applicant by letter, specifying the duration of the exemption and listing any additional conditions that may pertain to the applicant that are not addressed in the underlying exemption.

1.4 SAFETY MANAGEMENT

1.4.1.1 SAFETY MANAGEMENT

- (a) Any AOC, ATO, and AMO shall implement a safety management system acceptable to the Authority that as a minimum—
 - (1) Identifies safety hazards;
 - (2) Ensures the implementation of remedial action necessary to maintain agreed safety performance;
 - (3) Provides for continuous monitoring and regular assessment of the safety performance; and
 - (4) Aims at a continuous improvement of the overall performance of the safety management system.

- (b) The safety management system shall clearly define lines of safety accountability throughout the organisation including a direct accountability for safety on the part of senior management.
- (c) The safety management system shall contain the components and elements prescribed in Implementing Standards and be commensurate with the size and complexity of the operation.

PART 2

PERSONNEL LICENSING

2.1 GENERAL LICENSING REQUIREMENTS

2.1.1 General

2.1.1.1 APPLICABILITY

- (a) This part prescribes the—
 - (1) Requirements for the issue, renewal, reissue, validation, and conversion of aviation personnel licences, ratings, authorisations, endorsements, certificates, and designations;
 - (2) Conditions under which those licences, ratings, authorisations, endorsements, certificates, and designations are necessary; and
 - (3) Privileges and limitations granted to the holders of those licences, ratings, authorisations, endorsements, certificates, and designations.

2.1.1.2 DEFINITIONS

- (a) For the purpose of this part, the applicable definitions are contained in Part 1 of these regulations – “General Policies, Procedures and Definitions.”

2.1.1.3 ABBREVIATIONS

- (a) The following acronyms are used in this part—
 - (1) AFIS – Aerodrome Flight Information Service
 - (2) AGI – Advanced Ground Instructor
 - (3) AIP – Aeronautical Information Publication

- (4) AME – Aviation Medical Examiner
- (5) AMO – Approved Maintenance Organisation
- (6) AMT – Aviation Maintenance Technician
- (7) ARS – Aviation Repair Specialist
- (8) AS – Airship
- (9) ASO – Aeronautical Station Operator
- (10) ATC – Air Traffic Control
- (11) ATCO – Air Traffic Controller
- (12) ATO – Approved Training Organisation
- (13) ATPE – Airline Transport Pilot Examiner
- (14) ATPL – Airline Transport Pilot Licence
- (15) ATS – Air Traffic Service
- (16) BGI – Basic Ground Instructor
- (17) C2 – Command And Control
- (18) CAT II – Category II
- (19) CAT III – Category III
- (20) CE – Commercial Pilot Examiner
- (21) CIE – International Commission on Illumination
- (22) CIRE – Commercial Instrument Rating Examiner
- (23) CP – Co-Pilot
- (24) CPL – Commercial Pilot Licence
- (25) CRM – Crew Resource Management
- (26) DE – Designated Examiner
- (27) DFEE – Designated Flight Engineer Examiner
- (28) DFNE – Designated Flight Navigator Examiner
- (29) DFOOE – Designated Flight Operations Officer Examiner
- (30) DG – Director General
- (31) DH – Decision Height
- (32) DME – Designated Mechanic Examiner
- (33) DPRE – Designated Parachute Rigger Examiner
- (34) ECCAA – Eastern Caribbean Civil Aviation Authority
- (35) FE – Flight Engineer
- (36) FEI – Flight Engineer Instructor FI – Flight Instructor
- (37) FN – Flight Navigator
- (38) FOO – Flight Operations Officer
- (39) FSTD – Flight Simulation Training Device
- (40) GI – Ground Instructor
- (41) HIV – Human Immunodeficiency Virus
- (42) IA – Inspection Authorisation
- (43) ICAO – International Civil Aviation Organization
- (44) IFR – Instrument Flight Rules
- (45) IGI – Instrument Ground Instructor
- (46) ILS – Instrument Landing System
- (47) IMC – Instrument Meteorological Conditions
- (48) IR – Instrument Rating

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- (49) IS – Implementing Standard
 - (50) ISO – International Organization for Standardization
 - (51) MCM – Maintenance Control Manual
 - (52) MEL – Minimum Equipment List
 - (53) MPA – Multi-Pilot Aeroplane
 - (54) MPH – Multi-Pilot Helicopter
 - (55) MPL – Multi-Crew Pilot Licence
 - (56) MSL – Mean Sea Level
 - (57) NDT – Non-Destructive Testing
 - (58) NOTAM – Notice to Airmen
 - (59) OJTI – On The Job Training Instructor
 - (60) OM – Operations Manual
 - (61) PIC – Pilot-In-Command
 - (62) PL – Powered-Lift
 - (63) PPE – Private Pilot Examiner
 - (64) PPL – Private Pilot Licence
 - (65) PR – Parachute Rigger
 - (66) RP – Remote Pilot
 - (67) RPA – Remotely Piloted Aircraft
 - (68) RPAS – Remotely Piloted Aircraft Systems
 - (69) RPL – Remote Pilot Licence
 - (70) RPS – Remote Pilot Station
 - (71) RT – Radiotelephony
 - (72) RVR – Runway Visual Range
 - (73) SOP – Standard Operating Procedure
 - (74) SPA – Single-Pilot Aeroplane
 - (75) SPH – Single-Pilot Helicopter
 - (76) SSP – State Safety Programme
 - (77) STS – Skill Test Standard
 - (78) VFR – Visual Flight Rules
 - (79) VMC – Visual Meteorological Conditions

2.2 GENERAL REQUIREMENTS FOR LICENCES, RATINGS, AUTHORISATIONS, ENDORSEMENTS, CERTIFICATES, AND DESIGNATIONS

2.2.1 Issue, Renewal, and Reissue of Licences, Ratings, Authorisations, Endorsements, Certificates, and Designations

(a) Applicability

- (1) This Section describes the licences, ratings and pilot authorisations issued by the Authority and prescribes the requirements for testing and validating such licences, ratings and authorisations.

- (2) An applicant for a licence shall apply to the Authority in the manner prescribed in IS 2.1.2.1.
 - (3) An applicant shall, before being issued any pilot licence, rating, authorisation, or designation, meet such requirements with respect to age, knowledge, experience, flight instruction, skill, medical fitness, and language proficiency as are specified for that licence, rating, or authorisation.
 - (4) An applicant shall, before being issued any licence or rating for personnel other than flight crew members meet such requirements in respect to age, knowledge, experience, and where appropriate medical fitness, and skill as are specified for that licence or rating.
- (b) Licences Issued. The Authority may issue the following licences under this part to an applicant who satisfactorily accomplishes the requirements of this part for the licence sought—
 - (1) Pilot licences—
 - (i) SPL - student pilot;
 - (ii) PPL - private pilot;
 - (iii) CPL – commercial pilot; and
 - (iv) ATPL - airline transport pilot.
 - (2) FE - flight engineer licence;
 - (3) FOO licence
 - (4) Air traffic controller licence;
 - (i) SCO – Student controller licence
 - (2) ATCO – Air traffic controller licence
 - (5) AMEL - Aviation Maintenance Technician (AMT) licence
- (c) Ratings Issued. The Authority may issue the following ratings to place on a pilot or flight instructor certificate when an applicant

satisfactorily accomplishes the requirements of this part for the rating being sought—

- (1) Category ratings in the following aircraft—
 - (i) Aeroplane;
 - (ii) Rotorcraft;
 - (iii) Glider;
 - (iv) Free balloon;
 - (v) Airship;
 - (vi) Power lift;
 - (viii) RPAS;
- (2) Class ratings in the following aircraft—
 - (i) Single-engine, land;
 - (ii) Single-engine, sea;
 - (iii) Multi-engine, land;
 - (iv) Multi-engine, sea;
 - (v) Helicopter;
 - (vi) Gyroplane;
 - (vii) Hot air – balloon;
 - (viii) Gas – balloon;
 - (ix) RPAS;
 - (x) Any rating considered necessary by the Authority;
- (3) Type ratings in the following aircraft—
 - (i) Large aircraft, other than lighter-than-air;

- (ii) Small turbojet powered aeroplanes;
 - (iii) Small helicopters for operations requiring an airline transport certificate;
 - (iv) Aircraft certified for at least two pilots;
 - (v) Any aircraft considered necessary by the Authority;
- (4) Instrument ratings in the following aircraft—
 - (i) Instrument – Aeroplane;
 - (ii) Instrument – Helicopter;
 - (iii) Instrument – Powered lift;
- (5) Flight Instructor—
 - (i) The appropriate aircraft category, class, instrument, and/or type rating according to the instruction to be taught.
- (d) The Authority may issue the following ratings to place on a Ground Instructor licence when an applicant satisfactorily accomplishes the requirements of this part for the rating sought—
 - (1) Basic;
 - (2) Advanced;
 - (3) Instrument;
- (e) The Authority may issue the following ratings for flight engineers when an applicant satisfactorily accomplishes the requirements of this part for the rating sought—
 - (1) reciprocating engine powered;
 - (2) turbopropeller powered; and
 - (3) turbojet powered.

- (f) The Authority may issue the following ratings for air traffic controllers when an applicant satisfactorily accomplishes the requirements of this part for the rating sought—
 - (1) Aerodrome control rating
 - (2) Approach control procedural rating
 - (3) Approach radar control surveillance rating
 - (4) Approach precision radar control rating
 - (5) Area control procedural rating
 - (6) Area control surveillance rating
- (g) The Authority may issue the following ratings for an AMT licence when an applicant satisfactorily accomplishes the requirements of this part for the rating sought—
 - (1) Airframe;
 - (2) Powerplant;
 - (3) Avionics.
 - (4) Any other specialized ratings as may be determined by the Authority
- (h) The Authority may issue the following type ratings for parachute riggers—
 - (1) Seat;
 - (2) Back;
 - (3) Chest;
 - (4) Lap.

2.2.1.1 AUTHORISATIONS ISSUED

- (a) The Authority may issue the following authorisations under this Part—

- (i) Category II pilot authorisation;
- (ii) Category III pilot authorisation.

2.2.1.2 CERTIFICATES ISSUED

- (a) The Authority may issue the following medical certificates under this part when an applicant satisfactorily accomplishes the requirements of this part

Medical certificate class 1 for CPL and ATPL

Medical certificate class 2 for SPL, PPL and FE

Medical certificate class 3 for ATCO licence and RPL.

- (b) The Authority may issue validation certificates to pilots and FEs holding a licence from another Contracting State.
- (c) The Authority may issue certificates of designation to representatives of the Authority as identified in Subsection 2.2.1.4 of this section.

2.2.1.3 RESERVED

2.2.1.4 DESIGNATION OF REPRESENTATIVES OF THE AUTHORITY

- (a) The Authority may issue the following designations to private persons to act on behalf of the Authority as specified in this part.

(1) DE,

(2) AME,

(3) Other designees as may be determined by the Authority.

2.2.1.5 VALIDITY OF LICENCES, RATINGS, AUTHORISATIONS CERTIFICATES AND DESIGNATIONS

- (a) The Authority may issue Licences, Ratings, Authorisations, Certificates and Designations with a specific expiration date.
- (b) The issue, renewal, and reissue of licences, ratings, authorisations, designations, and certificates will be performed by the Authority.
 - (1) Renewal of ratings and CAT II or III pilot authorisations may be performed by the examiner, when delegated by the Authority,

- (c) Renewal of ratings and CAT II or III pilot authorisations may be performed by the examiner, when delegated by the Authority, Application for the issue, renewal, and reissue of licences, ratings, authorisations, designations, and certificates by the Authority shall be done by submitting to the Authority a properly completed form, which can be obtained from the Authority.
- (d) The exercise of any of the privileges of a licence issued under this part shall be dependent upon the validity of such licence in respect of—
 - (1) the medical as applicable to such licence;
 - (2) the competency, proficiency, or currency of the licence holder; and
 - (3) the recency of experience of the licence holder.
- (e) Privileges—
 - (1) The holder of a licence, rating, certificate, authorisation, or designation shall not exercise privileges other than those granted by the licence, certificate, authorisation, or designation.
 - (2) The privileges granted by a licence, or by related ratings, may not be exercised unless the holder maintains competency and meets the requirements of this part for recent experience.
- (f) Maintenance of Competency.
 - (1) Maintenance of competency shall be indicated in the flight crew members personal licence or record (e.g., logbook).
 - (2) the maintenance of competency of flight crew and remote flight crew members engaged in commercial air transport operations shall be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with Part 8 of these regulations.
 - (3) the maintenance of competency shall be satisfactorily recorded in the operator's records or in the flight crew or remote flight crew member's personal logbook or licence.

- (g) A flight crew or RPAS flight crew member shall, to the extent deemed feasible by the State of Registry, or by the Authority of the State of the Operator, respectively, demonstrate his or her continuing competency in FSTDs approved by that State.
- (h) Medical Fitness. An applicant for the following licences, authorisations, and designations shall hold a current and appropriate medical certificate issued under the requirements of this part in order for his or her licence, authorisation, or designation to be valid—
 - (1) Student pilot licence
 - (2) Pilot licence
 - (3) ATCO licence.

Implementing Standard: See IS 2.2.1.5 for details on validity of licenses.

2.2.2 Language Proficiency

- (a) Pilots, FEs, ATCOs, and RPs, shall demonstrate the ability to speak and understand RT communications in English language.
- (b) The airmen identified in Paragraph 2.2.2(a) of this subsection shall demonstrate the ability to speak and understand RT communications in English language to at least the Operational Level (Level 4) with the aim to speak at the Expert Level (Level 6) as specified in the language proficiency requirements;
- (c) The language proficiency of the airmen identified in Paragraph 2.2.2(a) of this subsection shall be formally evaluated at intervals in accordance with an individual's demonstrated proficiency level as follows—
 - (1) those demonstrating language proficiency at the Operational Level 4 shall be evaluated at intervals not greater than 3 years;
 - (2) those demonstrating language proficiency at the Extended Level 5 shall be evaluated at intervals not greater than 6 years; and
 - (3) those demonstrating language proficiency at the Expert Level 6 shall be exempt from further language evaluation;

Implementing Standard: See IS:2.2.2 for detailed language proficiency requirements

2.2.3 General Requirements: Licences, Ratings, Authorisations and Certificates

- (a) The Authority may issue to an applicant who cannot comply with certain eligibility requirements or areas of operations required for the issue of a licence because of physical limitations, or for other reasons, a licence, rating, or authorisation with an appropriate limitation provided the—
 - (1) applicant is able to meet all other certification requirements for the licence, rating, or authorisation sought;
 - (2) physical limitation, if any, has been recorded with the Authority on the applicant's medical records; and
 - (3) authority determines that the applicant's inability to perform the particular area of operation will not adversely affect safety.
- (b) The Authority may remove a limitation placed on a person's licence provided that person demonstrates to an examiner or inspector satisfactory proficiency in the area of operation to which the limitation applies, or otherwise shows compliance with conditions to remove the limitation, as applicable.
- (c) A person shall not act as a required pilot of a civil aircraft of foreign registry within Grenada unless that person's pilot licence was issued under this part, or was issued or validated by the country in which the aircraft is registered.
- (d) A person shall not act as a pilot, flight instructor, required flight crew member, or air traffic controller unless that person holds an appropriate and current medical certificate issued under this part, or other documentation acceptable to the Authority.
- (e) Flight instructor rating—
 - (1) except as provided in Paragraph 2.2.3(e)(2) of this section, a person other than the holder of a flight instructor rating with appropriate certificate in his licence shall not —

- (i) give training required to qualify a person for solo flight and solo cross-country flight;
 - (ii) endorse an applicant for a pilot, flight instructor, or ground instructor licence or rating issued under this part;
 - (iii) endorse a pilot logbook to show training given; or
 - (iv) endorse a student pilot licence and logbook for solo operating privileges.
- (2) The following instructors do not have to hold a flight instructor rating—
 - (i) the holder of a commercial pilot licence with a lighter-than-air rating, provided the training is given in a lighter-than-air aircraft;
 - (ii) the holder of an airline transport pilot licence with appropriate ratings, provided the training is conducted in accordance with an approved air carrier training program;
 - (iii) a person who is qualified in accordance with Part 3, Subpart 3.4 of these regulations, provided the training is conducted in accordance with an approved training program;
 - (iv) a flight instructor, qualified in accordance with Subsection 2.1.4.8 of this part, not rated by the Authority; or
 - (v) the holder of a ground instructor licence in accordance with the privileges of the licence.
- (f) A person shall not act as the PIC or co-pilot of an aircraft unless that person holds the appropriate category, class, and type rating (if a class rating and type rating is required) for the aircraft to be flown, except where the pilot—
 - (1) is receiving training for the purpose of obtaining an additional pilot licence or rating that is appropriate to that aircraft while under the supervision of an authorised instructor; or

- (2) has received training required by this Part that is appropriate to the aircraft category, class, and type rating (if a class or type rating is required) for the aircraft to be flown, and has received the required endorsements from an authorised instructor.
- (g) A pilot shall not act as PIC of an aircraft that is carrying another person, or is operated for compensation or hire, unless that pilot holds a category, class, and type rating (if a class and type rating is required) that applies to the aircraft.

Note: This subsection does not require a category and class rating for an aircraft not type certified as an aeroplane, rotorcraft, glider, powered-lift, or lighter-than-air aircraft.

- (h) Except as provided in Paragraph 2.2.3(i) of this section, a person shall not act as PIC of a complex aeroplane, high-performance aeroplane, or a pressurised aircraft capable of flight above 25,000 feet MSL, or an aircraft that the Authority has determined requires aircraft type-specific training unless the person has—
 - (1) received and logged ground and flight training from an authorised instructor in the applicable aeroplane type, or in an approved flight simulator or approved flight training device that is representative of that, and has been found proficient in the operation and systems of that aeroplane; and
 - (2) received a one-time endorsement in the pilot's logbook from an authorised instructor who certifies the person is proficient to operate that aircraft.
- (i) The training and endorsement required by Paragraph 2.2.3(h) of this section is not required if the person has logged flight time as PIC of that type of aircraft, or in an approved flight simulator or approved flight training device that is representative of such an aircraft.
- (j) Additional training required for operating tailwheel aeroplanes. Except as provided in Paragraph 2.2.3(j)(3) of this section, a person shall not act as PIC of a tailwheel aeroplane unless that person has—
 - (i) received and logged flight training from an authorised instructor in a tailwheel aeroplane on the manoeuvres and procedures listed in Paragraph 2.2.3(j)(2) of this section;
 - (ii) received an endorsement in the person's logbook from an authorised instructor who found the person proficient in the

operation of a tailwheel aeroplane, to include at least normal and crosswind takeoffs and landings, wheel landings (unless the manufacturer has recommended against such landings), and go-around procedures;

- (iii) the training and endorsement required by this subsection is not required if the person logged PIC time in a tailwheel aeroplane before.

Implementing Standard: See IS: 2.2.3 for details on additional training requirements.

Implementing Standard; See IS 2.6.2.4 for persons exempt from holding a medical certificate.

2.2.4 Validation and Conversion of Foreign Licences, Ratings, Authorisations, and Certificates

Note: Validation and conversion of RPAS licences are contained in 2.3.11.3 of this part.

2.2.4.1 VALIDATION OF FLIGHT CREW LICENCES

(a) GENERAL REQUIREMENTS FOR VALIDATION.

- (1) A person who holds a current and valid pilot licence issued by another Contracting State in accordance with ICAO Annex 1 may apply for validation of such licence for use on aircraft registered in Grenada.
- (2) The applicant for the validation certificate shall present to the Authority the foreign licence and the record (e.g., logbook) of evidence of required experience.
- (3) The applicant for the validation certificate shall present to the Authority evidence that he or she holds either a current medical certificate issued under this part or a current medical certificate issued by the Contracting State that issued the applicant's licence.
- (4) The Authority may allow the applicant to use his or her foreign medical certificate with the validation certificate, provided that the medical certification requirements on which the foreign medical certificate was issued meet the requirements of this part, relevant to the licence held.

- (5) The applicant for the validation certificate shall present to the Authority evidence of language proficiency in English, as specified in Section 2.2.2 of this part or shall demonstrate to the Authority the language proficiency skills as specified in Section 2.2.2 of this part.
 - (6) The Authority will verify the authenticity of the licence, ratings, authorisations, and medical certificate with the State of Licence prior to issuing the validation.
 - (7) The Authority will only validate ratings or authorisations on the foreign licence together with the validation of a licence.
 - (8) The Authority may issue a validation certificate which will be valid for a period not exceeding 6 months, provided the foreign licence, ratings, or authorisations and the medical certificate remain valid.
- (b) VALIDATION CERTIFICATE WITH PPL PRIVILEGES. In addition to the requirements of Paragraph 2.2.4.1(a) of this subsection, the applicant for a validation certificate with PPL privileges shall have a foreign licence with at least PPL privileges.
- (c) VALIDATION CERTIFICATE WITH PPL/IR, CPL, CPL/IR, MPL, ATPL, OR FE PRIVILEGES. In addition to the requirements in Paragraph 2.2.4.1(a) of this subsection, the applicant for a validation certificate with PPL/IR, CPL, CPL/IR, MPL, ATPL, or FE privileges shall have a foreign licence with at least those privileges and shall meet the following requirements—
- (1) The applicant for the validation certificate shall demonstrate, to the satisfaction of the Authority and relevant to the licence to be validated, knowledge of Grenada's—
 - (i) Air law;
 - (ii) Meteorology;
 - (iii) Operational procedures; and
 - (iv) RT.

- (2) The applicant for the validation certificate shall complete a skill test for the relevant licence and ratings that he or she wants to be validated relevant to the privileges of the licence held.

Implementing Standard: See IS 2.2.3 for details on additional and exemptions to the training requirements of this section.

2.2.4.2 CONVERSION OF FLIGHT CREW LICENCES

- (a) Conversion of a foreign pilot licence for issuance of a PPL by Grenada.
 - (1) A person who holds a current and valid pilot licence with at least PPL privileges, issued by another Contracting State in accordance with ICAO Annex 1, may apply for a conversion and be issued a PPL for use on aircraft registered in Grenada, provided the following requirements are met—
 - (2) The holder shall—
 - (i) Present to the Authority the foreign licence, the evidence of experience required by presenting the record (e.g., logbook), and a current medical certificate;
 - (ii) Present to the Authority evidence of language proficiency in the English language as specified in Section 2.2.2 of this part, or shall demonstrate to the Authority the language proficiency skills as specified in Section 2.2.2 of this part;
 - (iii) Obtain a Class 2 medical certificate issued under this part;
 - (iv) Demonstrate, to the satisfaction of the Authority and relevant to the licence to be converted, knowledge of Grenada's—
 - (A) Air law;
 - (B) Meteorology;
 - (C) Operational procedures; and
 - (D) RT; and

- (E) Any other subject areas deemed necessary by the Authority.
- (v) Complete a skill test for the relevant licence and ratings that he or she wants to be converted relevant to the privileges of the licence held.
- (3) The Authority shall verify the authenticity of the licence, ratings, authorisations, and medical certificate with the State of Licence Issue prior to converting the licence.
- (4) Conversion of CPLs, CPLs/IR, MPLs, ATPLs, and FE licences, which have been validated in accordance with Subsection 2.2.4.1 of this part.
- (5) The holder of a current and valid foreign CPL, CPL/IR, MPL, ATPL, or FE licence, issued by another Contracting State in accordance with ICAO Annex 1, and an appropriate medical certificate, may apply for conversion to the appropriate licence and ratings issued by Grenada, provided the following requirements are met—
 - (i) The applicant is the holder of a current validation certificate issued under Subsection 2.2.4.1 of this part;
 - (ii) The applicant has completed 150 flight hours in a Grenada-registered aircraft which is operated by an operator established in Grenada exercising the privileges granted by the validation certificate;
 - (iii) The applicant for the conversion shall present to the Authority the foreign licence and evidence of the 150 flight hours by presenting the record (e.g., logbook); and
 - (iv) The applicant shall hold or obtain a medical certificate issued under this part, appropriate to the level of licence to be converted.
- (6) The holder of a current and valid foreign PPL/IR issued by another Contracting State, in accordance with ICAO Annex 1, and an appropriate medical certificate, may apply for conversion to the appropriate licence and ratings issued by Grenada, provided the following requirements are met—
 - (i) The applicant is the holder of a current validation certificate issued under Subsection 2.2.4.1 of this part;

- (ii) The applicant has completed 75 flight hours in a Grenada-registered aircraft in Grenada exercising the privileges granted by the validation certificate;
 - (iii) The applicant for the conversion shall present to the Authority the foreign licence and evidence of the 75 flight hours by presenting the record (e.g., logbook); and
 - (iv) The applicant shall hold or obtain a medical certificate issued under this part, appropriate to the level of licence to be converted.
- (b) Ratings listed on a person's foreign pilot licence that have been validated in accordance with Subsection 2.2.4.1 of this part may be placed on that person's converted licence.

2.2.4.3 VALIDATION IN CASE OF LEASED, CHARTERED, OR INTERCHANGED AIRCRAFT

- (a) The requirements stated in 2.2.4.1 of this part shall not apply where aircraft registered in Grenada are leased to, chartered by, or interchanged by an operator of another Contracting State, provided that during the term of the lease the State of the Operator has accepted responsibility for the technical and/or operational supervision of the aircraft in accordance with Article 83 bis of the Convention on International Civil Aviation.
- (b) The licences of the flight crew of the other Contracting State may be validated by the Authority, provided that the privileges of the flight crew licence validation are restricted for use during the lease, charter, or interchange period only on nominated aircraft in specified operations not involving a Grenada operator, directly or indirectly through a wet lease or other commercial arrangement.
- (c) The Authority shall verify the authenticity of the licence, ratings, authorisations, including the English language proficiency endorsement of at least Level 4, and medical certificate with the State of Licence Issue prior to issuing the validation.

2.2.4.4 TEMPORARY VALIDATION OF NON-GRENADA PILOT LICENCES HELD BY MANUFACTURER PILOTS

- (a) In circumstances where validation of a non-Grenada pilot licence is needed to fulfil specific tasks of finite duration, the Authority may issue a temporary validation of such a licence for those tasks as described in this Section.

- (b) Notwithstanding the requirements contained in 2.2.4.1, 2.2.4.2, 2.2.4.3, or 2.2.4.4 of this part, the Authority may temporarily validate a licence issued by another Contracting State in accordance with the provisions of ICAO Annex 1, including an instructor rating or examiner authorisation issued by that State, provided that the holder of the licence shall—
- (1) Possess the appropriate licence, medical certificate, type ratings, and qualifications, to include instructor or examiner qualifications, valid in the State of Licence Issue for the duties proposed;
 - (2) Demonstrate, to the satisfaction of the Authority and relevant to the licence to be validated, knowledge of Grenada's—
 - (i) Air law;
 - (ii) Meteorology;
 - (iii) Operational procedures; and
 - (iv) RT;
 - (3) Provide evidence of language proficiency in English as specified in Section 2.2.2 of this part or shall demonstrate to the Authority the language skills as specified in Section 2.2.2 of this part;
 - (4) Be employed by an aircraft manufacturer or ATO located outside Grenada and performing training on behalf of an aircraft manufacturer; and
 - (5) Be limited to performing flight instruction and testing for initial issue of type ratings, the supervision of initial line flying by the pilots of an operator in Grenada, delivery or ferry flights, initial line flying, flight demonstrations, or test flights.
- (c) Whenever conducting or supervising line flying, the pilot shall also be required to meet the relevant requirements of Part 8 of these regulations.

- (d) The Authority will verify the authenticity of the licence, ratings, authorisations, and medical certificate with the State of Licence Issue prior to issuing the temporary validation.
- (e) The duration of the temporary validation shall be 1 year.

2.2.4.5 VALIDATION OF AIRCRAFT MAINTENANCE TECHNICIAN LICENCES

- (a) GENERAL REQUIREMENTS FOR VALIDATION.
 - (1) A person who holds a current and valid AMT licence issued by another Contracting State in accordance with ICAO Annex 1 may apply for the validation of such licence for use on aircraft registered in Grenada provided the following requirements are met.
 - (i) The applicant for the validation certificate shall present to the Authority the foreign licence and evidence of the experience required by presenting the personal record (e.g., logbook).
 - (ii) The applicant for the validation certificate shall demonstrate to the Authority evidence of language proficiency in English.
 - (2) The Authority shall verify the authenticity of the licence, ratings, and authorisations with the State of Licence Issue prior to issuing the validation.
 - (3) The Authority shall only validate ratings or authorisations on the foreign licence together with the validation of a licence.
 - (4) The Authority may issue a validation certificate which shall be valid for 1 year, provided the foreign licence, ratings, or authorisations remain valid.
- (b) The applicant for the validation certificate shall demonstrate, to the satisfaction of the Authority and relevant to the licence to be validated, knowledge of—
 - (1) Air law;

- (2) Applicable airworthiness requirements governing certification and continuing airworthiness; and
- (3) AMOs and procedures.
- (c) The applicant for the validation certificate shall complete a skill test for the relevant licence and ratings that he or she wants to have validated, relevant to the privileges of the licence held.
- (d) The applicant for the validation certificate shall have a minimum of 4 years of AMT experience

2.2.4.6 CONVERSION OF AIRCRAFT MAINTENANCE TECHNICIAN LICENCES

- (a) GENERAL REQUIREMENTS FOR CONVERSION. A person who holds a current and valid AMT licence issued by another Contracting State in accordance with ICAO Annex 1 may apply for the conversion of such licence for use on aircraft registered in Grenada, provided the following requirements are met—
 - (1) The applicant for the conversion shall present to the Authority the foreign licence and evidence of the experience required by presenting the personal record (e.g., logbook).
 - (2) The applicant for the conversion shall demonstrate to the Authority evidence of language proficiency in English.
 - (3) The applicant for the conversion shall demonstrate, to the satisfaction of the Authority and relevant to the licence to be converted, knowledge of Grenada's—
 - (i) Air law;
 - (ii) Applicable airworthiness requirements governing certification and continuing airworthiness; and
 - (iii) AMOs and procedures;
 - (4) The applicant for the conversion shall complete a skill test for the relevant licence and ratings that he or she wants to have converted, relevant to the privileges of the licence held; and
 - (5) The applicant for the conversion shall have a minimum of 4 years of AMT experience.

- (b) The Authority will verify the authenticity of the licence, ratings, and authorisations with the State of Licence Issue prior to issuing the converted licence.
- (c) The Authority will only convert ratings or authorisations on the foreign licence together with the conversion of a licence.
- (d) Conversion of AMT licences that have been validated in accordance with Subsection 2.2.4.5 of this section.
 - (1) The holder of a current and valid AMT licence issued by another Contracting State in accordance with ICAO Annex 1 who has a validation in accordance with Subsection 2.2.4.5 of this section and can show evidence of 12 months of performing maintenance on aircraft registered in Grenada may convert his or her AMT licence with no further formality.

2.2.5 Training and Testing Requirements

2.2.5.1 DOCUMENTATION OF TRAINING AND AERONAUTICAL EXPERIENCE

- (a) Each person shall document and record the following in a manner acceptable to the Authority—
 - (i) The training and/or experience used to meet the requirements for a licence, rating, endorsement, and/or authorisation of this part; and
 - (ii) The experience required to show maintenance of recency of aeronautical experience according to the requirements of this part.

2.2.5.2 TRAINING CONDUCTED IN AN ATO

- (a) Approved training for aviation personnel licences shall be conducted within an ATO.
- (b) The Authority may approve a training programme for a licence, rating, authorisation, or endorsement that allows an alternative means of compliance with the experience requirements prescribed in this part when training is conducted within an ATO under special curricula approved by the Authority under Part 3 of these regulations.

- (c) Prior to authorising an alternative means of compliance that permits an ATO to conduct training that does not meet the normal prescribed experience requirements, the Authority will ensure that the approved training programme provides a level of competency at least equal to that provided by the minimum experience requirements for personnel not receiving such approved special curricula.
- (d) Part 3 of these regulations prescribes the requirements for certifying and administering ATOs for conducting approved training.
- (e) Competency-based approved training for aircraft maintenance personnel shall be conducted within an ATO.
- (f) As of 03 November 2022, competency-based approved training for remote flight crew and RPAS maintenance personnel shall be conducted within an ATO.
- (g) Competency-based approved training for flight operations officer/flight dispatcher personnel shall be conducted within an ATO.

2.2.5.3 KNOWLEDGE AND SKILL TESTS AND CHECKS – TIME, PLACE, DESIGNATED PERSONS, AND FORMAT

- (a) Knowledge and skill tests and checks prescribed by or under this part shall be given at times, at places, and by persons authorised and designated by the Authority.
- (b) The knowledge test shall be performed in written or computer format, except for the knowledge test for an instructor licence or an additional instructor rating within the same aircraft category, which may be performed orally.
- (c) In addition to the written knowledge test, candidates may be questioned orally during the skill test, as appropriate.

2.2.5.4 KNOWLEDGE TEST: PREREQUISITES AND PASSING GRADES

- (a) An applicant for a knowledge test shall have—
 - (1) received an endorsement from an authorised instructor certifying that the applicant accomplished a ground-training or a home-study course required by this Part for the licence or rating sought and is prepared for the knowledge test; and

- (2) proper government identification at the time of application that contains the applicant's—
 - (i) photograph;
 - (ii) signature;
 - (iii) date of birth, which shows the applicant meets or will meet the age requirements of this Part for the licence sought before the expiration date of the airman knowledge test report; and
 - (iv) actual residential address, if different from the applicant's mailing address.
- (b) The Authority will specify the minimum passing grades.
- (c) An applicant for a knowledge or skill test shall receive written authorisation from the Authority to take, or retake, the test.

2.2.5.5 SKILL TEST: PREREQUISITES

- (a) To be eligible for a skill test, an applicant shall meet all applicable requirements for the licence or rating sought.
- (b) If an applicant does not complete all increments of a skill test for a licence or rating on one date, the applicant shall complete all remaining increments of the test not more than 30 calendar days after that date.
- (c) If an applicant does not satisfactorily complete all increments of the skill test for a licence or a rating within 30 calendar days after beginning the test, the applicant shall retake the entire skill test, including those increments satisfactorily completed.
- (d) When an applicant is required to provide an aircraft for a skill test, that aircraft shall—
 - (1) Be airworthy and certificated;
 - (2) Be capable of performing all areas of operation appropriate to the rating sought and shall have no operating limitations that prohibit its use in any of the areas of operation required for the skill test;

- (3) Have no operating limitations that prohibit the tasks required for the skill test;
- (4) Be of national, foreign, or military registry of the same category, class, and type, if applicable, for the licence and/or rating for which the applicant is applying, with an appropriate letter of authorisation for aircraft use in a skill test if the applicant is not the owner of the foreign-registered or military aircraft;
- (5) Have—
 - (i) Fully functioning dual controls;
 - (ii) At least two pilot stations with adequate visibility for each person to operate the aircraft safely; and
 - (iii) Flight deck and outside visibility adequate to evaluate the performance of the applicant when an additional jump seat is provided for the examiner.
- (e) If the applicant is required to take a segmented skill test using an FSTD and an aircraft, the FSTD shall be approved by the Authority

Implementing Standard: See IS: 2.2.5.5 for the eligibility requirements of a skill test.

2.2.5.6 SKILL TESTS: GENERAL PROCEDURES

- (a) Except as provided in Paragraph 2.2.5.6(b) of this subsection, the Authority will determine an applicant's ability to hold a licence or rating issued under this Subpart based upon the applicant's ability to safely perform the following during a skill test—
 - (1) perform the tasks specified in the areas of operation for the licence or rating sought within the prescribed standards;
 - (2) demonstrate mastery of the aircraft;
 - (3) demonstrate sound judgement; and
 - (4) demonstrate single-pilot competence if the aircraft is type certified for single-pilot operations.

- (b) If an applicant fails any area of operation, that applicant fails the skill test.
- (c) An applicant is not eligible for a licence or rating sought until all the areas of operation are passed.
- (d) The examiner or the applicant may discontinue a skill test at any time—
 - (1) when the applicant fails one or more of the areas of operation; or
 - (2) due to inclement weather conditions, aircraft airworthiness, or any other safety-of-flight concern.
- (e) If a skill test is discontinued, the Authority may give the applicant credit for those areas of operation already passed, but only if the applicant—
 - (1) passes the remainder of the skill test within the 30-day period after the date the skill test was begun;
 - (2) presents to the examiner for the retest, the original notice of disapproval form or the letter of discontinuance form, as appropriate;
 - (3) satisfactorily accomplishes any additional training needed and obtains the appropriate instructor endorsements, if additional training is required.

2.2.5.7 SKILL TESTS: REQUIRED AIRCRAFT AND EQUIPMENT

- (a) Except when permitted to accomplish the entire flight increment of the skill test in an approved flight simulator or an approved flight training device, an applicant for a licence or rating issued under this part shall furnish an aircraft with the necessary equipment and controls.

Implementing Standard: See IS: 2.2.5.7 for required equipment and controls for skill tests.

2.2.5.8 RETESTING AFTER FAILURE

- (a) An applicant for a knowledge or skill test who fails that test may reapply for the test only after the applicant has received—

- (1) the necessary training from an authorised instructor who has determined that the applicant is proficient to pass the test; and
 - (2) an endorsement from an authorised instructor who gave the applicant the additional training.
- (b) An applicant for a flight instructor rating with an aeroplane category rating or, for a flight instructor rating with a glider category rating, who has failed the skill test due to deficiencies in instructional proficiency on stall awareness, spin entry, spins, or spin recovery shall—
 - (1) comply with the requirements of Paragraph (a) of this subsection before being retested;
 - (2) bring an aircraft to the retest that is of the appropriate aircraft category for the rating sought and is certified for spins; and
 - (3) demonstrate satisfactory instructional proficiency on stall awareness, spin entry, spins, and spin recovery to an examiner during the retest.

2.2.5.9 RECORDS OF TRAINING TIME

- (a) A person shall document and record the following time in a manner acceptable to the Authority—
 - (1) training and aeronautical experience used to meet the requirements for a licence, rating, qualification, authorisation, or flight review of this Part;
 - (2) the aeronautical experience required to show recent flight experience requirements of these regulations.

Implementing Standard: See IS: 2.2.5.9 for flight time to be recorded.

2.2.5.10 FLIGHT TRAINING RECEIVED FROM FLIGHT INSTRUCTORS NOT RATED BY THE AUTHORITY

- (a) A person may credit flight training toward the requirements of a pilot licence or rating if that person received the training from—
 - (1) a flight instructor of an Armed Force in a program for training military pilots of either—

- (i) Grenada; or
 - (ii) another Contracting State; or
- (2) a flight instructor authorised to give such training by the licensing authority of a Contracting State, provided that the flight training is given outside of Grenada.
- (3) A flight instructor described in Paragraph 2.2.5.10(a) of this subsection is authorised to give only the endorsements to show training given.

2.2.5.11 EXEMPTION FROM SKILL TEST

- (a) Applicants for an AMT licence may be exempted from a skill test providing they have submitted record of practical experience, for example, on the job training (OJT) for the licence or rating applied for.

2.2.5.12 USE OF FLIGHT SIMULATION FLIGHT TRAINING DEVICES

- (a) Except as specified in Paragraph 2.2.5.12(b) of this subsection, no airman may receive credit for use of any FSTD for satisfying any training, testing, or checking requirement of this part unless that flight simulator or flight training device is approved by the Authority for—
 - (i) The training, testing, and checking for which it is used;
 - (ii) Each particular manoeuvre, procedure, or crew member function performed; and
 - (iii) The representation of the specific category and class of aircraft, type of aircraft, particular variation within the type of aircraft, or set of aircraft for certain flight training devices.
- (b) The FSTD shall have the same technology for the basic flight instruments (attitude indicator, airspeed, altimeter, and heading reference) as those of the aircraft used by the operator.
- (c) Operators that have electronic/glass displays shall use simulators that have electronic/glass displays.

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- (d) Operators that have standard instruments shall use simulators that have standard instruments.
 - (e) Operators shall not conduct differences training or variant training on aircraft that have electronic glass displays with aircraft that have standard instruments.
 - (f) The use of an FSTD for performing training, testing, and checking for which a flight crew member is to receive credit shall be approved by the Authority, which will ensure that the FSTD is appropriate to the task.
 - (g) The Authority will consider as a flight training device any device used for flight training, testing, or checking that the Authority has accepted or approved, which any user can show to function as originally designed, provided it is used for the same purposes for which it was originally accepted or approved and only to the extent of such acceptance or approval.
 - (h) The Authority may approve a device other than a flight training simulator or flight training device for specific purposes.

Implementing Standard: See IS: 2.2.5.12 for requirements on the use of approved simulators and flight training device.

2.2.5.13 SYNTHETIC FLIGHT TRAINING DEVICE

- (a) A Synthetic Flight Training Device is classified as—
 - (1) flight training device (FTD);
 - (2) full flight simulator (FFS).
- (b) Synthetic flight training devices shall be used if available otherwise an aeroplane shall be used if appropriate for the manoeuvre or procedure.

2.2.5.14 RELIANCE ON TRAINING AND TESTING IN ANOTHER CONTRACTING STATE

- (a) The Authority may rely on the training and/or testing system administered by another Contracting State as the basis for its own approved training curriculum, including the administration of written and/or skill test requirements for airman licences, provided

that the Authority has an agreement with the other Contracting State whose training and/or testing system is used.

- (b) The applicant shall apply for and receive written approval from the Authority prior to receiving training and/or testing in a system administered by another Contracting State.

2.2.6 Instructor Requirements – General

- (a) An applicant for an instructor licence and ratings or authorisations shall, in addition to specific requirements contained in this part, have received and logged training from an authorised instructor on the fundamentals of instructing and shall have passed a knowledge test on the following areas of instructing—
 - (1) Techniques of applied instruction;
 - (2) Assessment of student performance in those subjects in which ground instruction is given;
 - (3) The learning process;
 - (4) Elements of effective teaching;
 - (5) Student evaluation and testing, training philosophies;
 - (6) Training programme development;
 - (7) Lesson planning;
 - (8) Classroom instructional techniques;
 - (9) Use of training aids, including FSTDs as appropriate;
 - (10) Analysis and correction of student errors;
 - (11) Human performance relevant to flight instruction;
 - (12) Hazards involved in simulating system failures and malfunctions in the aircraft; and
 - (13) Principles of threat and error management.
- (b) The following applicants do not need to comply with Paragraph 2.2.6(a) of this section—

- (1) The holder of an instructor licence or authorisation issued under this part who has already passed the knowledge test in the areas of instructing;
- (2) The holder of a current teacher's certificate issued by a national or local authority that authorises the person to teach at a secondary educational level or higher; or
- (3) A person who provides evidence of an equivalent level of experience acceptable to the Authority.

2.2.7 Designated Examiners

- (a) The Authority may designate private individuals to act as representatives of the Director General in examining, inspecting, and testing persons and aircraft for the purpose of issuing airman and aircraft licences, ratings, and certificates.
- (b) The specific requirements for each type of designated examiner are contained in the appropriate licensing section of this part related to the licensing requirements of the persons to be examined.
- (c) The Authority shall issue each designated examiner a Certificate of Authority, a Designated Examiner Stamp and a Letter of Approval specifying the kinds of designation for which the individual is qualified and the duration of the designation.

2.2.8 Specifications and Format of the Licence

- (a) The licence shall—
 - (1) Be made of a suitable material as listed in ICAO Annex 1: 5.1.2.
 - (2) Be issued in a form and manner as prescribed in IS 2.2.8.
 - (3) Contain the expiration date of the licence and rating(s).
 - (4) Be issued in the English language.

2.3 CERTIFICATION: PILOTS, FLIGHT INSTRUCTORS, AND GROUND INSTRUCTORS

2.3.1 General

2.3.1.1 APPLICABILITY

- (a) This section prescribes the requirements for the issue, renewal, and reissue, if applicable, of pilot licences, ratings, and authorisations.

2.3.1.2 GENERAL RULE CONCERNING LICENCES, RATINGS, AND AUTHORISATIONS, AND DESIGNATIONS

- (a) An applicant shall, before being issued any pilot licence, rating, authorisation, or designation, meet such requirements with respect to age, knowledge, experience, flight instruction, skill, medical fitness, and language proficiency as are specified for that licence, rating, or authorization.
- (b) A person shall not act as PIC or CP, or as remote PIC or remote CP of an aircraft in any of the categories unless that person is the holder of a pilot licence issued in accordance with the requirements of this part.
- (c) An applicant shall, for renewal or reissue of a licence, rating, authorisation, or designation, meet the requirements specified for that licence, rating, authorisation, or designation.

2.3.1.3 AUTHORITY TO ACT AS A FLIGHT CREW MEMBER

- (a) A person shall not act as a pilot flight crew member of an aircraft, or a remote flight crew member of an RPAS, registered in Grenada unless a valid licence or a validation certificate is held showing compliance with the requirements of this part and appropriate to the duties to be performed by that person.
- (b) A person shall not act as the PIC or CP of an aircraft unless that person holds the appropriate category, class, and type rating for the aircraft to be flown.
- (c) During a skill test, the applicant acts as PIC but the safety pilot will intervene in safety situations.

2.3.1.4 CREDITING OF FLIGHT TIME

- (a) A student pilot or the holder of a pilot licence shall be entitled to be credited in full with all solo, dual instruction, and PIC flight time towards the total flight time required for the initial issue of a pilot licence or the issue of a higher grade of pilot licence.

- (b) The holder of a pilot licence, when acting as CP at a pilot station of an aircraft certificated for operation by a single pilot but required by Grenada to be operated with a CP, shall be entitled to be credited with not more than 50 per cent of the CP flight time towards the total flight time required for a higher grade of pilot licence. Grenada may authorise that flight time be credited in full towards the total flight time required if the aircraft is equipped to be operated by a CP and the aircraft is operated in a multi-crew operation.
- (c) The holder of a pilot licence, when acting as CP at a pilot station of an aircraft certificated to be operated with a CP, shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot licence.
- (d) The holder of a pilot licence, when acting as PIC under supervision, shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot licence.

2.3.1.5 LIMITATION OF PRIVILEGES OF PILOTS WHO HAVE ATTAINED THEIR 60TH BIRTHDAY AND CURTAILMENT OF PRIVILEGES OF PILOTS WHO HAVE ATTAINED THEIR 65TH BIRTHDAY

- (a) A person who holds a pilot licence issued under this part shall not serve as a PIC in single-pilot operations on a civil aircraft of Grenada registry engaged in commercial air transport operations if the person has reached his or her 60th birthday.
- (b) A person who holds a pilot licence issued under this part shall not serve as a pilot of a civil aircraft of Grenada registry engaged in commercial air transport operations requiring more than one pilot if the person has reached his or her 65th birthday.

2.3.1.6 RECENT EXPERIENCE AND PROFICIENCY REQUIREMENTS FOR NON-COMMERCIAL AIR TRANSPORT OPERATIONS

Note: For commercial air transport operations, see Part 8, Subpart 8.4 of these regulations.

- (a) In order to maintain recency and proficiency, all pilots shall meet the applicable requirements in Paragraphs 2.3.1.6(b) through (g) of this subsection.
- (b) A person shall not operate as PIC of an aircraft unless that pilot has, within 24 months, accomplished a flight review that includes—

- (1) A review of the current general operating and flight rules of Part 8 of these regulations;
 - (2) A review of those manoeuvres and procedures that, at the discretion of the person giving the review, are necessary for the pilot to demonstrate the safe exercise of the privileges of the pilot licence;
 - (3) A proficiency check in the appropriate aircraft for the licence, ratings, or authorisations held unless, within the past 24 months, the pilot has satisfactorily completed one of the following—
 - (i) A pilot proficiency check or skill test, conducted by an authorised ECCAA examiner, for a pilot certificate, rating, or operating privilege; or
 - (ii) A skill test conducted by an authorised ECCAA examiner for the issuance of an FI certificate or an additional rating on an FI certificate, the renewal of an FI certificate, or the reinstatement of an FI certificate; and
 - (4) A logbook endorsement from an authorised instructor who gave the review, certifying that the person has satisfactorily completed the review required in Paragraphs 2.3.1.6(b)(3)(i) and (ii) of this subsection and has completed the applicable proficiency check.
- (c) AIRCRAFT TYPE CERTIFICATED FOR MORE THAN ONE PILOT.
- (1) A person shall not act as PIC of an aircraft type certificated for more than one pilot or a turbojet aircraft unless, since the beginning of the past 12 calendar months, he or she has passed a proficiency check in an aircraft, or in an FSTD approved for the purpose, with an authorised representative of the Authority.
 - (2) A person shall not act as CP of an aircraft type certified for more than one pilot unless, since the beginning of the past 12 calendar months, he or she has logged three take-offs and landings as the sole manipulator of the controls in the aircraft of the same type, or in an FSTD approved for the purpose, with

each take-off and landing to full stop, and has satisfactorily completed ground training appropriate to the aircraft type.

- (d) AIRCRAFT TYPE CERTIFICATED FOR SINGLE PILOT AND REQUIRING A TYPE RATING ON THE PILOT LICENCE. A person shall not act as PIC of an aircraft type certified for a single pilot unless, since the beginning of the past 12 calendar months, he or she has passed a proficiency check with an authorised representative of the Authority in the category, class, and type of aircraft to be operated, or in an FSTD approved for the purpose.
- (e) RECENCY FOR CARRIAGE OF PASSENGERS. A person shall not act as PIC or CP of an aircraft carrying passengers unless, within the preceding 90 days, that pilot has—
 - (1) Made three take-offs and landings as the sole manipulator of the flight controls in an aircraft of the same category and class and, if a type rating is required, of the same type or in an FSTD approved for the purpose.
 - (2) For a tailwheel aeroplane, made the three take-offs and landings in a tailwheel aeroplane, with each take-off and landing to a full stop.
 - (3) For night operations, made the three take-offs and landings required by Paragraph 2.3.1.6(e)(1) of this subsection at night, with each take-off and landing to a full stop.
- (f) IFR OPERATIONS. A pilot shall not operate as PIC of an aircraft under IFR or in weather conditions less than the minimums prescribed for VFR flight unless, within the preceding 6 months, that pilot has—
 - (1) Had an instrument proficiency check on the manoeuvres in the IR Skill Test and Proficiency Check contained in the applicable CAA STSs; or
 - (2) Has logged, in actual or simulated conditions, 6 hours of instrument flight time including at least 3 hours in flight in the category of aircraft, to include—
 - (i) Six instrument approaches;
 - (ii) Holding procedures and tasks; and

- (iii) Intercepting and tracking courses through the use of navigational electronic systems.

2.3.1.7 GENERAL RULE CONCERNING LICENCES, RATINGS, AND AUTHORISATIONS, AND DESIGNATIONS

- (a) An applicant shall, before being issued any pilot licence, rating, authorisation, or designation, meet such requirements with respect to age, knowledge, experience, flight instruction, skill, medical fitness, and language proficiency as are specified for that licence, rating, or authorisation.

2.3.2 Aircraft Ratings and Pilot Authorisations

2.3.2.1 GENERAL REQUIREMENT

- (a) The holder of a pilot licence shall not be permitted to act as PIC or CP of an aircraft unless the holder has received the applicable ratings, authorisations, and/or endorsements as follows—
 - (1) The appropriate aircraft category rating specified in this part;
 - (2) The appropriate class rating when required in accordance with this part;
 - (3) A type rating when required in accordance with this part;
 - (4) An authorisation when required in accordance with this part;
or
 - (5) An endorsement when required in accordance with this part.
- (b) The applicant shall meet the appropriate requirements of this part for the aircraft rating, authorisation, or endorsement sought.
- (c) When an applicant demonstrates skill and knowledge for the initial issue or reissue of a pilot licence, the category and ratings appropriate to the class or type of aircraft used in the demonstration will be entered on the licence.
- (d) For the purpose of training, testing, or specific special purpose non-revenue, non-passenger- carrying flights, special authorisation may be provided in writing to the licence holder by the Authority in place of issuing the class or type rating in accordance with Paragraph

2.3.2.1(a) of this subsection. This authorisation shall be limited in validity to the time needed to complete the specific flight.

2.3.2.2 CATEGORY RATING

- (a) The category of aircraft shall be endorsed on the licence as a rating.
- (b) INITIAL CATEGORY RATING—
 - (1) An applicant for a pilot licence, after successfully meeting all the requirements for the issuance of the licence as contained in this part, shall receive the appropriate licence with the aircraft category and, if applicable, the class or type rating endorsed on the licence.
 - (2) A pilot seeking a category rating—
 - (i) shall have received the required training and possess the aeronautical experience prescribed by this part for the aircraft category and, if applicable, class and type rating sought;
 - (ii) shall have an endorsement in his or her logbook or training record from an authorised instructor that the applicant has been found competent in the following areas, as appropriate to the pilot licence for the aircraft category and, if applicable, class and type rating sought—
 - (A) aeronautical knowledge areas;
 - (B) areas of operation.
 - (iii) shall pass the skill test applicable to the pilot licence for the aircraft category and, if applicable, class and type rating sought; and
 - (iv) need not take an additional knowledge test, provided the applicant holds an aeroplane, rotorcraft, powered-lift, or airship rating at that pilot licence level.
- (c) ADDITIONAL CATEGORY RATINGS—
 - (1) Any additional category rating endorsed on a pilot licence shall indicate the level of licensing privileges at which the category rating is granted.

- (2) The holder of a pilot licence seeking an additional category rating shall—
 - (i) Meet the requirements of this part appropriate to the privileges for which the category rating is sought;
 - (ii) Have an endorsement in his or her logbook or training record from an authorised instructor that the applicant has been found competent in the required aeronautical knowledge and flight instruction areas;
 - (iii) Pass the required knowledge test; and
 - (iv) Pass the required skill test for the aircraft category and, if applicable, the class rating being sought.

2.3.2.3 CLASS RATING

- (a) The class of aircraft, if applicable, shall be endorsed on the licence as a rating.
- (b) INITIAL CLASS RATING
 - (1) An applicant for a pilot licence, after successfully meeting all the requirements for the issuance of the licence as contained in this part, shall receive the appropriate licence with the aircraft category, class, and, if applicable, type rating endorsed on the licence.
- (c) ADDITIONAL CLASS RATINGS
 - (1) Any additional class rating endorsed on a pilot licence shall indicate the level of licensing privileges at which the class rating is granted
 - (2) A pilot seeking an additional class rating
 - (i) shall meet the requirements of this part appropriate to the privileges for which the class rating is sought;

- (ii) shall have an endorsement in his or her logbook or training record from an authorised instructor that the applicant has been found competent in the following areas, as appropriate to the pilot licence and for the aircraft class rating sought—
 - (A) aeronautical knowledge areas;
 - (B) areas of operation.
- (3) shall pass the skill test applicable to the pilot licence for the aircraft class rating sought;
- (4) need not meet the training time requirements prescribed by this Part for the aircraft class rating sought; and
- (5) need not take an additional knowledge test, provided the applicant holds an aeroplane, rotorcraft, powered-lift, or airship rating at that pilot licence level.

2.3.2.4 TYPE RATING

- (a) The type rating shall be endorsed on the licence as a rating, including any limitations.
- (b) To act as a PIC or co-pilot of any of the following aircraft, a pilot shall hold a type rating for that aircraft—
 - (i) large aircraft (except lighter-than-air);
 - (ii) turbojet or turbofan powered aeroplanes;
 - (iii) other aircraft specified by the Authority through aircraft type certificate procedures.
- (c) Except as specified in Paragraph 2.3.2.4(c)(6) of this part, a pilot seeking an aircraft type rating to be added on a pilot licence, or the addition of an aircraft type rating that is accomplished concurrently with an additional aircraft category or class rating—
 - (1) Have received training from an authorised instructor in the applicable type of aircraft and/or approved FSTD, including the following—

- (i) Normal flight procedures and manoeuvres during all phases of flight;
 - (ii) Abnormal and emergency procedures and manoeuvres in the event of failures and malfunctions of equipment, such as engine, systems, and airframe;
 - (iii) Where applicable, instrument procedures, including instrument approach, missed approach, and landing procedures under normal, abnormal, and emergency conditions, including simulated engine failure;
 - (iv) Procedures for crew incapacitation and crew coordination, including allocation of pilot tasks, crew cooperation, and use of checklists; and
 - (v) For the issue of an aeroplane category type rating, upset prevention and recovery training.
- (2) shall hold or concurrently obtain an instrument rating that is appropriate to the aircraft category, class, or type rating sought;
- (3) shall have an endorsement in his or her logbook or training record from an authorised instructor that the applicant has been found competent in the following areas, as appropriate to the pilot licence for the aircraft category, class and type rating sought—
 - (i) aeronautical knowledge areas;
 - (ii) areas of operation;
- (4) Demonstrate the skill and knowledge required for the safe operation of the applicable type of aircraft, relevant to the duties of a PIC or a CP;
- (5) Demonstrate, at the ATPL level, an extent of knowledge as specified in Paragraph 2.3.6.3(b) of this part
- (6) shall pass the skill test applying CRM concepts applicable to the pilot licence for the aircraft category, class, and type rating sought;
- (7) An applicant for a type rating who provides an aircraft not capable of the instrument manoeuvres and procedures

required by the appropriate requirements contained in Subsection 2.3.8.1 for the skill test—

- (i) may obtain a type rating limited to "VFR only"; and
- (ii) may remove the "VFR only" limitation for each aircraft type in which the applicant demonstrates compliance with the appropriate instrument requirements of these regulations
- (iii) except as provided for in Paragraphs 2.3.2.4(e) and 2.3.2.4(f), shall perform the skill test under instrument flight rules;
- (iv) need not take an additional knowledge test, provided the applicant holds an aeroplane, rotorcraft, powered-lift, or airship rating on their pilot licence; and
- (v) in the case of a pilot employee of an AOC holder, shall have—
 - (A) met the appropriate requirements of Paragraphs 2.3.2.4(c)(1), 2.3.2.4(c)(4) and 2.3.2.4(c)(5) for the aircraft type rating sought; and
 - (B) received an endorsement in his or her flight training record from the certificate holder certifying that the applicant has completed the certificate holder's approved ground and flight training program appropriate to the aircraft type rating sought.
- (d) The Authority may issue to an applicant for a type rating a licence with the limitation "VFR only" for each aircraft type not equipped for the applicant to show instrument proficiency.
- (e) An applicant for a type rating in a multiengine, single-pilot station aeroplane may meet the requirements of Paragraph 2.3.2.4(c) in a multiseat version of that multiengine aeroplane.
- (f) An applicant for a type rating in a single-engine, single-pilot station aeroplane may meet the requirements of Paragraph 2.3.2.4(c) in a multiseat version of that single-engine aeroplane.

2.3.2.5 CATEGORY II AND III PILOT AUTHORISATION REQUIREMENTS

- (a) The Authority shall issue a CAT II or CAT III pilot authorisation by letter, to accompany the pilot licence, when the pilot meets the requirements contained in this subsection and in IS 2.3.2.5.
- (b) GENERAL—
 - (1) A person, not flying for an AOC holder under Part 9 of these regulations, may not act as pilot of an aircraft during CAT II or III operations unless that person holds a CAT II or III pilot authorisation for that category, class, or type of aircraft.
 - (2) An applicant for a Category II or Category III pilot authorisation shall—
 - (i) hold a pilot licence with an instrument rating or an airline transport pilot licence;
 - (ii) hold a category and class rating, and type rating, if applicable, for the aircraft for which the authorisation is sought.
- (c) KNOWLEDGE. The applicant for a CAT II or III pilot authorisation shall have completed the theoretical knowledge instruction on the subjects listed in IS 2.3.2.5.
- (d) Experience requirements. An applicant for a Category II or Category III pilot authorisation shall have at least—
 - (i) 50 hours of night flight time as PIC;
 - (ii) 75 hours of instrument time under actual or simulated instrument conditions that may include not more than—
 - (iii) a combination of 25 hours of simulated instrument flight time in an approved flight simulator or an approved flight training device; or
 - (iv) 40 hours of simulated instrument flight time if accomplished in an approved course conducted by an appropriately rated ATO certified under Part 3, Subpart 3.2 of these regulations.
 - (v) 250 hours of cross-country flight time as PIC.

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- (e) FLIGHT INSTRUCTION. The applicant for a CAT II or III pilot authorisation shall have completed the flight instruction on the areas of operation listed in IS 2.3.2.5.
 - (f) SKILL TEST. The applicant for a CAT II or III pilot authorisation shall pass a skill test including the areas of operation listed in IS 2.3.2.5
 - (g) VALIDITY. Subject to compliance with the requirements specified in this part, the validity period of a CAT II or III authorisation is 6 months.
 - (h) RENEWAL. For the renewal of a CAT II or III pilot authorisation, the pilot shall have completed a proficiency check including the areas of operation listed in IS 2.3.2.5. Upon passing a skill test for a Category II or III pilot authorisation, a pilot may renew that authorisation for each type of aircraft for which the pilot holds authorisation.
 - (1) If the holder of a Category II or Category III pilot authorisation passes the skill test for a renewal after the authorisation expires, the Authority shall renew the authorisation from the date the applicant satisfactorily passed the skill test.
 - (2) If the holder of a Category II or Category III pilot authorisation passes the skill test for a renewal in the month before the authorisation expires, the Authority will consider that the holder passed it during the month the authorisation expired.
 - (i) REISSUE. If the CAT II or III has expired, the applicant shall—
 - (1) Have received refresher training from an authorised instructor, with an endorsement that the person is prepared for the required skill test; and
 - (2) Pass the required skill test on the subjects listed in IS 2.3.2.5.

Implementing Standard: See IS: 2.3.2.5 for additional requirements concerning Category II and III pilot authorisations.

2.3.3 Student Pilots

2.3.3.1 APPLICABILITY

- (a) This Subpart prescribes the requirements for the issuance of student pilot licences, the conditions under which those licences are

necessary, and the general operating rules and limitations for the holders of those licences.

2.3.3.2 ELIGIBILITY REQUIREMENTS FOR STUDENT PILOTS

- (a) To be eligible for a student pilot licence, an applicant shall—
 - (1) be at least 17 years of age;
 - (2) meet the English language proficiency requirements of Subsection 2.2.2 of this Part;
 - (3) pass a Class 2 medical examination conducted by an authorised medical examiner.

2.3.3.3 APPLICATION

- (a) An applicant for a student pilot licence shall apply to the Authority in the prescribed manner

2.3.3.4 SOLO REQUIREMENTS FOR STUDENT PILOTS

- (a) General.
 - (1) A student pilot shall not fly solo unless under the supervision of, or with the authority of, an authorized flight instructor;
 - (2) In international flight unless there is a special or general arrangement between Grenada and the intended Grenada flight;
 - (3) A student pilot may not operate an aircraft in solo flight unless that student has met the requirements of this subsection.
- (b) Aeronautical knowledge.
 - (1) A student pilot shall satisfactorily pass an aeronautical knowledge test on the following subjects—
 - (i) applicable sections of this Part for the category of aircraft to be flown and of Part 8 of these regulations;
 - (ii) airspace rules and procedures for the aerodrome where the student will perform solo flight; and

- (iii) flight characteristics and operation limitations for the make and model of aircraft to be flown.
- (2) The student's authorised instructor shall—
 - (i) administer the test; and
 - (ii) at the conclusion of the test, review all incorrect answers with the student before authorising that student to conduct a solo flight.
- (c) Pre-solo flight training. Prior to conducting a solo flight, a student pilot shall have—
 - (i) received and logged flight training for the manoeuvres and procedures of this subsection that are appropriate to the make and model of aircraft to be flown, and
 - (ii) demonstrated satisfactory proficiency and safety, as judged by an authorised instructor, on the manoeuvres and procedures required by this subsection in the make and model of aircraft or similar make and model of aircraft to be flown.
- (d) Manoeuvres and procedures for pre-solo flight training. A student pilot shall receive and log flight training for required manoeuvres and procedures.

Implementing Standard: See IS: 2.3.3.4 for required manoeuvres and procedures for a student pilot.

2.3.3.5 GENERAL LIMITATIONS

- (a) A student pilot may not act as PIC of an aircraft—
 - (1) that is carrying a passenger;
 - (2) that is carrying property for compensation or hire;
 - (3) that is operated for compensation or hire;
 - (4) in furtherance of a business;
 - (5) on an international flight;

- (6) with a flight or surface visibility of less than 3 statute miles during daylight hours or 5 statute miles at night;
 - (7) when the flight cannot be made with visual reference to the surface; or
 - (8) in a manner contrary to any limitations placed in the pilot's logbook by an authorised instructor.
- (b) A student pilot shall not act as a required pilot flight crewmember on any aircraft for which more than one pilot is required by the aircraft type certificate, or by these regulations under which the flight is conducted, except when receiving flight training from an authorised instructor on board an airship, and no person other than a required flight crewmember is carried on the aircraft.
- (c) A student pilot shall not operate an aircraft in solo flight unless that student pilot has received within the 90 days preceding the date of the flight, an endorsement from an authorised instructor for the specific make and model aircraft to be flown made—
 - (1) on his or her student pilot licence; and
 - (2) in the student's logbook.
- (d) A student pilot shall not operate an aircraft in solo flight at night unless that student pilot has received—
 - (1) flight training at night that includes takeoffs, approaches, landings and go-arounds at night at the airport where the student will conduct solo flight;
 - (2) navigation training at night in the vicinity of the airport where the student pilot will conduct solo flight; and
 - (3) an endorsement for night solo flight.

2.3.3.6 SOLO CROSS-COUNTRY FLIGHT REQUIREMENTS

- (a) General.
 - (1) except as provided in Paragraph 2.3.3.6(b) of this subsection, a student pilot shall meet the requirements of this subsection before—

- (i) conducting a solo cross-country flight, or any flight greater than 25 nautical miles from the airport from where the flight originated; and
 - (ii) making a solo flight and landing at any location other than the airport of origination.
 - (2) except as provided in Paragraph (b) of this subsection, a student pilot who seeks solo crosscountry flight privileges shall—
 - (i) have received flight training from an authorised instructor on the manoeuvres and procedures of this subsection that are appropriate to the make and model of aircraft for which solo crosscountry privileges are sought;
 - (ii) have demonstrated cross-country proficiency on the appropriate manoeuvres and procedures of this subsection to an authorised instructor;
 - (iii) have satisfactorily accomplished the pre-solo flight manoeuvres and procedures required by IS: 2.3.3.6 in the make and model of aircraft or similar make and model of aircraft for which solo cross-country privileges are sought; and
 - (iv) comply with any limitations included in the instructor's endorsement that are required by Paragraph (c) of this subsection.
 - (3) a student pilot who seeks solo cross-country flight privileges shall have received ground and flight training from an authorised instructor on the cross-country manoeuvres and procedures listed in this subsection that are appropriate to the aircraft to be flown.
- (b) Authorisation to perform certain solo flights and cross-country flights. A student pilot shall obtain an endorsement from an authorised instructor to make solo flights, subject to the following conditions—
- (1) a student pilot may make solo flights to another airport that is within 25 nautical miles from the airport where the student pilot normally receives training, provided—

- (i) the authorised instructor who makes the endorsement gave the student pilot flight training at the other airport, and that training included flight in both directions over the route, entering and exiting the traffic pattern, and takeoffs and landings at the other airport;
 - (ii) the student pilot has a current solo flight endorsement in accordance with Subsection 2.3.3.4 of this Part.
 - (iii) the instructor has determined that the student pilot is proficient to make the flight; and
 - (iv) the purpose of the flight is to practice takeoffs and landings at that other airport.
- (2) a student pilot may make repeated specific solo cross-country flights to another airport that is within 50 nautical miles of the airport from which the flight originated, provided—
 - (i) the authorised instructor who gave the endorsement gave the student flight training in both directions over the route, including entering and exiting the traffic patterns, takeoffs, and landings at the airport to be used;
 - (ii) the student has current solo flight endorsements in accordance with Subsection 2.3.3.4 of this Part; and
 - (iii) the student has a current solo cross-country flight endorsement in accordance with Paragraph 2.3.3.6(c) of this subsection, except that separate endorsements are not required for each flight made under this section.
- (c) Endorsements for solo cross-country flights. Except as specified in Paragraph 2.3.3.6(b)(2) of this subsection, a student pilot shall have the endorsements prescribed in this paragraph for each make and model aircraft the student will fly on each cross-country flight—
 - (1) student pilot licence endorsement—
 - (i) a student pilot shall have a solo cross-country endorsement placed on the student pilot licence by the authorised instructor who conducted the training.

- (2) logbook endorsement—
 - (i) a student pilot shall have a solo cross-country endorsement placed in the student pilot's logbook by the authorised instructor who conducted the training;
 - (ii) a licenced pilot who is receiving training for an additional aircraft category and class rating shall have an endorsement placed in the pilot's logbook by the authorised instructor who conducted the training.
- (d) Manoeuvres and procedures for cross-country flight training. A student pilot who is receiving training for cross-country flight shall receive and log flight training in the required manoeuvres and procedures.

Implementing Standard: See IS: 2.3.3.6 for list of required manoeuvres and procedures.

2.3.4 Private Pilots

2.3.4.1 APPLICABILITY

- (a) This subsection prescribes the requirements for the issuance of private pilot licences and ratings, and the conditions under which those licences and ratings are necessary.

2.3.4.2 ELIGIBILITY REQUIREMENTS: GENERAL

- (a) To be eligible for a private pilot licence, a person shall—
 - (1) be at least 17 years of age;
 - (2) meet the English language proficiency requirements of Subsection 2.2.2
 - (3) pass a Class 2 medical examination conducted by an authorised medical examiner;
 - (4) receive a logbook endorsement for the knowledge test from an authorised instructor who—
 - (i) conducted the training or reviewed the person's home study on the aeronautical knowledge areas listed in

Paragraph 2.3.4.3(a) of this subsection that apply to the aircraft rating sought; and

- (ii) certified that the person is prepared for the required knowledge test.
- (5) pass the required knowledge test on the aeronautical knowledge areas listed in Paragraph 2.3.4.3(a) of this subsection.
- (6) receive flight training and a logbook endorsement from an authorised instructor who—
 - (i) conducted the training in the areas of operation listed in Paragraph 2.3.4.4(a) of this subsection that apply to the aircraft rating sought; and
 - (ii) certified that the person is prepared for the required skill test.
- (7) meet the aeronautical experience requirements of this Subpart that apply to the aircraft rating sought before applying for the skill test;
- (8) pass a skill test on the areas of operation listed in Paragraph 2.3.4.4(a) of this subsection that apply to the aircraft rating sought;
- (9) comply with the appropriate sections of Subpart 2.2 of this part that apply to the aircraft category and class rating sought.

2.3.4.3 AERONAUTICAL KNOWLEDGE AREAS

- (a) An applicant for a private pilot licence shall receive and log ground training from an authorised instructor on the following subjects appropriate to the privileges granted to the holder of a PPL and appropriate to the category of aircraft to be included on the licence: or complete a home-study course on the required aeronautical knowledge areas shown in IS: 2.3.4.3.

- (1) AIR LAW.
 - (i) Rules and regulations relevant to the holder of a PPL; rules of the air; appropriate ATS practices and procedures

(2) AIRCRAFT GENERAL KNOWLEDGE

- (i) Principles of operation and functioning of engines, systems, and instruments;
- (ii) Operating limitations of aeroplanes and the relevant category of aircraft and powerplants; relevant operational information from the flight manual or other appropriate document;
- (iii) For helicopter and powered-lift, transmission (power trains) where applicable; (iv) For airship and balloon, physical properties and practical application of gases;

(3) FLIGHT PERFORMANCE AND PLANNING.

- (i) Effects of loading and mass distribution on flight characteristics; mass and balance calculations;
- (ii) Use and practical application of take-off or launching, landing, and other performance data;
- (iii) Pre-flight and en route flight planning appropriate to private operations under VFR; preparation and filing of ATS flight plans; appropriate ATS procedures; position reporting procedures; altimeter setting procedures; and operations in areas of high-density traffic;

(4) HUMAN PERFORMANCE.

- (i) Human performance relevant to the appropriate category of aircraft;
- (ii) Principles of threat and error management;

(5) METEOROLOGY.

- (i) Application of elementary aeronautical meteorology; use of, and procedures for obtaining, meteorological information; altimetry; hazardous weather conditions;

(6) NAVIGATION.

- (i) Practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts;

(7) OPERATIONAL PROCEDURES.

- (i) Application of threat and error management to operational procedures;
- (ii) Altimeter setting procedures;
- (iii) Use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
- (iv) Appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence, and other operating hazards;
- (v) In the case of helicopter and, if applicable, powered-lift, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures associated with flight under VMC

(8) PRINCIPLES OF FLIGHT.

- (i) Principles of flight relating to the appropriate category of aircraft; and

(9) RT.

- (i) Communication procedures and phraseology as applied to VFR operations; action to be taken in case of communication failure.

(b) KNOWLEDGE TESTING.

(1) The applicant for a PPL shall—

- (i) Have received an endorsement for the knowledge test from an authorised instructor who—
 - (A) Conducted the training on the knowledge subjects; and
 - (B) Certifies that the person is prepared for the required knowledge test; and

- (ii) Pass the required written knowledge test on the knowledge areas listed in Paragraph 2.3.4.1(c) of this subsection.
- (c) EXPERIENCE AND FLIGHT INSTRUCTION.
 - (1) An applicant for a PPL shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this part.
- (d) SKILL.
 - (1) The applicant for a PPL shall have—
 - (i) Received an endorsement from an authorised instructor who certifies that the person is prepared for the required skill test
 - (ii) Demonstrated by passing a skill test the ability to perform as PIC of an aircraft, within the appropriate category areas of operation described in the appropriate STS listed below, with a degree of competency appropriate to the privileges granted to the holder of a PPL; and
 - (iii) Demonstrated the ability to—
 - (A) Recognise and manage threats;
 - (B) Operate the aircraft within its limitations;
 - (C) Complete all manoeuvres with smoothness and accuracy;
 - (D) Exercise good judgement and airmanship;
 - (E) Apply aeronautical knowledge; and
 - (F) Maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.
- (e) PRIVILEGES.
 - (1) Subject to compliance with the requirements specified in this part, the privileges of the holder of a PPL shall be to act, but

not for remuneration, as PIC or CP of an aircraft within the appropriate aircraft category engaged in non-revenue flights;

- (2) Before exercising the privileges at night the license holder shall receive dual instruction in aircraft within the appropriate category of aircraft in night flying, including take-off, landing and navigation.

Implementing Standard: See IS: 2.3.4.3 for list of required aeronautical areas for PPL.

2.3.4.4 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE PPL – AEROPLANE CATEGORY

(a) EXPERIENCE.

- (1) The applicant for a PPL(A) shall have completed not less than 40 hours of flight time, or 35 hours if completed during a course of approved training, as a pilot of aeroplanes appropriate to the class rating sought. The Authority will determine whether experience as a pilot under instruction in an FSTD is acceptable as part of the total flight time of 40 or 35 hours, as the case may be. Credit for such experience shall be limited to a total of 5 hours if completed under instruction in an FSTD approved by the Authority.
- (2) The applicant for a PPL(A) shall have completed in aeroplanes not less than 10 hours of solo flight time under the supervision of an authorised FI, including 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 270 km (150 NM) in the course of which full-stop landings at two different aerodromes shall be made.
- (3) The holder of pilot licences in other categories may be credited with 10 hours of the total flight time as PIC towards a PPL(A)

(b) FLIGHT INSTRUCTION.

- (1) The applicant for a PPL(A) shall have received and logged not less than 20 hours of dual instruction from an authorised instructor on the subjects listed in the CAA STSs for PPL(A). These 20 hours may include 5 hours completed in an FSTD. The 20 hours of dual instruction shall include at least 5 hours

of solo cross-country flight time with at least one cross-country flight totalling not less than 270 km (150 NM) in the course of which full-stop landings at two different aerodromes shall be made.

- (2) The instructor shall ensure that the applicant for a PPL(A) has operational experience in at least the following areas to the level of performance required for the private pilot—
- (i) Recognise and manage threats and errors;
 - (ii) Pre-flight operations, including mass and balance determination, aeroplane inspection, and servicing;
 - (iii) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
 - (iv) Control of the aeroplane by external visual reference;
 - (v) Flight at critically slow airspeeds; recognition of and recovery from incipient and full stalls;
 - (vi) Flight at critically high airspeeds; recognition of and recovery from spiral dives;
 - (vii) Normal and crosswind take-offs and landings;
 - (viii) Maximum performance (short field and obstacle clearance) take-offs; short-field landings;
 - (ix) Flight by reference solely to instruments, including the completion of a level 180 degrees turn;
 - (x) Cross-country flying using visual reference, dead reckoning, and, where available, radio navigation aids;
 - (xi) Emergency operations, including simulated aeroplane equipment malfunctions;
 - (xii) Operations to, from, and transiting controlled aerodromes; compliance with ATS procedures;
 - (xiii) RT procedures and phraseology; and
 - (xiv) As further specified in the CAA STSs for PPL(A).

- (3) If the privileges of the PPL(A) are to be exercised at night, the applicant shall have received 4 hours of dual instruction in aeroplanes in night flying, including take-offs, landings, and 1 hour of navigation.
- (c) The requirements for the skill test for the PPL(A) are included in the (New IS) for PPL(A)

Implementing Standard: See IS: 2.3.4.4 for minimum aeronautical training requirements for PPL.

2.3.4.5 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE PPL – HELICOPTER CATEGORY

(a) EXPERIENCE.

- (1) The applicant for a PPL(H) shall have completed not less than 40 hours of flight time, or 35 hours if completed during a course of approved training, as a pilot of helicopters. The Authority will determine whether experience as a pilot under instruction in an FSTD is acceptable as part of the total flight time of 40 or 35 hours, as the case may be. Credit for such experience shall be limited to a total of 5 hours if completed under instruction in an FSTD approved by the Authority.
- (2) The applicant for a PPL(H) shall have completed in helicopters not less than 10 hours of solo flight time under the supervision of an authorised FI, including 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 180 km (100 NM) in the course of which landings at two different points shall be made.
- (3) The holder of pilot licences in other powered aircraft categories may be credited with 10 hours of the total flight time as PIC towards a PPL(H).

(b) FLIGHT INSTRUCTION.

- (1) The applicant for a PPL(H) shall have received and logged not less than 20 hours of dual instruction from an authorised instructor on the subjects listed in the CAA STSs for PPL(H). These 20 hours may include 5 hours completed in an FSTD. The 20 hours of dual instruction shall include at least 5 hours of solo cross-country flight time with at least one cross-

country flight totalling not less than 180 km (100 NM) in the course of which landings at two different points shall be made.

- (2) The instructor shall ensure that the applicant for a PPL(H) has operational experience in at least the following areas to the level of performance required for the private pilot—
 - (i) Recognise and manage threats and errors;
 - (ii) Pre-flight operations, including mass and balance determination, helicopter inspection, and servicing;
 - (iii) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
 - (iv) Control of the helicopter by external visual reference;
 - (v) Recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;
 - (vi) Ground manoeuvring and run-ups; hovering; take-offs and landings – normal, out of wind, and sloping ground;
 - (vii) Take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;
 - (viii) Cross-country flying using visual reference, dead reckoning, and, where available, radio navigation aids, including a flight of at least 1 hour;
 - (ix) Emergency operations, including simulated helicopter equipment malfunctions; autorotative approach and landing;
 - (x) Operations to, from, and transiting controlled aerodromes; compliance with ATS procedures;
 - (xi) RT procedures and phraseology; and
 - (xii) As furthered specified in the ECCAA STSs for PPL(H).
- (2) including take-offs, landings, and 1 hour of navigation.

- (c) The requirements for the skill test for the PPL(H) are included in the ECCAA STSs or PPL(H).

Implementing Standard: See IS: 2.3.4.4 for minimum aeronautical experience requirements for PPL.

2.3.4.6 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE PPL – POWERED-LIFT CATEGORY

- (a) EXPERIENCE.

- (1) The applicant for a PPL(PL) shall have completed not less than 40 hours of flight time as pilot of powered-lifts. The Authority will determine whether such experience as a pilot under instruction in an FSTD is acceptable as part of the total flight time of 40 hours. Credit for such experience shall be limited to a total of 5 hours if completed under instruction in an FSTD approved by the Authority.
- (2) When the applicant for a PPL(PL) has flight time as a pilot of aircraft in other categories, the Authority will determine whether such experience is acceptable and, if so, the extent to which the flight time in Paragraph 2.3.4.6(a) of this subsection may be reduced.
- (3) The applicant for a PPL(PL) shall have completed in a powered-lift aircraft not less than 10 hours of solo flight time under the supervision of an authorised FI, including 5 hours of solo cross-country flight time with at least one cross-country flight totaling not less than 270 km (150 NM) in the course of which full-stop landings at two different aerodromes shall be made.

- (b) FLIGHT INSTRUCTION.

- (1) The applicant for a PPL(PL) shall have received not less than 20 hours dual instruction in powered-lifts from an authorised instructor in at least the following areas—
 - (i) Recognise and manage threats and errors;
 - (ii) Pre-flight operations, including mass and balance determination, powered-lift inspection and servicing;
 - (iii) Aerodrome and traffic operations, collision avoidance precautions and procedures;

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- (iv) Control of the powered-lift by external visual reference;
 - (v) Ground manoeuvring and run-ups; hover and rolling take-offs and climbout; hover and rolling approach and landings – normal, out of wind, and sloping ground;
 - (vi) Take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;
 - (vii) Cross-country flying using visual reference, dead reckoning, and, where available, radio navigation aids, including a flight of at least 1 hour;
 - (viii) Emergency operations, including simulated powered-lift equipment malfunctions; power of reconversion to autorotation and autorotative approach, where applicable; transmission and interconnect driveshaft failure, where applicable;
 - (ix) Operations to, from, and transiting controlled aerodromes, compliance with ATS procedures;
 - (x) RT procedures and phraseology; and
 - (xi) As further specified in the ECCAA STSs for PPL(PL).
- (c) The requirements for the skill test for the PPL(PL) are included in the ECCAA STSs for PPL(PL).

2.3.4.7 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE PPL – AIRSHIP CATEGORY

- (a) EXPERIENCE. The applicant for a PPL(AS) shall have completed not less than 25 hours of flight time as pilot of airships, including at least—
- (1) 3 hours of cross-country flight training in an airship with a cross-country flight totalling not less than 45 km (25 NM);
 - (2) Five take-offs and five landings to a full stop at an aerodrome with each landing involving a flight in the traffic pattern at an aerodrome;

- (3) 3 hours of instrument time; and
 - (4) 5 hours as pilot assuming the duties of the PIC under the supervision of the PIC.
- (b) FLIGHT INSTRUCTION. The applicant for a PPL(AS) shall have received dual instruction from an authorised instructor in at least the following areas—
 - (1) Recognise and manage threats and errors;
 - (2) Pre-flight operations, including mass and balance determination, airships inspection and servicing;
 - (3) Ground reference manoeuvres;
 - (4) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
 - (5) Techniques and procedures for the take-off, including appropriate limitations, emergency procedures, and signals used;
 - (6) Control of the airship by external visual reference;
 - (7) Take-offs, landings, and go-arounds;
 - (8) Maximum performance (obstacle clearance) take-offs;
 - (9) Flight by reference solely to instruments, including the completion of a level 180 degree turn;
 - (10) Navigation, cross-country flying using visual reference, dead reckoning, and radio navigation aids;
 - (11) Emergency operations (recognition of leaks), including simulated airship equipment malfunctions; and
 - (12) RT procedures and phraseology.
- (c) The requirements for the skill test for the PPL(AS) are included in the ECCAA STSs for PPL(AS).

2.3.4.8 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE PPL – BALLOON CATEGORY.

- (a) **EXPERIENCE.** The applicant for a PPL(B) shall have completed not less than 16 hours of flight time as pilot of free balloons, including at least 8 launches and ascents, at least one of which shall be solo.
- (b) **FLIGHT INSTRUCTION.** The applicant for a PPL(B) shall have received dual instruction in free balloons from an authorised instructor in at least the following areas—
 - (1) Pre-flight operations, including balloon assembly, rigging, inflation, mooring, and inspection;
 - (2) Aerodrome operations, transiting controlled aerodromes, compliance with ATS procedures; RT procedures and phraseology;
 - (3) Techniques and procedures for the launching and ascent, including appropriate limitations, emergency procedures, and signals used;
 - (4) Collision avoidance precautions;
 - (5) Control of the free balloon by external visual references;
 - (6) Recognition of and recovery from rapid descents;
 - (7) Cross-country flying using visual reference and dead reckoning;
 - (8) Approaches and landings, including ground handling; and
 - (9) Emergency procedures.
- (c) **Skill:** An applicant shall have demonstrated the ability to perform as pilot-in-command of a free balloon, the procedures and manoeuvres described in Paragraph 2.3.4.8(b) of this subsection with a degree of competency appropriate to the privileges granted to the holder of a free balloon pilot licence, and to—
 - (1) recognize and manage threats and errors;
 - (2) operate the free balloon within its limitations;
 - (3) complete all manoeuvres with smoothness and accuracy;

- (4) exercise good judgement and airmanship;
- (5) apply aeronautical knowledge; and
- (6) maintain control of the free balloon at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

2.3.4.9 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE PPL – GLIDER CATEGORY

- (a) **EXPERIENCE.** The applicant for a PPL(G) shall have completed not less than 6 hours of flight time as a pilot of gliders, including 2 hours of solo flight time during which not less than 20 launches and landings have been performed.
- (b) **FLIGHT INSTRUCTION.** The applicant for a PPL(G) shall have received dual instruction in gliders from an authorised instructor in at least the following areas—
 - (1) Pre-flight operations, including glider assembly and inspection;
 - (2) Techniques and procedures for the launching method used, including appropriate airspeed limitations, emergency procedures, and signals used;
 - (3) Traffic pattern operations, collision avoidance precautions and procedures;
 - (4) Control of the glider by external visual reference;
 - (5) Flight throughout the flight envelope;
 - (6) Recognition of and recovery from incipient and full stalls and spiral dives;
 - (7) Normal and crosswind launches, approaches, and landings;
 - (8) Cross-country flying using visual reference and dead reckoning; and
 - (9) Emergency procedures.

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- (c) CREDITING OF TIME IN OTHER AIRCRAFT CATEGORIES. The holder of a pilot licence in the aeroplane category may be credited with 3 hours towards the 6 hours of flight time required for the glider licence.
- (d) Skill: An applicant shall have demonstrated the ability to perform as pilot-in-command of a glider, the procedures and manoeuvres described in Paragraph 2.3.4.9(b) of this subsection with a degree of competency appropriate to the privileges granted to the holder of a glider pilot licence, and to—
- (1) recognize and manage threats and errors;
 - (2) operate the glider within its limitations;
 - (3) complete all manoeuvres with smoothness and accuracy;
 - (4) exercise good judgement and airmanship;
 - (5) apply aeronautical knowledge; and
 - (6) maintain control of the glider at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

2.3.4.10 CROSS-COUNTRY FLIGHTS: PILOTS BASED ON SMALL ISLANDS

- (a) Except as provided in Paragraph 2.3.4.10(b) of this subsection, an applicant located on an island from which the cross-country flight training required in Subsection 2.3.3.6 of this part cannot be accomplished without flying over water for more than 10 nautical miles from the nearest shoreline need not comply with the requirements of that section.
- (b) If other airports that permit civil operations are available to which a flight may be made without flying over water for more than 10 nautical miles from the nearest shoreline, the applicant shall show completion of two round-trip solo flights between those two airports that are farthest apart, including a landing at each airport on both flights.
- (c) The Authority shall issue to an applicant who complies with Paragraph 2.3.4.10(a) or (b) of this subsection, and meets all requirements for the issuance of a private pilot licence, except the

cross-country training requirements of Subsection 2.3.3.6 of this part, a pilot licence with an endorsement containing the following limitation, "Passenger carrying prohibited on flights more than 10 nautical miles from (the appropriate island)." The Authority may subsequently amend the limitation to include another island if the applicant complies with the requirements of Paragraph 2.3.4.10(a) or (b) of this subsection for another island.

- (d) Upon meeting the cross-country training requirements of Subsection 2.3.3.6 of this part, an applicant may have the limitation in Paragraph 2.3.4.10(c) of this subsection removed.

2.3.4.11 PRIVATE PILOT PRIVILEGES AND LIMITATIONS: REQUIRED CREWMEMBER

- (a) Except as provided in Paragraphs 2.3.4.11(b) through (f) of this subsection, a private pilot shall not act as a required crewmember of an aircraft —
 - (1) carrying passengers or property for compensation or hire; or
 - (2) operated for compensation or hire.
- (b) A private pilot may, for compensation or hire, act as a required crewmember of an aircraft in connection with any business or employment if—
 - (1) the flight is only incidental to that business or employment; and
 - (2) the aircraft does not carry passengers or property for compensation or hire.
- (c) A private pilot may act as a required crewmember of an aircraft used in a passenger-carrying airlift sponsored by a charitable organisation described in Paragraph 2.3.4.11(c)(7) of this subsection, and for which the passengers make a donation to the organisation, when the following requirements are met—
 - (1) the sponsor of the airlift notifies the office of the Authority with jurisdiction over the area concerned at least 7 days before the event and furnishes—
 - (i) a signed letter from the sponsor that shows the name of the sponsor, the purpose of the charitable event, the date and time of the event, and the location of the event; and

- (ii) a photocopy of each required crewmember's pilot licence, medical certificate, and logbook entries that show the pilot is current and has logged at least 200 hours of flight time;
 - (iii) the flight is conducted from a public airport that is adequate for the aircraft to be used, or from another airport that has been approved by the Authority for the operation;
 - (iv) no aerobatic or formation flights are conducted;
 - (v) an aircraft used for the charitable event holds a standard airworthiness certificate;
 - (vi) an aircraft used for the charitable event is airworthy and complies with the applicable
 - (vii) requirements of Part 8 of these regulations;
 - (viii) a flight for the charitable event is made during day VFR conditions; and
 - (ix) the charitable organisation is an organisation identified as such by the appropriate authority of the government.
- (d) A private pilot may be reimbursed for aircraft operating expenses that are directly related to search and location operations, provided the expenses involve only fuel, oil, airport expenditures, or rental fees, and the operation is sanctioned and under the direction and control of—
 - (1) a relevant Government agency; or
 - (2) an organisation that conducts search and location operations.
- (e) A private pilot who is an aircraft salesman and who has at least 200 hours of logged flight time may demonstrate an aircraft in flight to a prospective buyer.
- (f) A private pilot shall not pay less than the pro rata share of the operating expenses of a flight with passengers, provided the expenses involve only fuel, oil, airport expenditures, or rental fees.

- (g) Except as provided in Paragraphs 2.3.4.11(b) through (f) of this subsection, a private pilot shall not, for compensation or hire, act as SIC of an aircraft that is type certified for more than one pilot.

2.3.5 Commercial Pilots

2.3.5.1 APPLICABILITY

- (a) This subsection prescribes the requirements for the issuance of commercial pilot licences and ratings, and the conditions under which those licences and ratings are necessary.

2.3.5.2 ELIGIBILITY REQUIREMENTS: GENERAL

- (a) To be eligible for a commercial pilot licence, a person shall—
 - (1) be at least 18 years of age.
 - (2) meet the English language proficiency requirements of Subpart 2.2.2;
 - (3) pass a Class 1 medical examination conducted by an authorised medical examiner
 - (4) receive a logbook endorsement from an authorised instructor who—
 - (i) conducted the required ground training or reviewed the person's home study on the aeronautical knowledge areas listed in IS: 2.3.5.3 that apply to the aircraft category and class rating sought; and
 - (ii) certified that the person is prepared for the required knowledge test that applies to the aircraft category and class rating sought.
 - (5) pass the required knowledge test on the aeronautical knowledge areas listed in IS: 2.3.5.3;
 - (6) receive the required training and a logbook endorsement from an authorised instructor who—

- (i) conducted the training on the areas of operation listed in IS: 2.3.5.3 that apply to the aircraft category and class rating sought; and
 - (ii) certified that the person is prepared for the required skill test.
- (7) meet the aeronautical experience requirements of this Subpart that apply to the aircraft category and class rating sought before applying for the skill test;
- (8) pass the required skill test on the areas of operation listed in IS: 2.3.5.4 that apply to the aircraft category and class rating sought;
- (9) hold a private pilot licence issued under this Subpart; and
- (10) comply with all sections of this Subpart that apply to the aircraft category and class rating sought.

2.3.5.3 COMMERCIAL PILOT: AERONAUTICAL KNOWLEDGE REQUIREMENTS

- (a) An applicant for a commercial pilot licence shall receive and log ground training from an authorised instructor, on the following subjects appropriate to the privileges granted to the holder of a CPL and appropriate to the category of aircraft to be included on the licence or complete a home-study course on the required aeronautical knowledge areas shown in IS: 2.3.5.3.
 - (1) AIR LAW
 - (i) Rules and regulations relevant to the holder of a CPL; rules of the air; appropriate ATS practices and procedures.
 - (2) AIRCRAFT GENERAL KNOWLEDGE—
 - (i) Principles of operation and functioning of powerplants, systems, and instruments;
 - (ii) Operating limitations of the appropriate category of aircraft and powerplants; relevant operational information from the flight manual or other appropriate document;

- (iii) Use and serviceability checks of equipment and systems of appropriate aircraft;
 - (iv) Maintenance procedures for airframes, systems, and powerplants of appropriate aircraft;
 - (v) For helicopters and powered-lifts, transmission (power-trains) where applicable;
 - (vi) For airships and balloons, physical properties and practical application of gases;
- (3) FLIGHT PERFORMANCE, PLANNING, AND LOADING.
- (i) Effects of loading and mass distribution on aircraft handling, flight characteristics, and performance; mass and balance calculations;
 - (ii) Use and practical application of take-off or launching, landing, and other performance data;
 - (iii) Pre-flight and en route flight planning appropriate to commercial operations under VFR; preparation and filing of ATS flight plans; appropriate ATS procedures;
 - (iv) In the case of airships, helicopter, and powered-lift, effects of external loading on handling;
- (4) HUMAN PERFORMANCE.
- (i) Human performance relevant to the appropriate aircraft type;
 - (ii) Principles of threat and error management;
- (5) METEOROLOGY.
- (i) Interpretation and application of aeronautical meteorological reports, charts and forecasts; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimetry;
 - (ii) Aeronautical meteorology; climatology of relevant areas with respect to the elements having an effect upon

aviation; the movement of pressure systems, the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en route, and landing conditions;

- (iii) Causes, recognition, and effects of icing; frontal zone penetration procedures; hazardous weather avoidance;

(6) NAVIGATION.

- (i) Air navigation, including the use of aeronautical charts, instruments, and navigation aids;
- (ii) An understanding of the principles and characteristics of appropriate navigation systems;
- (iii) Operation of airborne equipment;
- (iv) In the case of airships—
 - (A) Use, limitation, and serviceability of avionics and instruments necessary for control and navigation;
 - (B) Use, accuracy, and reliability of navigation systems used in departure, en route, approach, and landing phases of flight, identification of radio navigation aids;
 - (C) Principles and characteristics of self-contained and external referenced navigation systems; operation of airborne equipment;

(7) OPERATIONAL PROCEDURES.

- (i) Application of threat and error management to operational performance;
- (ii) Use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
- (iii) Altimeter setting procedures;
- (iv) Appropriate precautionary and emergency procedures;

- (v) Operational procedures for carriage of freight; potential hazards associated with dangerous goods;
 - (vi) Requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft;
 - (vii) In the case of helicopters, and, if applicable, powered-lifts, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight under VMC;
- (8) PRINCIPLES OF FLIGHT.
 - (i) Principles of flight relating to the appropriate category of aircraft;
- (9) RT.
 - (i) Communication procedures and phraseology as applied to VFR operations; action to be taken in case of communication failure; and
 - (ii) As further specified in the applicable ECCAA STSs.
- (b) KNOWLEDGE TESTING. The applicant for a CPL shall—
 - (1) Have received an endorsement for the knowledge test from an authorised instructor who—
 - (i) Conducted the training on the knowledge subjects; and
 - (ii) Certifies that the person is prepared for the required knowledge test; and
 - (2) Pass the required knowledge test on the knowledge subjects listed in the applicable ECCAA knowledge test guide.
- (c) EXPERIENCE AND FLIGHT INSTRUCTION. An applicant for a CPL shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this part.
- (d) SKILL. The applicant for a CPL shall have—

- (1) Received an endorsement from an authorised instructor who certifies that the person is prepared for the required skill test; and
 - (2) Demonstrated by passing a skill test the ability to perform as PIC of an aeroplane the areas of operation described in the applicable CAA STSs with a degree of competency appropriate to the privileges granted to the holder of a CPL, and to—
 - (i) Operate the aeroplane within its limitations;
 - (ii) Complete all manoeuvres with smoothness and accuracy;
 - (iii) Exercise good judgement and airmanship;
 - (iv) Apply aeronautical knowledge; and
 - (v) Maintain control of the aeroplane at all times in a manner such that the successful outcome of a procedure or manoeuvre is never seriously in doubt.
- (e) PRIVILEGES. Subject to compliance with the requirements specified in this part, the privileges of the holder of a CPL shall be—
 - (1) To exercise all the privileges of the holder of a PPL in an aircraft within the appropriate aircraft category;
 - (2) To act as PIC of an aircraft within the appropriate aircraft category engaged in operations other than commercial air transportation;
 - (3) To act as PIC in commercial air transportation of an aircraft within the appropriate aircraft category and certificated for single-pilot operation;
 - (4) To act as CP of an aircraft within the appropriate aircraft category required to be operated with a CP; and
 - (5) For the airship category, to pilot an airship under IFR.

Implementing Standard: See IS: 2.3.5.3 for specific aeronautical knowledge area requirements.

2.3.5.4 COMMERCIAL PILOT: FLIGHT PROFICIENCY REQUIREMENTS

- (a) An applicant for a commercial pilot licence shall complete a home study course or receive and log ground training from an authorised instructor and shall receive and log flight training from an authorised instructor on the areas of operation of this subsection that apply to the aircraft category, class and type rating sought.

Implementing Standard: See IS: 2.3.5.4 for detailed requirements concerning training for aircraft category and class ratings sought.

2.3.5.5 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE CPL – AEROPLANE CATEGORY

(a) EXPERIENCE

- (1) The applicant for a CPL(A) shall have completed not less than 250 hours of flight time, or 190 hours if completed during a CAA-approved training course provided by an ATO under Part 3 of these regulations, as a pilot of aeroplanes, of which 20 hours may have been completed in an FSTD.
- (2) The applicant for a CPL(A) shall have completed in aeroplanes not less than—
 - (i) 100 hours as PIC or, in the case of a course of approved training, 70 hours as PIC;
 - (ii) 20 hours of cross-country flight time as PIC including a cross-country flight totalling not less
 - (iii) than 540 km (300 NM), in the course of which full-stop landings at two different aerodromes shall be made;
 - (iv) 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time; and
 - (v) If the privileges of the licence are to be exercised at night, 5 hours of night flight time including five take-offs and five landings as PIC.
- (3) The holder of a pilot licence in another category may be credited towards the 200 hours of flight time as follows—

- (i) 10 hours as PIC in a category other than helicopters
 - (ii) 30 hours as PIC holding a PPL(H) in helicopters; or
 - (iii) 100 hours as PIC holding a CPL(H) in helicopters.
 - (4) The applicant for a CPL(A) shall hold a PPL(A) issued under this part.
- (b) FLIGHT INSTRUCTION.
- (1) The applicant for a CPL(A) shall have received and logged not less than 25 hours of dual instruction from an authorised instructor. These 25 hours may include 5 hours completed in an FSTD.
 - (2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot—
 - (i) Recognise and manage threats and errors;
 - (ii) Pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;
 - (iii) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
 - (iv) Control of the aeroplane by external visual reference;
 - (v) Flight at critically slow airspeeds; spin avoidance; recognition of, and recovery from, incipient and full stalls;
 - (vi) Flight with asymmetrical power for multi-engine class or type ratings;
 - (vii) Flight at critically high airspeeds; recognition of and recovery from spiral dives;
 - (viii) Normal and crosswind take-offs and landings;
 - (ix) Maximum performance (short field and obstacle clearance) take-offs; short-field landings;

- (x) Basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;
 - (xi) Cross-country flying using visual reference, dead reckoning, and radio navigation aids; diversion procedures;
 - (xii) Abnormal and emergency procedures and manoeuvres including simulated aeroplane equipment malfunctions;
 - (xiii) Operations to, from, and transiting controlled aerodromes, compliance with ATS procedures;
 - (xiv) RT procedures and phraseology; and
 - (xv) Upset prevention and recovery training in actual flight.
- (3) If the privileges of the CPL(A) are to be exercised at night, the applicant shall have received 4 hours of dual instruction in aeroplanes in night flying, including take-offs, landings, and 1 hour of navigation.
- (c) SKILL TEST. The requirements for the skill test for the CPL(A) category are included in the CAA STSs for CPL(A).

2.3.5.6 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE CPL – HELICOPTER CATEGORY

- (a) EXPERIENCE.
- (1) The applicant for a CPL(H) shall have completed not less than 150 hours of flight time, or 100 hours if completed during an integrated course of approved training provided by an ATO under Part 3 of these regulations, as a pilot of helicopters, of which 10 hours may have been completed in an FSTD.
 - (2) The applicant for a CPL(H) shall have completed in helicopters not less than—
 - (i) 35 hours as PIC;
 - (ii) 10 hours of cross-country flight time as PIC including a cross-country flight, in the course of which full-stop landings at two different points shall be made;

- (iii) 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time; and
 - (iv) If the privileges of the licence are to be exercised at night, 5 hours of night flight time including five take-offs and five landings as PIC.
 - (3) The holder of a pilot licence in another category may be credited towards the 150 hours of flight time as follows—
 - (i) 20 hours as PIC holding a PPL(A) in aeroplanes; or
 - (ii) 50 hours as PIC holding a CPL(A) in aeroplanes.
 - (4) The applicant for a CPL(H) shall hold a PPL(H) under this part.
- (b) FLIGHT INSTRUCTION.
- (1) The applicant for a CPL(H) shall have received and logged not less than 30 hours of dual instruction in helicopters from an authorised instructor on the subjects listed in the ECCAA STSs for CPL(H).
 - (2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot—
 - (i) Recognise and manage threats and errors;
 - (ii) Pre-flight operations, including mass and balance determination, helicopter inspection and servicing;
 - (iii) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
 - (iv) Control of the helicopter by external visual reference;
 - (v) Recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;
 - (vi) Ground manoeuvring and run-ups; hovering; take-offs and landings – normal, out of wind, and sloping ground; steep approaches;

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- (vii) Take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;
 - (viii) Hovering out of ground effect; operations with external load, if applicable; flight at high altitude;
 - (ix) Basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;
 - (x) Cross-country flying using visual reference, dead reckoning, and radio navigation aids; diversion procedures;
 - (xi) Abnormal and emergency procedures, including simulated helicopter equipment malfunctions, autorotative approach and landing;
 - (xii) Operations to, from, and transiting controlled aerodromes, compliance with ATS procedures;
 - (xiii) RT procedures and phraseology; and
 - (xiv) As further specified in the ECCAA STSs for CPL(H).
- (3) If the privileges of the licence are to be exercised at night, the applicant shall have received 4 hours of dual instruction in helicopters in night flying, including take-offs, landings, and 1 hour of navigation.
- (c) SKILL TEST. The requirements for the skill test for the CPL(H) category are included in the CAA STSs for CPL(H).

2.3.5.7 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE CPL – POWERED-LIFT CATEGORY

- (a) EXPERIENCE.
- (1) The applicant for a CPL(PL) shall have completed not less than 200 hours of flight time, or 150 hours if completed during a course of approved training provided for in an ATO under Part 3 of these regulations, as a pilot of aircraft. The Authority may determine whether experience as a pilot under instruction in an FSTD is acceptable as part of the total flight time of 200 hours or 150 hours, as the case may be.

- (2) The applicant for a CPL(PL) shall have completed in a powered-lift aircraft not less than—
 - (i) 50 hours as PIC;
 - (ii) 10 hours of cross-country flying as PIC including a cross-country flight totalling not less than 540 km (300 NM), in the course of which full-stop landings at two different aerodromes shall be made;
 - (iii) 10 hours of instrument instruction of which not more than 5 hours may be instrument ground time; and
 - (iv) If the privileges are to be exercised at night, 5 hours of night flight including five take-offs and landings as PIC.
- (3) When the applicant for a CPL(PL) has flight time as a pilot of aircraft in other categories, the Authority may determine whether such experience is acceptable and, if so, the extent to which the flight time requirements in Paragraph 2.3.5.4(a) of this subsection may be reduced.
- (b) FLIGHT INSTRUCTION. The applicant for a CPL(PL) shall have received dual instruction in powered-lift from an authorised instructor in at least the following areas to the level of performance required for the commercial pilot—
 - (i) Recognise and manage threats and errors;
 - (ii) Pre-flight operations, including mass and balance determination, powered-lift inspection and servicing;
 - (iii) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
 - (iv) Control of the powered-lift by external visual reference;
 - (v) Recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;
 - (vi) Ground manoeuvring and run-ups; hover and rolling take-offs and climbout; hover and rolling approach and landings – normal, out of wind, and sloping ground; steep approaches;

- (vii) Take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;
 - (viii) Hovering out of ground effect; operations with external load, if applicable; flight at high altitude;
 - (ix) Basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;
 - (x) Cross-country flying using visual reference, dead reckoning, and, where available, radio navigation aids, including a flight of at least 1 hour;
 - (xi) Emergency operations, including simulated powered-lift equipment malfunctions; power of reconversion to autorotation and autorotative approach, where applicable; transmission and interconnect driveshaft failure, where applicable; and
 - (xii) Operations to, from, and transiting controlled aerodromes, compliance with ATS procedures; and
 - (xiii) RT procedures and phraseology.
- (c) SKILL TEST. The requirements for the skill test for the CPL(PL) category are included in the ECCAA STSs for CPL(PL).

2.3.5.8 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE CPL – AIRSHIP CATEGORY

- (a) EXPERIENCE
- (1) The applicant for a CPL(AS) shall have completed not less than 200 hours of flight time as a pilot.
 - (2) The applicant for a CPL(AS) shall have completed not less than—
 - (i) 50 hours as a pilot in airships;
 - (ii) 30 hours as PIC or PIC under supervision in airships, to include not less than—

- (iii) 10 hours of cross-country flight time; and
 - (iv) 10 hours of night flight;
 - (v) 40 hours of instrument time, of which 20 hours shall be in flight and 10 hours in flight in airships; and
 - (vi) 20 hours of flight training in airships on the areas of operation listed in Paragraph 2.3.5.5(b) of this subsection.
- (b) FLIGHT INSTRUCTION. The applicant for a CPL(AS) shall have received dual instruction in airships from an authorised instructor in at least the following areas to the level of performance required for the commercial pilot—
 - (1) Recognise and manage threats and errors;
 - (2) Pre-flight operations, including mass and balance determination, airships inspection and servicing;
 - (3) Aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
 - (4) Techniques and procedures for the take-off, including appropriate limitations, emergency procedures, and signals used;
 - (5) Control of the airship by external visual reference;
 - (6) Recognition of leaks;
 - (7) Normal take-offs and landings;
 - (8) Maximum performance (short field and obstacle clearance) take-offs; short-field landings;
 - (9) Flight under IFR;
 - (10) Cross-country flying using visual reference, dead reckoning, and, where applicable, radio navigation aids;
 - (11) Emergency operations, including simulated airship equipment malfunctions;

- (12) Operations to, from, and transiting controlled aerodromes, compliance with ATS procedures; and
- (13) RT procedures and phraseology.
- (c) SKILL TEST. The requirements for the skill test for CPL(AS) are included in the ECCAA STSs for CPL(AS).

2.3.5.9 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE CPL – BALLOON CATEGORY

- (a) EXPERIENCE. The applicant for a CPL(B) shall have completed at least—
 - (1) 35 hours of flight time as a pilot, including at least—
 - (i) 20 hours as a pilot of free balloons;
 - (ii) 10 flights in a free balloon; and
 - (iii) 2 flights in a free balloon as the PIC.
 - (2) 10 hours of flight training that includes at least 10 training flights in a free balloon on the areas of operation listed in Paragraph 2.3.5.9(b) of this subsection, including at least—
 - (i) For a gas balloon rating—
 - (A) Two training flights of 2 hours each in a gas balloon on the areas of operation appropriate to a gas balloon within 60 days prior to application for the rating;
 - (B) Two flights performing the functions of PIC in a gas balloon on the appropriate areas of operation; and
 - (C) One flight involving a controlled ascent to 5 000 ft above the launch site.
 - (ii) For a hot air balloon rating—
 - (A) Three training flights of 1 hour each in a balloon with an airborne heater on the areas of operation

- appropriate to a balloon with an airborne heater within 60 days prior to application for the rating;
 - (B) Two solo flights in a balloon with an airborne heater on the appropriate areas of operation; and
 - (C) One flight involving a controlled ascent to 3 000 ft above the launch site.
- (b) FLIGHT INSTRUCTION. The applicant for a CPL(B) shall have received dual instruction in balloons from an authorised instructor in at least the following areas to the level of performance required for the commercial pilot—
 - (i) Recognise and manage threats and errors;
 - (ii) Technical subjects;
 - (iii) Pre-flight operations, including balloon assembly, rigging, inflation, mooring, and inspection;
 - (iv) Pre-flight lesson on a manoeuvre to be performed in flight;
 - (v) Aerodrome operations, transiting controlled aerodromes, compliance with ATS procedures;
 - (vi) RT procedures and phraseology;
 - (vii) Techniques and procedures for launching and ascent, including appropriate limitations, emergency procedures, and signals used;
 - (viii) Collision avoidance precautions;
 - (ix) Control of the free balloon by external visual reference;
 - (x) Recognition of and recovery from rapid descents;
 - (xi) Navigation and cross-country flying using visual reference and dead reckoning;
 - (xii) Approaches and landings, including ground handling;
 - (xiii) Emergency procedures; and

(xiv) Post-flight procedures.

- (c) SKILL TEST. The requirements for the skill test for CPL(B) are included in the ECCAA STSs for CPL(B).

2.3.5.10 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE CPL – GLIDER CATEGORY

- (a) EXPERIENCE. The applicant for a CPL(G) shall have completed at least—

(1) 25 hours of flight time as pilot in a glider, including at least 100 flights in a glider as PIC and at least—

(i) 3 hours of flight training or 10 training flights in gliders on the areas of operation listed in Paragraph 2.3.5.10 (b) of this subsection; and

(ii) 2 hours of solo flight that includes not less than 10 solo flights in gliders on the areas of operation listed in Paragraph 2.3.5.10 (b) of this subsection; or

(2) 200 hours of flight time as a pilot in aeroplane, helicopter, or powered-lift aircraft, and 20 flights in gliders as PIC, including at least—

(i) 3 hours of flight training or 10 training flights in gliders on the areas of operation listed in Paragraph 2.3.5.10 (b) of this subsection; and

(ii) 5 solo flights in a glider on the areas of operation listed in Paragraph 2.3.5.10 (b) of this subsection.

- (b) FLIGHT INSTRUCTION. The applicant for a CPL(G) shall have received dual instruction in a glider from an authorised instructor in at least the following areas of operation to the level of performance required for a commercial pilot—

(1) Pre-flight operations, including glider assembly and inspection;

(2) Techniques and procedures for the launching method used, including appropriate airspeed limitations, emergency procedures, and signals used;

- (3) Traffic pattern operations, collision avoidance precautions and procedures;
 - (4) Control of the glider by external visual reference;
 - (5) Flight throughout the flight envelope;
 - (6) Recognition of, and recovery from, incipient and full stalls and spiral dives;
 - (7) Normal and crosswind launches, approaches, and landings;
 - (8) Cross-country flying using visual reference and dead reckoning; and
 - (9) Emergency procedures.
- (c) SKILL TEST. The requirements for the skill test for CPL(G) are included in the ECCAA STSs for CPL(G).

Implementing Standard: See IS: 2.3.5.10 for specific required aeronautical experience

2.3.5.11 COMMERCIAL PILOT PRIVILEGES AND LIMITATIONS

- (a) Privileges: A commercial pilot licence holder may act as PIC or co-pilot of an aircraft for compensation or hire, including the carriage of persons or property for compensation or hire, provided the pilot is qualified in accordance with the applicable parts of these regulations—
- (1) a commercial pilot with a lighter-than-air category ratings may—
 - (i) for an airship—
 - (A) give flight and ground training in an airship for the issuance of a licence or rating;
 - (B) endorse a pilot licence for an airship; and
 - (C) act as PIC or co-pilot of an airship under IFR.
 - (ii) for a balloon—

- (A) give flight and ground training in a balloon for the issuance of a licence or rating; and
 - (B) endorse a pilot licence for a balloon.
- (b) Limitations—
 - (1) the Authority shall issue to an applicant for a commercial pilot licence with an aeroplane category or powered-lift category rating who does not hold an instrument rating in the same category and class, a commercial pilot licence that contains the limitation, "The carriage of passengers for hire in (aeroplanes) (powered-lifts) on cross-country flights in excess of 50 nautical miles or at night is prohibited."
 - (2) a pilot may remove the limitation specified in Paragraph 2.3.5.11(b)(1) of this subsection by satisfactorily accomplishing the requirements listed in Subsection 2.3.8.1 of this part for an instrument rating in the same category and class of aircraft that has the limitation;
 - (3) if an applicant for a commercial pilot licence with a balloon rating takes a skill test in a balloon with an airborne heater—
 - (i) the Authority shall place upon the pilot licence a limitation restricting the exercise of the privileges of that licence to a balloon with an airborne heater;
 - (ii) the pilot may remove the limitation specified in Paragraph 2.3.5.11(b)(3)(i) of this subsection by obtaining the required aeronautical experience in a gas balloon and receiving a logbook endorsement from an authorised instructor who attests to the pilot's accomplishment of the required aeronautical experience and ability to satisfactorily operate a gas balloon.
 - (4) if an applicant for a commercial pilot licence with a balloon rating takes a skill test in a gas balloon—
 - (i) the Authority shall place upon the pilot licence a limitation restricting the exercise of the privileges of that licence to a gas balloon; and
 - (ii) the pilot may remove the limitation specified in Paragraph 2.3.5.11(b)(4)(i) of this subsection by

obtaining the required aeronautical experience in a balloon with an airborne heater and receiving a logbook endorsement from an authorised instructor who attests to the person's accomplishment of the required aeronautical experience and ability to satisfactorily operate a balloon with an airborne heater.

2.3.5.12 ADDITIONAL AIRCRAFT CATEGORY, CLASS, AND TYPE RATINGS

- (a) An applicant for a commercial pilot licence with a category rating who holds a commercial pilot licence with another aircraft category rating shall—
 - (1) meet the applicable eligibility requirements;
 - (i) pass a knowledge test on the applicable aeronautical knowledge areas;
 - (ii) meet the applicable aeronautical experience requirements; and
 - (iii) pass the skill test on the areas of operation.
 - (b) Aircraft type rating.
 - (1) An applicant seeking an aircraft type rating to be added on a commercial pilot licence shall pass a knowledge test appropriate to the type rating sought;
 - (2) Pass the required skill test on the applicable aircraft type.

2.3.6 Airline Transport Pilots

2.3.6.1 APPLICABILITY

- (a) This Section prescribes the requirements for the issuance of airline transport pilot licences and ratings, and the conditions under which those licences and ratings are necessary.
- (b) Eligibility Requirements: General
- (c) To be eligible for an airline transport pilot licence, a person shall—

- (1) be at least 21 years of age;
- (2) meet the English language proficiency requirements of Subsection 2.2.2 of this Part;
- (3) pass a Class 1 medical examination conducted by an authorised medical examiner;
- (4) meet at least one of the following requirements—
 - (i) hold a valid and current commercial pilot licence and an instrument rating; or
 - (ii) hold either a foreign airline transport pilot or foreign commercial pilot licence and an instrument rating issued by another Contracting State.
 - (iii) meet the aeronautical applicable experience requirements of this Subpart before applying for the skill test;
 - (iv) pass a knowledge test on the applicable aeronautical knowledge areas of IS: 2.3.6.2 that apply to the aircraft category and class rating sought;
 - (v) pass the skill test on the applicable areas of operation listed in Subsection 2.3.6.3 of this section that apply to the aircraft category and class rating sought.

2.3.6.2 AERONAUTICAL KNOWLEDGE

- (a) General. The Authority will administer a knowledge test for an airline transport pilot licence based on the aeronautical knowledge areas appropriate to the aircraft category and class rating sought.
- (b) An applicant for an air transport licence shall receive and log ground training from an authorised instructor, on the following subjects appropriate to the privileges granted to the holder of a ATPL and appropriate to the category of aircraft to be included on the licence or complete a home-study course on the required aeronautical knowledge areas shown in IS: 2.3.6.2.
 - (1) AIR LAW.

- (i) Rules and regulations relevant to the holder of an ATPL; rules of the air; appropriate ATS practices and procedures;
- (2) AIRCRAFT GENERAL KNOWLEDGE.
 - (i) General characteristics and limitations of electrical, hydraulic, pressurisation, and other aircraft systems; flight control systems, including autopilot and stability augmentation;
 - (ii) Principles of operation, handling procedures and operating limitations of aircraft powerplants; effects of atmospheric conditions on engine performance; relevant operational information from the flight manual or other appropriate document;
 - (iii) Operating procedures and limitations of appropriate aircraft; effects of atmospheric conditions on aircraft performance in accordance to the relevant operational information from the flight manual;
 - (iv) Use and serviceability checks of equipment and systems of the relevant category of aircraft;
 - (v) Flight instruments; compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments and electronic display units;
 - (vi) Maintenance procedures for airframes, systems, and powerplants of appropriate aircraft;
 - (vii) For helicopter and powered-lift, transmission (power-trains), where applicable;
- (3) FLIGHT PERFORMANCE, PLANNING, AND LOADING.
 - (i) Effects of loading and mass distribution on aircraft handling, flight characteristics and performance; mass and balance calculations;

- (ii) Use and practical application of take-off, landing, and other performance data, including procedures for cruise control;
 - (iii) Pre-flight and en route operational flight planning; preparation and filing of ATS flight plans; appropriate ATS procedures; altimeter setting procedures;
 - (iv) In the case of helicopter or powered-lift, effects of external loading on handling;
- (4) HUMAN PERFORMANCE.
 - (i) Human performance, including principles of threat and error management;
- (5) METEOROLOGY.
 - (i) Interpretation and application of aeronautical meteorological reports, charts, and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimetry;
 - (ii) Aeronautical meteorology; climatology of relevant areas with respect to the elements having an effect upon aviation; the movement of pressure systems; the structure of fronts; and the origin and characteristics of significant weather phenomena which affect take-off, en route, and landing conditions;
 - (iii) Causes, recognition, and effects of icing; frontal zone penetration procedures; hazardous weather avoidance;
 - (iv) In the case of aeroplane and powered-lift, practical high-altitude meteorology, including interpretation and use of weather reports, charts, and forecasts; jet streams;
- (6) NAVIGATION.
 - (i) Air navigation, including the use of aeronautical charts, radio navigation aids, and area navigation systems; specific navigation requirements for long-range flights;

- (ii) Use, limitation, and serviceability of avionics and instruments necessary for the control and navigation of aircraft;
 - (iii) Use, accuracy, and reliability of navigation systems used in departure, en route, approach, and landing phases of flight; identification of radio navigation aids;
 - (iv) Principles and characteristics of self-contained and external-referenced navigation systems; operation of airborne equipment;
- (7) OPERATIONAL PROCEDURES.
 - (i) Application of threat and error management to operational performance;
 - (ii) Interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
 - (iii) Precautionary and emergency procedures; safety practices;
 - (iv) Operational procedures for carriage of freight and dangerous goods;
 - (v) Requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft;
 - (vi) In the case of helicopter and, if applicable, powered-lift, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures associated with flight under VMC;
- (8) PRINCIPLES OF FLIGHT.
 - (i) Principles of flight relating to the appropriate aircraft category; and
- (9) RT.
 - (i) RT procedures and phraseology; action to be taken in case of communication failure.

- (c) KNOWLEDGE TESTING. The applicant for an ATPL shall—
 - (1) Have received an endorsement for the knowledge test from an authorised instructor who—
 - (A) Conducted the training on the knowledge subjects; and
 - (B) Certifies that the person is prepared for the required knowledge test; and
 - (2) Pass the required written knowledge test on the knowledge subjects listed in Paragraph 2.3.6.2(b)(2) of this subsection.
- (d) EXPERIENCE AND FLIGHT INSTRUCTION. The applicant for an ATPL shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this part.
- (e) SKILL. The applicant for an ATPL shall have—
 - (1) Received an endorsement from an authorised instructor who certifies that the person is prepared for the required skill test; and
 - (2) Demonstrated by passing a skill test the ability to perform, as PIC of an aircraft of the appropriate category required to be operated with a CP, the following procedures and manoeuvres—
 - (i) Pre-flight procedures, including the preparation of the operational flight plan and filing of the ATS flight plan;
 - (ii) Normal flight procedures and manoeuvres during all phases of flight;
 - (iii) Abnormal and emergency procedures and manoeuvres related to failures and malfunctions of equipment, such as powerplant, systems, and airframe;
 - (iv) Procedures for crew incapacitation and crew coordination, including allocation of pilot tasks, crew cooperation, and use of checklists;

- (v) In the case of the aeroplane and powered-lift, procedures and manoeuvres for instrument flight as described in 2.3.6 of this part, including simulated engine failure; and
 - (vi) In the case of aeroplane, the applicant shall have demonstrated the ability to perform the procedures and manoeuvres described in this paragraph as PIC in a multi-engine aircraft.
- (3) Demonstrated, by passing a skill test, the ability to perform the areas of operation described in the applicable CAA STSs, with a degree of competency appropriate to the privileges granted to the holder of an ATPL, and to—
 - (i) Operate the aeroplane within its limitations;
 - (ii) Recognise and manage threats and errors;
 - (iii) Smoothly and accurately, manually control the aircraft within its limitations at all times, such that the successful outcome of a procedure or manoeuvre is assured;
 - (iv) Operate the aircraft in the mode of automation appropriate to the phase of flight and to maintain awareness of the active mode of automation;
 - (v) Perform, in an accurate manner, normal, abnormal, and emergency procedures in all phases of flight;
 - (vi) Exercise good judgement and airmanship, to include structured decision making and the maintenance of situational awareness; and
 - (vii) Communicate effectively with the other flight crew members and demonstrate the ability to effectively perform procedures for crew incapacitation, crew coordination, including allocation of pilot tasks, crew cooperation, adherence to SOPs and use of checklists.
- (f) PRIVILEGES. Subject to compliance with the requirements specified in this part, the privileges of the holder of an ATPL shall be—

- (1) To exercise all the privileges of the holder of a PPL and CPL in an aircraft within the appropriate aircraft category and class, if applicable;
- (2) In the case of the aeroplane and powered-lift categories, to exercise the privileges of the holder of an IR; and
- (3) To act as PIC and CP, in commercial air transportation, of an aircraft within the appropriate category and class, if applicable.

Implementing Standard: See IS: 2.3.6.2 for a list of required aeronautical knowledge areas.

2.3.6.3 FLIGHT PROFICIENCY

- (a) An applicant for an airline transport pilot licence shall complete a home study course or receive and log ground training from an authorised instructor and shall receive and log flight training from an authorised instructor on the areas of operation of this subsection that apply to the aircraft category, class and type rating sought.

Implementing Standard: See IS: 2.3.6.3 for detailed requirements concerning training for aircraft category and class ratings sought.

2.3.6.4 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE ATPL – AEROPLANE CATEGORY

- (a) EXPERIENCE—
 - (1) Except as provided in Paragraphs 2.3.6.4(a)(5), (6) and (7) of this subsection, an applicant for an ATPL(A) shall have completed not less than 1500 hours of flight time as a pilot of aeroplanes, of which a maximum of 100 hours may have been completed in an FSTD. The applicant shall have completed in aeroplanes not less than—
 - (i) 500 hours as a pilot in command under supervision or 250 hours, either as PIC, or made up by not less than 100 hours as PIC and the necessary additional flight time as CP performing, under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Authority;

- (ii) 200 hours of cross-country flight time, of which not less than 100 hours shall be as PIC or as CP performing, under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Authority;
 - (iii) 75 hours of instrument time, of which not more than 30 hours may be instrument ground time; and
 - (iv) 100 hours of night flight as PIC or CP.
- (2) Not more than one of the following in an approved flight simulator or approved flight training device representing an aeroplane—
 - (i) 30 hours of simulated instrument time.
 - (ii) 50 hours of simulated instrument time if the training was accomplished in a course conducted by an ATO certified under Part 3, Subpart 3.1 of these regulations;
- (3) 100 hours of aeronautical experience requirements in an approved course conducted by an ATO certified under Part 3, Subpart 3.1 of these regulations; and
- (4) 250 hours of flight time in an aeroplane as a PIC, or as SIC performing the duties and functions of a PIC while under the supervision of a PIC or any combination thereof, which includes at least—
 - (i) 100 hours of cross-country flight time; and
 - (ii) 25 hours of night flight time.
- (5) A pilot who has performed at least 20 night takeoffs and landings to a full stop may substitute each additional night takeoff and landing to a full stop for 1 hour of night flight time to satisfy the requirements of Paragraph 2.3.6.4(a)(2) of this subsection, not to exceed 25 hours of night flight time.
- (6) A commercial pilot applicant may credit the following SIC flight time or flight-engineer flight time toward the 1,500 hours of total time as a pilot required by Paragraph 2.3.6.4(a) of this subsection—

- (i) SIC time acquired in an aeroplane required to have more than one pilot by the aeroplane's flight manual or type certificate; or
 - (ii) engaged in operations under Part 9 of these regulations for which a SIC is required.
- (7) Flight-engineer time acquired—
 - (i) in an aeroplane required to have a flight engineer by the aeroplane's flight manual or type certificate;
 - (ii) while engaged in operations under Part 9 of these regulations for which a flight engineer is required;
 - (iii) while the pilot is participating in a pilot training program approved under Part 9 of these regulations; and
 - (iv) that does not exceed 1 hour for each 3 hours of flight engineer flight time for a total credited time of no more than 500 hours.
- (8) Holders of a CPL(H) will be credited with 50 per cent of their helicopter flight time as PIC towards the flight time required in Paragraph 2.3.6.4(a)(1) of this subsection.
- (9) The applicant for an ATPL(A) shall be the holder of a CPL(A) with instrument and multi-engine rating issued under this part.
- (b) FLIGHT INSTRUCTION. The applicant for an ATPL(A) shall have received the dual flight instruction required for the issue of the CPL and the IR.
- (c) SKILL TEST. The requirements for the skill test for ATPL(A) are included in the ECCAA STSs for ATPL(A).

2.3.6.5 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE ATPL – HELICOPTER CATEGORY

- (a) EXPERIENCE.
 - (1) The applicant for an ATPL(H) shall have completed not less than 1000 hours of flight time as a pilot of helicopters, of

which a maximum of 100 hours may have been completed in an FSTD. The applicant shall have completed in helicopters not less than—

- (i) 250 hours, either as PIC or made up by not less than 70 hours as PIC and the necessary additional flight time as CP performing, under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Authority;
 - (ii) 200 hours of cross-country flight time, of which not less than 100 hours shall be as PIC or as CP performing, under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Authority;
 - (iii) 30 hours of instrument flight time in actual or simulated instrument meteorological conditions, of which at least 20 hours are obtained in flight with at least 10 hours in helicopters as a PIC, or as CP performing, under the supervision of a PIC, the duties and functions of a PIC, or any combination thereof.
 - (iv) Not more than one of the following in an approved flight simulator or approved flight training device representing a rotorcraft
 - (v) 10 hours of simulated instrument time;
 - (vi) 20 hours of simulated instrument time if the training was accomplished in a course conducted by an ATO certified under Part 3, Subpart 3.1 of these regulations
 - (vii) 50 hours of night flight as PIC or CP.
- (2) Holders of a CPL(A) will be credited with 50 per cent of their aeroplane flight time as PIC towards the flight time required in 2.3.6.5(a)(1) of this subsection.
 - (3) The applicant for an ATPL(H) shall be the holder of a CPL(H) issued under this part.
- (b) FLIGHT INSTRUCTION. The applicant for an ATPL(H) shall have received the dual flight instruction required for the issue of the CPL.

- (c) SKILL TEST. The requirements for the skill test for ATPL(H) are included in the CAA STSs for ATPL(H).

2.3.6.6 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE ATPL – POWERED-LIFT CATEGORY

- (a) EXPERIENCE.

- (1) The applicant for an ATPL(PL) shall have completed not less than 1500 hours of flight time as a pilot of powered-lift. The Authority may determine whether experience completed under instruction in an FSTD is acceptable as part of the total time of 1500 hours. The applicant shall have completed in powered-lift not less than—
- (i) 250 hours, either as PIC or made up by not less than 70 hours as PIC and the necessary additional flight time as CP performing, under the supervision of the PIC, the duties and functions of PIC, provided that the method of supervision employed is acceptable to the Authority .
 - (ii) 100 hours of cross-country flight time, of which not less than 50 hours shall be as PIC or as CP performing, under the supervision of the PIC, the duties and functions of a PIC, provided that the method of supervision employed is acceptable to the Authority .
 - (iii) 75 hours of instrument time, of which not more than 30 hours may be instrument ground time.
 - (iv) 25 hours of night flight as PIC or CP.
 - (v) Not more than one of the following in an approved flight simulator or approved flight training device representing a rotorcraft
 - (vi) 30 hours of simulated instrument time;
 - (vii) 50 hours of simulated instrument time if the training was accomplished in a course conducted by an ATO certified under Part 3, Subpart 3.1 of these regulations;
 - (viii) 100 hours of aeronautical experience in an approved course conducted by an ATO certified under Part 3, Subpart 3.1 of these regulations.

- (2) The Authority may determine if pilot flight time in other aircraft categories may be credited toward meeting the 1500-hour flight time in Paragraph 2.3.7.4(a)(1) of this subsection.
 - (3) The applicant for an ATPL(PL) shall be the holder of a CPL(PL) issued under this part.
- (b) FLIGHT INSTRUCTION. The applicant for an ATPL(PL) shall have received the dual flight instruction required for the issue of the CPL(PL) and for the issue of the IR.
- (c) SKILL TEST. The requirements for the skill test for ATPL(PL) are included in the CAA STSs for ATPL(PL).

2.3.6.7 ADDITIONAL AIRCRAFT CATEGORY, CLASS, AND TYPE RATINGS

- (a) An applicant for an airline transport licence with a category rating who holds an airline transport pilot licence with another aircraft category rating shall—
 - (1) meet the applicable eligibility requirements;
 - (2) pass a knowledge test on the applicable aeronautical knowledge areas;
 - (3) meet the applicable aeronautical experience requirements; and
 - (4) pass the skill test on the areas of operation.
- (b) Aircraft type rating.
 - (1) An applicant seeking an aircraft type rating to be added on an airline transport pilot licence shall pass a knowledge test appropriate to the type rating sought;
 - (2) Pass the required skill test on the applicable aircraft type.

2.3.6.8 AIRLINE TRANSPORT PILOT PRIVILEGES

- (a) The Authority extends to the holder of an airline transport pilot licence the same privileges as those extended to a holder of a

commercial pilot licence with an instrument rating and the privilege to act as PIC and SIC in aircraft in commercial air transportation.

- (b) An airline transport pilot may instruct—
 - (1) other pilots in air transportation service in aircraft of the category, class, and type, as applicable, for which the airline transport pilot is rated, and in simulation of those aircraft, and endorse the logbook or other training record of the person to whom training has been given;
 - (2) only as provided in this subsection, unless the airline transport pilot also holds a flight instructor licence, in which case the holder may exercise the instructor privileges of this Part for which he or she is rated.
- (c) Excluding briefings and debriefings, an airline transport pilot shall not instruct in aircraft, approved flight simulators, and approved flight training devices under this subsection—
 - (1) for more than 8 hours in any 24-consecutive-hour period; or
 - (2) for more than 36 hours in any 7-consecutive-day period.
- (d) An airline transport pilot shall not instruct in Category II or Category III operations unless he or she has been trained and successfully tested under Category II or Category III operations, as applicable.

2.3.7 Flight Instructors

2.3.7.1 APPLICABILITY

- (a) This Section prescribes the requirements for the issuance of flight instructor ratings, the conditions under which those ratings are necessary, and the limitations on those ratings.

2.3.7.2 ELIGIBILITY REQUIREMENTS

- (a) To be eligible for a flight instructor rating a person shall—
 - (1) be at least 21 years of age;
 - (2) meet the English language proficiency requirements of Section 2.2.2 of this part;

- (3) pass a Class 1 medical examination conducted by an authorised medical examiner;
- (4) hold either a commercial pilot licence or airline transport pilot licence with—
 - (i) an aircraft category, class and rating that is appropriate to the flight instructor rating sought; and
 - (ii) an instrument rating, if the person holds a commercial pilot licence and is applying for a flight instructor rating with—
 - (A) an aeroplane category and single-engine class rating;
 - (B) an aeroplane category and multiengine class rating;
a powered-lift rating; or
 - (C) an instrument rating.
- (5) receive a logbook endorsement from an authorised instructor on the fundamentals of instructing listed in Subsection 2.3.7.3 of this section appropriate to the required knowledge test;
- (6) pass a knowledge test on the areas listed in Subsection 2.3.7.3 of this section,
- (7) receive a logbook endorsement from an authorised instructor on the areas of operation listed in Subsection 2.3.7.4 of this section, appropriate to the flight instructor rating sought;
- (8) pass the required skill test that is appropriate to the flight instructor rating sought in an—
 - (i) aircraft that is representative of the category, class and type of aircraft for the aircraft rating sought; or
 - (ii) approved flight simulator or approved flight training device that is representative of the category, class and type of aircraft for the rating sought, and used in accordance with an approved course at an ATO certified under Part 3 of these regulations.

- (9) accomplish the following for a flight instructor rating with an aeroplane or a glider rating—
 - (i) receive a logbook endorsement from an authorised instructor indicating that the applicant is competent and possesses instructional proficiency in stall awareness, spin entry, spins, and spin recovery procedures after receiving flight training in those training areas in an aeroplane or glider, as appropriate, that is certified for spins;
 - (ii) demonstrate instructional proficiency in stall awareness, spin entry, spins, and spin recovery procedures.
- (10) an examiner may accept the endorsement specified in Paragraph 2.3.7.2(9)(i) of this subsection as satisfactory evidence of instructional proficiency in stall awareness, spin entry, spins, and spin recovery procedures for the skill test, provided that the skill test is not a retest as a result of the applicant failing the previous test for deficiencies in those knowledge or skill areas.
- (11) if a retest is the result of deficiencies in the ability of an applicant to demonstrate the requisite knowledge or skill, the applicant shall demonstrate the knowledge and skill to an examiner in an aeroplane or glider, as appropriate, that is certified for spins.
- (12) log at least 15 hours as PIC in the category, class and type of aircraft that is appropriate to the flight instructor rating sought; and
- (13) comply with the appropriate sections that apply to the flight instructor rating sought.

2.3.7.3 AERONAUTICAL KNOWLEDGE

- (a) an applicant for a flight instructor rating shall receive and log ground training from an authorised instructor on the fundamentals of instructing, including—
 - (1) the learning process;

- (2) elements of effective teaching;
 - (3) student evaluation and testing;
 - (4) course development;
 - (5) lesson planning; and
 - (6) classroom training techniques.
- (b) the aeronautical knowledge areas for a private and commercial pilot licence applicable to the aircraft category for which flight instructor privileges are sought; and
- (c) the aeronautical knowledge areas for the instrument rating applicable to the category for which instrument flight instructor privileges are sought.

2.3.7.4 FLIGHT INSTRUCTOR: AREAS OF OPERATION FOR FLIGHT PROFICIENCY

- (a) An applicant for a flight instructor rating shall receive and log flight and ground training, and an endorsement from an authorised instructor, that the person is proficient to pass a skill test for the flight instructor rating sought.
- (b) An applicant may accomplish the flight training required by this subsection—
 - (1) in an aircraft that is representative of the category and class of aircraft for the rating sought; or
 - (2) in a flight simulator or flight training device representative of the category and class of aircraft for the rating sought, and used in accordance with an approved course at an ATO certified under Part 3, Subpart 3.1 of these regulations.

Implementing Standard: See IS: 2.3.7 4 for a list of areas of operation that apply to the skill test for a flight instructor rating.

2.3.7.5 FLIGHT INSTRUCTOR RECORDS

- (a) A flight instructor shall—

- (1) sign the logbook of each person to whom that instructor has given flight training or ground training;
- (2) maintain a record in a logbook or a separate document that contains the following—
 - (i) the name of each person whose logbook or student pilot licence that instructor has endorsed for solo flight privileges, and the date of the endorsement; and
 - (ii) the name of each person that instructor has endorsed for a knowledge test or skill test, and a record of the kind of test, the date, and the results; and
- (3) retain the records required by this subsection for at least 3 years.

2.3.7.6 ADDITIONAL FLIGHT INSTRUCTOR ENDORSEMENTS

- (a) An applicant for an additional flight instructor endorsement shall meet the eligibility requirements listed in Subsection 2.3.7.2 of this section that apply to the flight instructor endorsement sought.
- (b) An applicant for an additional endorsement is not required to pass the knowledge test on the areas listed in Subsection 2.3.7.3 of this section.

2.3.7.7 FLIGHT INSTRUCTOR PRIVILEGES

- (a) A flight instructor is authorised within the limitations of that person's flight instructor rating, and pilot licence to give training and endorsements that are required for, and relate to—
 - (1) a student pilot licence;
 - (2) a pilot licence;
 - (3) a flight instructor licence;
 - (4) a ground instructor licence;
 - (5) an aircraft rating;
 - (6) an instrument rating;

- (7) a flight review, operating privilege, or recency of experience requirement;
- (8) a skill test; and
- (9) a knowledge test.

2.3.7.8 FLIGHT INSTRUCTOR LIMITATIONS AND QUALIFICATIONS

- (a) The holder of a flight instructor rating shall observe the limitations and qualifications applicable to flight instructors.

Implementing Standard: See IS: 2.3.7 8 for detailed list of flight instructor limitations and qualifications.

2.3.7.9 RENEWAL OF FLIGHT INSTRUCTOR RATINGS

- (a) A flight instructor rating that has not expired may be renewed for an additional 24 calendar months if the holder—
 - (1) passes a skill test for—
 - (2) renewal of the flight instructor rating; or
 - (3) an additional flight instructor rating; or
 - (4) presents to an Authority inspector—
 - (5) a record of training students that shows during the preceding 24 calendar months the flight instructor has endorsed at least five students for a skill test for a licence or rating, and at least 80 percent of those students passed that test on the first attempt;
 - (6) a record that shows that within the preceding 24 calendar months, service as a company check pilot, chief flight instructor, company check airman, or flight instructor in a Part 9 operation, or in a position involving the regular evaluation of pilots; or
 - (7) a graduation certificate showing that the pilot has successfully completed an approved flight instructor refresher course consisting of ground training or flight

training, or both, within the 90 days preceding the expiration month of his or her flight instructor certificate.

- (b) If a flight instructor accomplishes the renewal requirements within the 90 days preceding the expiration month of his or her flight instructor rating—
 - (1) the Authority shall consider that the flight instructor accomplished the renewal requirement in the month due; and
 - (2) the Authority shall renew the current flight instructor certificate for an additional 24 calendar months from its expiration date.
- (c) A flight instructor may accomplish the skill test required by Paragraph 2.3.7.9(a)(1) of this subsection in an approved course conducted by an ATO certified under Part 3 of the schedule.

2.3.7.10 EXPIRED FLIGHT INSTRUCTOR RATING

- (a) The holder of an expired flight instructor rating may renew that rating by passing the prescribed test.

2.3.8 Instrument Rating

2.3.8.1 GENERAL REQUIREMENTS

- (a) An applicant for an instrument rating shall—
 - (1) be at least 17 years of age
 - (2) hold a pilot licence with an aircraft category and class rating for the instrument rating sought;
 - (3) receive a logbook or training record endorsement from an authorised instructor certifying that the person is prepared to take the required skill test;
 - (4) pass the required knowledge test on the aeronautical knowledge areas, unless the applicant already holds an instrument rating in another category; and
 - (5) pass the required skill test on the areas of operation in—

- (i) the aircraft category, class, and type, if applicable, appropriate to the rating sought; or
 - (ii) a flight simulator or a flight training device appropriate to the rating sought and approved for the specific manoeuvre or procedure performed.
- (b) **AERONAUTICAL KNOWLEDGE:** An applicant for an instrument rating shall have received and logged ground training from an authorised instructor on the areas of aeronautical knowledge that apply to the instrument rating.
- (c) **FLIGHT PROFICIENCY.** An applicant for an instrument rating shall receive and log training from an authorised instructor in an aircraft, or in an approved flight simulator or approved flight training device, in accordance with Paragraph 3.2.8.1(e) of this subsection.
Note: If the privileges of the instrument rating are to be exercised on multi-engined aeroplanes, the applicant shall have received dual instrument flight instruction in such an aeroplane from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in the operation of the aeroplane solely by reference to instruments with one engine inoperative or simulated inoperative.
- (d) **AERONAUTICAL EXPERIENCE.** An applicant for an instrument rating shall have logged the required aeronautical experience shown in the implementing standard for this subsection.
- (e) **USE OF APPROVED FLIGHT SIMULATORS OR APPROVED FLIGHT TRAINING DEVICES.** If the instrument training was provided by an authorised instructor in an approved flight simulator or an approved flight training device, an applicant may perform—
 - (1) a maximum of 30 hours in that flight simulator or flight training device if the training was accomplished in accordance with a training program approved under Part 3; or
 - (2) a maximum of 20 hours in that flight simulator or flight training device if the training was not accomplished in accordance with a training program approved under Part 3.

Implementing Standard: See IS: 2.3.8.1 for additional requirements pertaining to the knowledge test, skill test, aeronautical experience, and aeronautical knowledge areas that apply to the instrument rating.

- (f) MEDICAL FITNESS. The applicant for an IR shall hold either a Class 1 or 2 medical certificate issued under this part, as appropriate for the level of licence held. The applicant for an IR holding a PPL shall have established his or her hearing acuity on the basis of compliance with the hearing requirements for the issue of a Class 1 medical certificate.
- (g) KNOWLEDGE. The applicant for an IR shall receive and log ground training from an authorised instructor on the following subjects—
 - (1) AIR LAW.
 - (i) Rules and regulations relevant to flight under IFR; related ATS practices and procedures;
 - (2) AIRCRAFT GENERAL KNOWLEDGE FOR THE AIRCRAFT CATEGORY BEING SOUGHT.
 - (i) Use, limitation, and serviceability of avionics, electronic devices, and instruments necessary for the control and navigation of aeroplanes under IFR and in instrument meteorological conditions; use and limitations of automation;
 - (ii) Compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments;
 - (3) FLIGHT PERFORMANCE AND PLANNING FOR THE AIRCRAFT CATEGORY BEING SOUGHT.
 - (i) Pre-flight preparations and checks appropriate to flight under IFR;
 - (ii) Operational flight planning; preparation and filing of ATS flight plans under IFR; altimeter setting procedures;
 - (4) HUMAN PERFORMANCE FOR THE AIRCRAFT CATEGORY BEING SOUGHT.
 - (i) Human performance relevant to instrument flight in aircraft;

- (ii) Principles of threat and error management;
- (5) METEOROLOGY FOR THE AIRCRAFT CATEGORY BEING SOUGHT.
 - (i) Application of aeronautical meteorology; interpretation and use of reports, charts, and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information; altimetry;
 - (ii) Causes, recognition, and effects of icing; frontal zone penetration procedures; hazardous weather avoidance;
 - (iii) In the case of helicopter and powered-lift, effects of rotor icing;
- (6) NAVIGATION FOR THE AIRCRAFT CATEGORY BEING SOUGHT.
 - (i) Practical air navigation using navigation systems;
 - (ii) Use, accuracy, and reliability of navigation systems used in departure, en route, approach, and landing phases of flight; identification of navigation sources;
- (7) OPERATIONAL PROCEDURES FOR THE AIRCRAFT CATEGORY BEING SOUGHT.
 - (i) Application of threat and error management to operational principles;
 - (ii) Interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations, and instrument procedure charts for departure, en route, descent, and approach;
 - (iii) Precautionary and emergency procedures; safety practices associated with flight under IFR; obstacle clearance criteria; and
- (8) RT.
 - (i) Communication procedures and phraseology as applied to aircraft operations under IFR; action to be taken in case of communication failure.

- (9) KNOWLEDGE TESTING. An applicant for an IR shall:
 - Have received an endorsement for the knowledge test from an authorised instructor who—
 - (i) Conducted the training on the knowledge subjects; and
 - (ii) Certifies that the person is prepared for the required knowledge test; and
 - (iii) Pass the required knowledge test on the knowledge subjects listed in Paragraph 2.3.8.1(b) of this subsection.
- (h) EXPERIENCE AND FLIGHT INSTRUCTION. An applicant for an IR shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in this part.
- (i) PRIVILEGES. Subject to compliance with the requirements specified in this part, the privileges of the holder of an IR shall be to pilot an aircraft of the appropriate category under IFR. Before exercising the privileges on multi-engine aircraft, the holder of the rating shall have complied with the requirements of Paragraph 2.3.8.1(k)(2) of this subsection.
- (j) VALIDITY. Subject to compliance with the requirements specified in this part, the validity period of an IR is 6 calendar months.
- (k) RENEWAL.
 - (1) For the renewal of an IR, the applicant shall, within the preceding 6 calendar months, complete a proficiency check on the subjects listed in the CAA STSs for the IR.
 - (2) If a pilot takes the proficiency check required in this section in the calendar month before or the calendar month after the month in which it is due, the pilot is considered to have taken it in the month in which it was due for the purpose of computing when the next proficiency check is due.
- (l) REISSUE. If the IR has expired, the applicant shall—
 - (i) Have received refresher training from an authorised instructor with an endorsement that the person is prepared for the required skill test; and

- (ii) Pass the required skill test on the subjects listed in the CAA STSs for the IR.

2.3.8.2 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE INSTRUMENT RATING

(a) EXPERIENCE.

- (1) The applicant for an IR shall hold a pilot licence with an aircraft category and, if applicable, a class rating for the IR sought.
- (2) The applicant shall have completed not less than—
 - (i) 50 hours of cross-country flight time as PIC of aircraft in categories acceptable to the Authority, of which not less than 10 hours shall be in the aircraft category being sought; and
 - (ii) 40 hours of instrument time in aircraft of which not more than 20 hours, or 30 hours where an FSTD is used, may be instrument ground time. The ground time shall be under the supervision of an authorised instructor.

(b) FLIGHT INSTRUCTION.

- (1) The applicant for an IR shall have not less than 10 hours of the instrument flight time required in Paragraph 2.3.8.2(a)(2)(ii) of this subsection while receiving and logging dual instruction in aircraft from an authorised FI, or in an approved flight simulator or approved flight training device.
- (2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the holder of an IR—
 - (i) Pre-flight procedures, including the use of the flight manual or equivalent document and appropriate ATS documents in the preparation of an IFR flight plan;
 - (ii) Pre-flight inspection, use of checklists, taxiing, and pre-take-off checks;

- (iii) Procedures and manoeuvres for IFR operation under normal, abnormal, and emergency conditions covering at least—
 - (iv) Transition to instrument flight on take-off;
 - (v) Standard instrument departures and arrivals;
 - (vi) En route IFR procedures and navigation;
 - (vii) Holding procedures;
 - (viii) Instrument approaches to specified minima;
 - (ix) Missed approach procedures; and
 - (x) Landings from instrument approaches;
 - (xi) In-flight manoeuvres and particular flight characteristics.
 - (3) If the privileges of the IR are to be exercised on multi-engine aircraft, the applicant shall have received dual instrument flight instruction in such an aircraft from an authorised FI. The instructor shall ensure that the applicant has operational experience in the operation of the aircraft solely by reference to instruments with one engine inoperative or simulated inoperative.
- (c) SKILL. The applicant for an IR shall have—
- (1) Received an endorsement from an authorised instructor who certifies that the person is prepared for the required skill test;
 - (2) Demonstrated, by passing a skill test, the ability to perform the areas of operation described in the CAA STSs for IR with a degree of competency appropriate to the privileges granted to the holder of an IR, and to—
 - (i) Recognise and manage threats and errors;
 - (ii) Operate the aircraft within its limitations;
 - (iii) Complete all manoeuvres with smoothness and accuracy;

- (iv) Exercise good judgement and airmanship;
 - (v) Apply aeronautical knowledge;
 - (vi) Maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured;
 - (vii) Understand and apply crew coordination and incapacitation procedures; and
 - (viii) Communicate effectively with the other flight crew members.
- (3) Demonstrated, by passing a skill test, the ability to operate multi-engine aircraft solely by reference to instruments with one engine inoperative, or simulated inoperative, described in the ECCAA STSs for IR, if the privileges of the IR are to be exercised on such aircraft.

Implementing Standard: See IS: 8.10.1.20 for the skill test and proficiency check for the IR.

2.3.9 Instructors for Pilot Licensing

2.3.9.1 GENERAL REQUIREMENTS

(a) **APPLICABILITY.**

- (1) This section prescribes the requirements for the issuance of instructor licences, ratings, or authorisations; the conditions under which those ratings and authorisations are necessary; and the privileges and limitations on those ratings and authorisations.
- (2) All instructors shall read, speak, write, and understand English language.
- (3) The following instructor licences, ratings, and authorisations are issued under this part—
 - (i) FI licence;

- (ii) GI licence, with basic, advanced, and instrument ratings; and
- (iii) Instructor authorisation for flight simulation training.

2.3.9.2 FLIGHT INSTRUCTOR RATING REQUIREMENTS, SKILL TEST, AND PROFICIENCY CHECK

- (a) AGE. The applicant for an FI rating shall be of the appropriate age for the underlying licence to be held.
- (b) MEDICAL FITNESS. The applicant for an FI rating shall have a Class 1 medical certificate.
- (c) KNOWLEDGE. The applicant for an FI rating shall—
 - (1) Have received and logged training from an authorised instructor;
 - (2) Pass an FI knowledge test on—
 - (i) The aeronautical knowledge areas for a student pilot authorisation; private, commercial, and airline transport pilot licences applicable to the aircraft category for which FI privileges are sought; and
 - (ii) The aeronautical knowledge areas for the IR applicable to the category for which instrument FI privileges are sought.
 - (3) Meet the requirements for fundamentals of knowledge instruction as listed in Section 2.2.6 of this part.
- (d) EXPERIENCE. The applicant for an FI rating shall hold a licence with the aircraft category and, if applicable, class and/or type rating appropriate to the FI rating sought, as follows—
 - (1) For an instructor rating in the aeroplane category – hold either a CPL(A) or an ATPL(A) with IR and appropriate class and/or type ratings;
 - (2) For an instructor rating in the powered-lift category – hold either a CPL(PL) or an ATPL(PL) with IR and, as applicable, class or type rating;

- (3) For an instructor rating in the helicopter category – hold either a CPL(H) or an ATPL(H) and any applicable class or type rating;
 - (4) For an instructor rating in the balloon category – hold a CPL(B) with applicable class rating;
 - (5) For an instructor rating in the airship category – hold a CPL(AS) and any applicable ratings;
 - (6) For an instructor rating in the glider category – hold a CPL(G) and any applicable ratings; and
 - (7) For an instructor IR rating – hold an IR in the appropriate category of aircraft.
- (e) FLIGHT INSTRUCTION. The applicant for an FI rating shall have—
- (1) Received flight instruction from an authorised instructor in flight instructional techniques including demonstration, student practices, recognition and correction of common student errors; and
 - (2) Practised instructional techniques in those flight manoeuvres and procedures in which it is intended to provide flight instruction.
- (f) SKILL. The applicant for an FI rating shall—
- (1) Receive a logbook endorsement from an authorised instructor to indicate that the applicant is proficient on the areas of operation listed in Paragraph 2.3.9.2(f)(2) of this subsection, appropriate to the FI rating sought;
 - (2) Pass the required skill test that is appropriate to the FI rating sought on the areas of operation described in the applicable CAA STSs in an—
 - (i) Aircraft that is representative of the category of aircraft and, if applicable, class and/or type for the aircraft rating sought; or
 - (ii) Approved FSTD that is representative of the category and, if applicable, class and/or type of aircraft for the licence and rating sought, and used in accordance with

an approved course at an ATO certified under Part 3 of these regulations.

(g) PRIVILEGES, LIMITATIONS, AND QUALIFICATIONS.

(1) An FI is authorised within the limitations of that person's FI rating, and pilot licence and ratings, to give training and endorsements that are required for and relate to—

- (i) A student pilot authorisation;
- (ii) A pilot licence;
- (iii) An FI licence;
- (iv) A GI licence;
- (v) An aircraft category rating;
- (vi) An aircraft class rating;
- (vii) An IR;
- (viii) A proficiency check or recency of experience requirement;
- (ix) A knowledge test; and
- (x) A skill test.

(h) ADDITIONAL FI RATING. An applicant for an additional FI endorsement shall meet the requirements listed in Subsection 2.3.9.2 of this part that apply to the FI rating sought.

(i) FI RECORDS. An FI shall—

- (1) Sign the logbook of each person to whom that instructor has given flight training or ground training;
- (2) Maintain a record in a logbook or separate document that contains the following—
 - (i) The name of each person whose logbook or student pilot licence that instructor has endorsed for solo flight privileges, and the date of the endorsement; and

- (ii) The name of each person that instructor has endorsed for a knowledge test or skill test, and a record of the kind of test, the date, and the results; and
 - (3) Retain the records required by this subsection for at least 3 years.
- (j) FI LIMITATIONS AND QUALIFICATIONS. The holder of an FI certificate shall observe the following limitations and qualifications—
 - (1) Hours of training. In any 24-consecutive-hour period, an FI may not conduct more than 8 hours of flight training.
 - (2) Required licence and ratings. An FI may not conduct flight training in any aircraft for which the FI does not hold a pilot licence and FI rating with the applicable category and, if applicable, class or type rating.
 - (3) For instrument flight training or for training for a type rating not limited to VFR, an appropriate IR on his or her FI rating and pilot licence.
 - (4) Limitations on endorsements. An FI may not endorse the following—
 - (i) A student pilot's licence or logbook for solo flight privileges, unless that FI has—
 - (A) Given that student the flight training required for solo flight privileges required by this subsection;
 - (B) Determined that the student is prepared to conduct the flight safely under known circumstances, subject to any limitations listed in the student's logbook that the instructor considers necessary for the safety of the flight;
 - (C) Given that student pilot training in the make and model of aircraft or a similar make and model of aircraft in which the solo flight is to be flown; and
 - (D) Endorsed the student pilot's logbook for the specific make and model of aircraft to be flown.

- (ii) A student pilot's licence and logbook for a solo cross-country flight, unless that FI has determined that—
 - (A) The student's flight preparation, planning, equipment, and proposed procedures are adequate for the proposed flight under the existing conditions and within any limitations listed in the logbook that the instructor considers necessary for the safety of the flight; and
 - (B) The student has the appropriate solo cross-country endorsement for the make and model of aircraft to be flown.
- (iii) A student pilot's licence and logbook for solo flight in a Class B airspace area or at an aerodrome within Class B airspace unless that FI has—
 - (A) Given that student ground and flight training in that Class B airspace or at that aerodrome; and
 - (B) Determined that the student is proficient to operate the aircraft safely.
- (iv) The logbook of a pilot for a flight review, unless that instructor has conducted a review of that pilot in accordance with the requirements of Part 8, Section 8.4.1.10 of these regulations; or
- (v) The logbook of a pilot for an instrument proficiency check, unless that instructor has tested that pilot in accordance with the requirements of Part 8, Section 8.4.1.11 of these regulations.
- (5) Training in a multi-engine aeroplane or a helicopter. An FI may not give training required for the issuance of a licence or rating in a multi-engine aeroplane or a helicopter unless that FI has at least 5 flight hours of PIC time in the specific make and model of multi-engine aeroplane or helicopter, as appropriate.
- (6) Qualifications of the FI for training first-time FI applicants.
 - (i) No FI may provide instruction to another pilot who has never held an FI certificate unless that FI—

- (A) Holds a current ground or FI certificate with the appropriate rating, has held that certificate for at least 24 months, and has given at least 40 hours of ground training; or
 - (B) Holds a current ground or FI certificate with the appropriate rating and has given at least 100 hours of ground training in a course which has been approved by the Authority; and
- (ii) Meets the eligibility requirements prescribed in Section 2.2.6 of this part;
- (iii) For training in preparation for an aeroplane or helicopter rating, has given at least 200 hours of flight training as an FI; and
- (iv) For training in preparation for a glider rating, has given at least 80 hours of flight training as an FI.
- (7) Prohibition against self-endorsements. An FI may not make any self-endorsement for a certificate, rating, flight review, authorisation, operating privilege, skill test, or knowledge test that is required by this part.
- (8) CAT II and CAT III instruction. An FI may not give training in CAT II or CAT III operations unless the FI has been trained and tested in CAT II or CAT III operations, as applicable.
- (k) The skill test and proficiency check for FI ratings in the categories of aeroplane, helicopter, powered-lift, airship, balloon, and glider, as well as IR (aeroplane, helicopter, and powered-lift) and additional type ratings, are included in the applicable CAA STSs.

2.3.9.3 INSTRUCTOR AUTHORISATION FOR FLIGHT SIMULATION TRAINING

- (a) Current and former holders of professional pilot licences having instructional experience can apply for an authorisation to provide flight instruction in an FSTD, provided the applicant has at least 1 year experience as an instructor in FSTDs.
- (1) **SKILL.** The applicant shall have demonstrated in a skill test, in the category and class or type of aircraft for which instructor

authorisation privileges are sought, the ability to instruct in those areas in which ground instruction is to be given.

- (2) PRIVILEGES. Subject to compliance with the requirements specified in this part, the privileges of the holder of an authorisation are to carry out instruction in an FSTD for the issue of a class or type rating in the appropriate category of aircraft.
- (3) VALIDITY. Subject to compliance with the requirements specified in this part, the validity period of an instructor authorisation for flight simulation training is 1 year.
- (4) RENEWAL. Renewal of the authorisation requires the successful completion of a proficiency check.
- (5) REISSUE. If the authorisation has expired, the applicant shall complete refresher training and successfully pass a skill test in the category and class or type of aircraft for which instructor authorisation privileges are sought.

2.3.9.4 RESERVED

2.3.10 RESERVED

2.3.11 Remote Pilot Licence

2.3.11.1 GENERAL REQUIREMENTS

- (a) AGE. The applicant for an RPL shall not be less than 18 years of age.
- (b) MEDICAL FITNESS. The applicant for an RPL shall hold a current Class 3 medical certificate or a current Class 1 medical certificate.
- (c) KNOWLEDGE AREAS. The applicant for an RPL shall demonstrate a level of knowledge appropriate to the privileges granted to the holder of an RPL and appropriate to the category of RPA and associated RPS intended to be included in the RPL, in at least the following subjects—
 - (1) AIR LAW.
 - (i) Rules and regulations relevant to the holder of an RPL; rules of the air; appropriate ATS practices and procedures;

- (ii) Rules and regulations relevant to flight under IFR; related ATS practices and procedures;
- (2) GENERAL RPAS KNOWLEDGE—
 - (i) Principles of operation and functioning of engines, systems, and instruments;
 - (ii) Operating limitations of the relevant category of RPA and engines; relevant operational information from the flight manual or other appropriate document;
 - (iii) Use and serviceability checks of equipment and systems of appropriate RPA;
 - (iv) Maintenance procedures for airframes, systems, and engines of appropriate RPA;
 - (v) For rotorcraft and powered-lift, transmission (power-trains), where applicable;
 - (vi) Use, limitation, and serviceability of avionics, electronic devices, and instruments necessary for the control and navigation of an RPA under IFR and in IMC;
 - (vii) Flight instruments; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments;
 - (viii) For airships, physical properties and practical application of gases;
 - (ix) RPS general knowledge—
 - (A) Principles of operation and function of systems and instruments;
 - (B) Use and serviceability checks of equipment and systems of appropriate RPS;
 - (C) Procedures in the event of malfunctions;
 - (x) C2 link general knowledge—

- (A) Different types of C2 links and their operating characteristics and limitations;
 - (B) Use and serviceability checks of C2 link systems;
 - (C) Procedures in the event of C2 link malfunction;
- (xi) Detect and avoid capabilities for RPAS;
- (3) FLIGHT PERFORMANCE, PLANNING, AND LOADING.
 - (i) Effects of loading and mass distribution on RPA handling, flight characteristics, and performance; mass and balance calculations;
 - (ii) Use and practical application of take-off or launching, landing, and other performance data;
 - (iii) Pre-flight and en route flight planning appropriate to RPAS operations under IFR; preparation and submission of ATS flight plans under IFR; appropriate ATS procedures; altimeter setting procedures;
 - (iv) In the case of airships, rotorcraft, and powered-lifts, effects of external loading on handling;
- (4) HUMAN PERFORMANCE.
 - (i) Human performance relevant to RPA and instrument flight, including principles of threat and error management;
- (5) METEOROLOGY.
 - (i) Interpretation and application of aeronautical meteorological reports, charts, and forecasts; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimetry;
 - (ii) Aeronautical meteorology; climatology of relevant areas with respect to the elements having an effect on aviation; the movement of pressure systems, the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en route, and landing conditions;

- (iii) Causes, recognition, and effects of icing; frontal zone penetration procedures; hazardous weather avoidance;
 - (iv) In the case of rotorcraft and powered-lifts, effects of rotor icing;
 - (v) In the case of high-altitude operations, practical high-altitude meteorology, including interpretation and use of weather reports, charts, and forecasts; jet streams;
- (6) NAVIGATION.
 - (i) Air navigation, including the use of aeronautical charts, instruments, and navigation aids; an understanding of the principles and characteristics of appropriate navigation systems; operation of RPAS equipment;
 - (ii) Use, limitation, and serviceability of avionics and instruments necessary for control and navigation;
 - (iii) Use, accuracy, and reliability of navigation systems used in departure, en route, approach, and landing phases of flight; identification of radio navigation aids;
 - (iv) Principles and characteristics of self-contained and external-referenced navigation systems; operation of RPAS equipment;
- (7) OPERATIONAL PROCEDURES.
 - (i) Application of threat and error management to operational performance;
 - (ii) Interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations, and instrument procedure charts for departure, en route, descent, and approach;
 - (iii) Altimeter setting procedures;
 - (iv) Appropriate precautionary and emergency procedures; safety practices associated with flight under IFR; obstacle clearance criteria;

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- (v) Operational procedures for carriage of freight; potential hazards associated with dangerous goods and their management;
 - (vi) Requirements and practices for safety briefings to remote flight crew members;
 - (vii) In the case of rotorcraft and, if applicable, powered-lifts, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight in VMC;
 - (viii) Operational procedures for handovers and coordination; and
 - (ix) Operational procedures for normal and abnormal C2 link operations;
 - (8) PRINCIPLES OF FLIGHT.
 - (i) Principles of flight; and
 - (9) RT.
 - (i) RT procedures and phraseology; action to be taken in case of communication failure.
 - (d) SKILL.
 - (1) The applicant for an RPL shall have demonstrated all the competencies of the adapted competency model approved by the Authority at the level required, to act as remote PIC of an RPAS operation within the appropriate category of RPA and associated RPS.
 - (2) If the privileges of the RP are to be exercised on a multi-engined RPA, the applicant shall have demonstrated the ability to operate under IFR with degraded propulsion capabilities.

2.3.11.2 EXPERIENCE, FLIGHT INSTRUCTION, AND SKILL TEST FOR THE REMOTE PILOT LICENCE

- (a) **EXPERIENCE.** The applicant for an RPL shall have gained experience during training in operating the RPA and associated RPS to

successfully demonstrate the competencies required in Subsection 2.3.11.14 of this section.

(b) RPL TRAINING.

- (1) In order to meet the requirements of the RPL, the applicant shall have completed an approved training course. The training shall be competency based and, if applicable, conducted in a multicrew operational environment.
- (2) During the training, the applicant for an RPL shall have acquired the competencies and underpinning skills required for performing as an RP of an RPA certificated for operation under IFR.
- (3) The applicant for an RPL shall have received dual RPL training in an RPA and associated RPS, sought from an authorised RPAS instructor. The RPAS instructor shall ensure that the applicant has operational experience in all phases of flight and the entire operating envelope of an RPAS, including abnormal and emergency conditions, upset prevention and recovery training for the categories concerned, and IFR operations.
- (4) If the privileges of the RP are to be exercised on a multi-engined RPA, the applicant shall have received dual instrument RPL training in a multi-engined RPA within the appropriate category from an authorised RPAS instructor. The RPAS instructor shall ensure that the applicant has operational experience in the operation of the RPA within the appropriate category with engines inoperative or simulated inoperative.

2.3.11.3 GENERAL LICENSING SPECIFICATIONS

- (a) A person shall not act either as remote PIC or as remote CP of an RPA in any of the following RPA categories unless that person is the holder of an RPL issued in accordance with the provisions of this part—
 - (1) Aeroplane
 - (2) Airship
 - (3) Glider

- (4) Rotorcraft Powered-lift
 - (4) Free balloon
- (b) The category of RPA shall be endorsed as a category rating on the RPL.
- (c) The applicant for an RPL shall, before being issued with any RPL or rating, meet such requirements with respect to age, experience, flight instruction, competencies, and medical fitness as are specified for that RPL or rating.
- (d) The applicant for any RPL or rating shall demonstrate, in a manner determined by the Authority, such requirements for knowledge and skill as are specified for that RPL or rating.
- (e) RPLs shall be validated or converted in accordance with the requirements of this part.

2.3.11.4 CATEGORY RATINGS

- (a) When established, category ratings shall be for categories of RPA listed in Subsection 2.3.11.3 of this section.
- (b) The holder of an RPL seeking additional category ratings to be added to the existing licence shall meet the requirements of this part regarding RPAS appropriate to the privileges for which the category rating is sought.

2.3.11.5 CLASS AND TYPE RATINGS

- (a) A class rating shall be established for RPA and associated RPS certificated for single-RP operation which have comparable handling, performance, and characteristics, unless a type rating is considered necessary by the Authority.
- (b) A type rating shall be established for RPA and associated RPS certificated for operation with a minimum crew of at least two RPs or when considered necessary by the Authority.

Note: Where a common type rating is established, it will be only for RPA with similar characteristics in terms of operating procedures, systems, and handling.

- (c) When an applicant for an RPL demonstrates competencies for the initial issue of an RPL, the category and ratings appropriate to the class or type of RPA and associated RPS used in the demonstration shall be entered on that RPL.
- (d) The levels of performance to be achieved to operate the class or type of RPA for which the ratings are issued shall be publicly available.

2.3.11.6 CIRCUMSTANCES IN WHICH CLASS AND TYPE RATINGS ARE REQUIRED

- (a) A Contracting State having issued an RPL will not permit the holder of such RPL to act either as remote PIC or as remote CP of an RPA and associated RPS unless the holder has received authorisation as follows—
 - (1) The appropriate class rating specified in Paragraph 2.3.11.5(a) of this section; or
 - (2) A type rating when required in accordance with the provisions of Paragraph 2.3.11.5(b) of this section.
 - (i) When a type rating is issued limiting the privileges to act as remote CP, or limiting the privileges to act as RP only during the cruise phase of the flight, such limitation shall be endorsed on the rating.
 - (ii) When a class rating is issued limiting the privileges to act as RP only during the cruise phase of the flight, such limitation shall be endorsed on the rating.
- (b) For the purpose of training, testing, or specific special-purpose non-revenue flights, special authorisation may be provided in writing to the RPL holder by the Authority in place of issuing the class or type rating in accordance with Paragraph 2.3.11.6(a) of this subsection. This authorisation shall be limited in validity to the time needed to complete the specific flight.

2.3.11.7 REQUIREMENTS FOR THE ISSUE OF CLASS AND TYPE RATINGS

- (a) The applicant for an RPL shall have demonstrated the competencies required for the safe operation of an RPA of the class for which the rating is sought.
- (b) Type rating as required by 2.3.11.5 of this section.

(c) The applicant for an RPL shall have—

(i) Gained, under appropriate supervision, experience in the applicable type of RPA and associated RPS and/or FSTD in the following—

- (A) Normal flight procedures and manoeuvres during all phases of flight;
- (B) Abnormal and emergency procedures and manoeuvres in the event of failures and malfunctions of equipment, such as engine, C2 link, systems, and airframe;
- (C) Instrument procedures, including instrument approach, missed approach, and landing procedures under normal, abnormal, and emergency conditions, including simulated engine failure;
- (D) For the issue of an aeroplane category type rating, upset prevention and recovery training; and

Note: The aeroplane upset prevention and recovery training may be integrated in the type rating programme or may be conducted immediately after, as an additional module.

- (E) Procedures for crew incapacitation and crew coordination, including allocation of RP tasks; crew cooperation and use of checklists;

Note: Attention is called to 2.3.11.9 of this section on the qualifications required for RPs giving RPAS training.

(ii) Demonstrated the competencies required for the safe operation of the applicable type of RPA and associated RPS and shall have demonstrated C2 link management skills relevant to the duties of a remote PIC or a remote CP, as applicable.

2.3.11.8 USE OF A FLIGHT SIMULATION TRAINING DEVICE FOR ACQUISITION OF EXPERIENCE AND DEMONSTRATION OF COMPETENCIES

- (a) The use of an FSTD for acquiring the required experience or performing any manoeuvre required during the demonstration of competencies for the issue of an RPL or rating shall be approved by the Authority, which will ensure that the FSTD used is appropriate to the task.

2.3.11.9 CIRCUMSTANCES IN WHICH AUTHORISATION TO CONDUCT REMOTE PILOT LICENCE TRAINING IS REQUIRED

- (a) A Contracting State, having issued an RPL, will not permit the holder thereof to carry out RPL training required for the issue of an RPL or rating unless such holder has received proper authorisation from such Contracting State. Proper authorisation shall comprise—
 - (1) An RPAS instructor rating on the holder's RPL; or
 - (2) The authority to act as an agent of an ATO authorised by the Authority to carry out RPL training; or
 - (3) A specific authorisation granted by the Contracting State which issued the RPL.
- (b) A Contracting State will not permit a person to carry out RPL training on an FSTD required for the issue of an RPL or rating unless such person holds or has held an appropriate RPL or has appropriate RPAS training flight experience and has received proper authorisation from such Contracting State.

2.3.11.10 CREDITING OF RPAS FLIGHT TIME

- (a) A student RP shall be entitled to be credited in full with all solo and dual instruction RPAS flight time towards the total flight time required for the initial issue of an RPL.
- (b) The holder of an RPL shall be entitled to be credited in full with all dual instruction RPAS flight time towards the total RPAS flight time required for a remote PIC upgrade.
- (c) The holder of an RPL shall be entitled to be credited in full with all solo or dual instruction RPAS flight time, in a new category of RPA or for obtaining a new rating, towards the total RPAS flight time required for that rating.

- (d) The holder of an RPL, when acting as remote CP of an RPA certificated for operation by a single RP, but required by a Contracting State to be operated with a remote CP, shall be entitled to be credited with not more than 50 per cent of the remote CP RPAS flight time towards the total RPAS flight time required for a remote PIC upgrade. The Contracting State may authorise that RPAS flight time be credited in full towards the total RPAS flight time required if the RPAS is equipped to be operated by a remote CP and is operated in a multi-crew operation.
- (e) The holder of an RPL, when acting as remote CP of an RPA certificated to be operated with a remote CP, shall be entitled to be credited in full with this RPAS flight time towards the total RPAS flight time required for a remote PIC upgrade.
- (f) The holder of an RPL, when acting as remote PIC under supervision, shall be entitled to be credited in full with this RPAS flight time towards the total RPAS flight time required for a remote PIC upgrade.
- (g) When applying for a new rating, the holder of an RPL shall be entitled to be credited with RPAS flight time experience as an RP of RPA. The Authority will determine whether such experience is acceptable and, if so, the extent to which the experience requirements for the issue of a rating can be reduced accordingly.

Note: The total RPAS flight time required is derived from the approved competency-based training programme.

2.3.11.11 LIMITATION OF PRIVILEGES OF REMOTE PILOTS WHO ATTAIN THEIR 60TH BIRTHDAY AND CURTAILMENT OF PRIVILEGES OF REMOTE PILOTS WHO ATTAIN THEIR 65TH BIRTHDAY

- (a) A Contracting State, having issued an RPL, will not permit the holder thereof to act as pilot of an RPAS engaged in international commercial air transport operations if the licence holder has attained his or her 60th birthday or, in the case of operations with more than one pilot, his or her 65th birthday.

2.3.11.12 PRIVILEGES OF THE HOLDER OF THE REMOTE PILOT LICENCE AND THE CONDITIONS TO BE OBSERVED IN EXERCISING SUCH PRIVILEGES

- (a) Subject to compliance with the requirements specified in Subsections 2.3.11.4 and 2.3.11.5 of this section, the privileges of the holder of an RPL shall be—

- (b) To act as remote PIC of an RPA and associated RPS, certificated for remote single-pilot operation;
 - (ii) To act as remote CP of an RPA and associated RPS, required to be operated with a remote CP;
 - (iii) To act as a remote PIC of an RPA and the associated RPS, required to be operated with a remote CP; and
- (c) To act either as remote PIC or as remote CP of an RPAS under IFR.
- (d) Before exercising the privileges at night, the RPL holder shall have received dual instruction in an RPA and associated RPS in night flying, including take-off, landing, and navigation.

Note: Certain privileges of the RPL are curtailed by Subsection 2.3.11.11 of this section for RPL holders when they attain their 60th and 65th birthdays.

2.3.11.13 RPAS INSTRUCTOR RATING

2.3.11.14 STUDENT REMOTE PILOT

- (a) A student RP shall meet requirements prescribed by the Contracting State concerned. In prescribing such requirements, Contracting States will ensure that the privileges granted would not permit student RPs to constitute a hazard to air navigation.
- (b) A student RP shall not fly an RPA solo unless under the supervision of, or with the authority of, an authorised RPAS instructor.
- (c) A student RP shall not fly an RPA solo on international RPAS operations unless by special or general arrangement between the Contracting States concerned.
- (d) MEDICAL FITNESS.
 - (1) A Contracting State will not permit a student RP to fly an RPA solo unless that student holds a current Class 3 or a current Class 1 medical certificate.

Note: A Class 1 medical certificate may be essential for a particular individual based on their work environment and responsibilities in the context of a specific RPAS application.

2.3.11.15 REMOTE PILOT LICENCE

Note: The provisions of this section are for international IFR operations of RPAS.

2.3.11.16 REQUIREMENTS FOR THE ISSUE OF THE RATING

(a) KNOWLEDGE.

- (1) The applicant shall demonstrate the ability to effectively assess trainees against the adapted competency model used in the approved training programme.
- (2) The applicant shall successfully complete the training and meet the qualifications of an ATO appropriate to the delivery of competency-based training programmes.
- (3) The RPAS instructor training programme shall focus on the development of competence in the following specific areas—
 - (i) The adapted competency model of the RP training programme according to the defined grading system used by the RPAS operator or ATO;
 - (ii) In accordance with the assessment and grading system of the RPAS operator or ATO, making assessments by observing behaviours; gathering objective evidence regarding the observable behaviours of the adapted competency model used;
 - (iii) Recognising and highlighting performance that meets competency standards;
 - (iv) Determining root causes for deviations below the expected standards of performance; and
 - (v) Identifying situations that could result in unacceptable reductions in safety margins.

- (4) The applicant shall have met the competency requirements for the issue of an RPL as appropriate to the category of RPA and associated RPS.
- (5) In addition, the applicant shall have demonstrated a level of competency appropriate to the privileges granted to the holder of an RPAS instructor rating, in at least the following areas—
 - (i) Techniques of applied instruction;
 - (ii) Assessment of student performance in those subjects in which ground instruction is given;
 - (iii) The learning process;
 - (iv) Elements of effective teaching;
 - (v) Competency-based training principles, including student assessments;
 - (vi) Evaluation of the training programme effectiveness;
 - (vii) Lesson planning;
 - (viii) Classroom instructional techniques;
 - (ix) Use of training aids, including FSTDs, as appropriate;
 - (x) Analysis and correction of student errors;
 - (xi) Human performance relevant to RPAS, instrument, flight, and RPL training, including principles of threat and error management; and
 - (xii) Hazards involved in simulating system failures and malfunctions in the aircraft.
- (b) SKILL.
 - (1) The applicant shall have successfully performed a formal competency assessment, prior to conducting instruction and assessment within a competency-based training programme.
 - (2) The competency assessment shall be conducted during a practical training session in the category of RPA and

associated RPS for which RPAS instructor privileges are sought, including pre-flight, post-flight, and ground instruction, as appropriate.

- (3) The competency assessment shall be conducted by a person authorised by the Authority.

(c) EXPERIENCE.

- (1) The applicant shall have met the requirements for the issue of an RPL, shall maintain competencies, and shall meet the recent experience requirements for the licence.
- (2) The applicant shall have sufficient training and experience to attain the required level of proficiency in all the required tasks, manoeuvres, operations and principles, and methods of instruction relevant to Paragraph 2.3.11.16 (c) of this section.

(d) RPL TRAINING.

- (1) The applicant shall, under the supervision of an RPAS instructor authorised by the Authority for that purpose—
 - (i) Have received training in RPAS instructional techniques including demonstration, student practices, recognition and correction of common student errors; and
 - (ii) Have practiced instructional techniques in those flight manoeuvres and procedures in which it is intended to provide RPL training.

2.3.11.17 PRIVILEGES OF THE HOLDER OF THE RATING AND THE CONDITIONS TO BE OBSERVED

- (a) Subject to compliance with the requirements specified in Subsection 2.11.1.8 of this section, the privileges of the holder of an RPAS instructor rating shall be—
 - (1) To supervise solo flights by student RPs; and
 - (2) To carry out RPL training for the issue of an RPL and an RPAS instructor rating, provided that the RPAS instructor—

- (i) Holds at least the RPL and rating for which instruction is being given, in the appropriate RPA category and associated RPS;
 - (ii) Holds the RPL and rating necessary to act as the remote PIC of the RPA category and associated RPS on which the instruction is given; and
 - (iii) Has the RPAS instructor privileges granted endorsed on the RPL.
- (b) The applicant, in order to carry out RPL training in a multi-crew operational environment, shall have also met all the instructor qualification requirements.

2.4 CERTIFICATION: FLIGHT CREWMEMBERS OTHER THAN PILOTS

2.4.1 Flight Engineers

2.4.1.1 APPLICABILITY

- (a) This Section prescribes the requirements for issuing flight engineer licences.

2.4.1.2 LICENCES AND RATINGS REQUIRED

- (a) A person shall not act as a flight engineer of a civil aircraft of Grenada registry unless he or she has a flight engineer licence with appropriate ratings.

2.4.1.3 (RESERVED)

2.4.1.4 ELIGIBILITY REQUIREMENTS - GENERAL

- (a) To be eligible for a flight engineer licence, a person shall—
 - (1) be at least 18 years of age;
 - (2) meet the English language proficiency requirements of Subsection 2.2.2 of this part; and comply with the requirements of this subsection that apply to the rating sought.

2.4.1.5 ADDITIONAL AIRCRAFT RATINGS

- (a) To add another aircraft class rating to a flight engineer licence, an applicant shall—
 - (1) pass the knowledge test and skill test that is appropriate to the class of aeroplane for which an additional rating is sought, or
 - (2) satisfactorily complete an approved flight engineer training program that is appropriate to the additional class rating sought.

2.4.1.6 KNOWLEDGE REQUIREMENTS

- (a) An applicant for a flight engineer licence shall pass a knowledge test on the following—
 - (1) the regulations that apply to a flight engineer.
 - (2) the theory of flight and aerodynamics.
 - (3) basic meteorology with respect to engine operations.
 - (4) centre of gravity computations.
- (b) An applicant for the original or additional issue of a flight engineer class rating shall pass a knowledge test for that aeroplane class on the following—
 - (1) aeroplane equipment;
 - (2) aeroplane systems;
 - (3) aeroplane loading;
 - (4) aeroplane procedures and engine operations with respect to limitations;
 - (5) normal operating procedures;
 - (6) emergency procedures.

- (c) Before taking the knowledge tests prescribed in Paragraphs 2.4.1.6(a) and (b) of this subsection, an applicant for a flight engineer licence shall present satisfactory evidence of having completed one of the experience requirements of Subsection 2.4.1.7 of this section.
- (d) An applicant may take the knowledge tests before acquiring the flight training required by Subsection 2.4.1.7 of this section.
- (e) Except as provided in Paragraph 2.4.1.6(f) of this subsection, an applicant for a flight engineer licence or rating shall have passed the knowledge tests required by Paragraphs 2.4.1.6(a) and (b) of this subsection since the beginning of the 24th calendar month before the month in which the skill test is taken.
- (f) An applicant who within the period ending 24 calendar months after passing the knowledge test, is employed as a flight crewmember or mechanic by a Grenada air carrier or certificate holder need not comply with the time limit set in Paragraph 2.4.1.6(e) of this subsection if the applicant—
 - (1) is employed by such a certificate holder at the time of the skill test; and
 - (2) if employed as a flight crewmember, has completed initial training, and, if appropriate, transition, upgrade, recurrent training; or
 - (3) if employed as an AMT, meets the recency of experience requirements of Part 5, Subpart 5.6.
- (g) An AOC holder may, when authorised by the Authority, provide as part of an approved training program a knowledge test that it may administer to satisfy the test required for an additional rating under Paragraph 2.4.1.6(b) of this subsection.

2.4.1.7 AERONAUTICAL EXPERIENCE REQUIREMENTS

- (a) Except as otherwise specified herein, an applicant for a flight engineer licence shall obtain and log the flight time used to satisfy the aeronautical experience requirements of Paragraph 2.4.1.7(b) of this subsection on an aeroplane on which a flight engineer is required by these regulations.
- (b) An applicant for a flight engineer licence with a class rating shall present, for the class rating sought, satisfactory evidence of one of

the following, including the practical experience with the aircraft described in Paragraph 2.4.1.7(a) of this subsection—

- (1) at least 3 years of practical experience in aircraft and aircraft engine maintenance and at least 5 hours of flight training in the duties of a flight engineer;
- (2) graduation from at least a 2-year specialised aeronautical training course in maintaining aircraft and aircraft engines and at least 5 hours of flight training in the duties of a flight engineer;
- (3) a degree in aeronautical, electrical, or mechanical engineering from a recognised college, university, or engineering school; at least 6 calendar months of practical experience in maintaining aircraft and at least 5 hours of flight training in the duties of a flight engineer;
- (4) at least a commercial pilot licence with an instrument rating and at least 5 hours of flight training in the duties of a flight engineer;
- (5) At least 200 hours of flight time in a transport category aeroplane as PIC or SIC performing the functions of a PIC under the supervision of a PIC;
- (6) At least 100 hours of flight time as a flight engineer;
- (7) Within the 90-day period before application, successful completion of an approved flight engineer ground and flight course of instruction.

2.4.1.8 SKILL REQUIREMENTS

- (a) An applicant for a flight engineer licence with a class and type ratings shall pass a skill test on the duties of a flight engineer—
 - (1) in the class and type of aeroplane for which a rating is sought; and
 - (2) only on an aeroplane specified in Paragraph 2.4.1.7(a) of this section or an approved flight simulator replicating the class and type of such an aeroplane.
- (b) An applicant shall—

- (1) show satisfactory performance in preflight inspection, servicing, starting, pre-takeoff, and postlanding procedures;
- (2) in flight, show satisfactory performance of the normal duties and procedures relating to the aeroplane, aeroplane engines, propellers (if appropriate), systems, and appliances; and
- (3) in flight, in an aeroplane simulator, or in an approved training device, show satisfactory performance on emergency duties and procedures and recognise and take appropriate action for malfunctions of the aeroplane, engines, propellers (if appropriate), systems and appliances.

2.4.1.9 (RESERVED)**2.4.1.10 VALIDATION OF FOREIGN FLIGHT ENGINEERS LICENCES AND RATINGS**

- (a) General. A person who holds a flight engineer's licence issued by another Contracting State may apply for a validation of that licence provided—
 - (1) that the applicant—
 - (i) is not under an order of revocation or suspension by the country that issued the pilot licence;
 - (ii) holds a licence that does not contain an endorsement stating that the applicant has not met all of the standards of ICAO for that licence;
 - (iii) does not currently hold a pilot licence issued by the Authority;
 - (iv) holds a current medical certificate issued by the country that issued the applicant's pilot licence; and
 - (v) meet the English language proficiency requirements of Subsection 2.2.2 of this part.
 - (2) The application must be supported by the relevant operator;
 - (3) The licence must be current and contain the appropriate ratings for the aircraft that the applicant intends to operate;

- (4) The licence to which this validation relates remains current throughout the period of the validation
- (b) Aircraft ratings issued. The Authority may validate the aircraft ratings listed on that pilot's foreign pilot licence.
- (c) Operating privileges and limitations. A person who is issued a validation of a foreign pilot licence under the provisions of this subsection—
 - (1) may act as a flight engineer of a civil aircraft of Grenada registry in accordance with the privileges authorised by this Part;
 - (2) shall be limited to the privileges placed on validation certificate by the Authority;
 - (3) shall be subject to the limitations and restrictions on the person's validation certificate issued by the Authority and foreign pilot licence when exercising the privileges of that flight engineer's licence in an aircraft registered in Grenada; and
 - (4) shall not exercise the privileges of the validation issued by the Authority when the person's foreign flight engineer's licence has been revoked or suspended.
- (d) Provisions for the validation of a foreign flight engineer's licence.
 - (1) An applicant may use only one foreign flight engineer's licence as a basis for obtaining a validation issued by the Authority;
 - (2) An applicant for a validation under this subsection shall provide a foreign flight engineer's licence and medical certification in the English language or accompanied by an English language transcription that has been signed by an official or representative of the foreign aviation authority that issued the foreign flight engineer's licence;
 - (3) The Authority shall place upon the validation certificate issued under this Subsection the foreign flight engineer's licence number and country of issuance.

Implementing Standard: See IS: 2.2.3 for details on additional requirements and exemptions to the training requirements of this subsection.

2.4.1.11 CONVERSION OF FOREIGN FLIGHT ENGINEERS LICENCES AND RATINGS

- (a) General. A person who holds a current flight engineer's licence issued by another Contracting State may apply for a conversion of that licence provided that—
 - (1) the applicant—
 - (A) is not under an order of revocation or suspension by the Contracting State that issued the flight engineer's licence;
 - (B) holds a licence that does not contain an endorsement stating that the applicant has not met all of the standards of ICAO for that licence;
 - (C) does not currently hold a flight engineer's licence issued by the Authority;
 - (D) holds a current medical certificate issued by the country that issued the applicant's pilot licence; and
 - (E) meet the English language proficiency requirements of Subpart 2.2.2 of this part;
 - (2) the application must be supported by the relevant operator;
 - (3) the foreign flight engineer's licence must be current and contain the appropriate ratings for the aircraft that the applicant intends to operate.
- (b) Aircraft ratings issued. The Authority may convert the aircraft ratings listed on that foreign flight engineer's licence.
- (c) Operating privileges and limitations. A person who is issued a flight engineer's licence by the Authority based on the conversion of a foreign flight engineer's licence under the provisions of this subsection—
 - (1) may act as a flight engineer of a civil aircraft of Grenada registration in accordance with the privileges authorised by this part;

- (2) shall be limited to the privileges placed on validation certificate, if applicable, by the Authority;
 - (3) shall be subject to the limitations and restrictions on the person's validation certificate, if applicable, issued by the Authority and foreign pilot licence when exercising the privileges of that foreign engineer's licence in an aircraft registered in Grenada.
- (d) Provisions for the conversion of a foreign flight engineer's licence—
 - (1) an applicant may use only one foreign flight engineer's licence as a basis for obtaining a converted licence issued by the Authority;
 - (2) an applicant for a conversion under this subsection shall provide a foreign flight engineer's licence and medical certification in the English language or accompanied by an English language transcription that has been signed by an official or representative of the foreign aviation authority that issued the foreign flight engineer's licence;
 - (3) an applicant for a conversion shall provide a passport to establish age and nationality;
 - (4) an applicant shall pass a Class I medical examination conducted by an authorised medical examiner;
 - (5) an applicant shall pass an examination in air law, flight rules and procedures.

Implementing Standard: See IS: 2.2.3 for details on additional requirements and exemptions to the training requirements of this subsection.

2.5 LICENSING: AIRMEN OTHER THAN FLIGHT CREWMEMBERS

2.5.1 General

2.5.1.1 APPLICABILITY

- (a) Subpart 2.5 prescribes the requirements for issuing the following licences, ratings, and inspection authorisations for—
 - (1) air traffic controllers;

- (2) flight operations officers;
- (3) aviation maintenance technicians;

2.5.2 Air Traffic Controllers

2.5.2.1 APPLICABILITY

- (a) This subpart prescribes the requirements for issuance of student air traffic controller licences, air traffic controller licences and ratings, and the conditions under which those licences and ratings are necessary.

2.5.2.2 REQUIRED LICENCES, RATING OR QUALIFICATION

- (a) A person shall not provide an air traffic controller service unless he or she—
 - (1) holds an air traffic controller licence issued to him or her under this subpart;
 - (2) holds a holds a current air traffic controller rating;
 - (3) maintains competency in accordance with criteria established by the Authority; or
 - (4) holds a student air traffic controller licence issued under this subpart; and functions under the supervision of an appropriately rated air traffic controller; or
 - (5) is undergoing ab-initio departmental instruction from an air traffic controller who is specifically authorized to carry out instruction in an operational environment.
- (b) The Authority shall take the appropriate measures to ensure that student ATCOs do not constitute a hazard to air navigation.

2.5.2.3 ELIGIBILITY REQUIREMENTS: GENERAL

- (a) To be eligible for a student air traffic controller licence a person shall—
 - (1) be at least 21 years of age;

- (2) hold a Class 3 medical certificate issued under this part;
 - (3) meet the English language proficiency requirements of Section 2.2.2 of this part; and
 - (4) completed an approved training course covered in Subsection 2.5.2.4 of this section
- (b) To be eligible for an air traffic controller licence a person shall—
- (1) be at least 21 years of age;
 - (2) meet the English language proficiency requirements of Section 2.2.2 of this part;
 - (3) meet the requirements of Subsection 2.5.2.4 of this section; and
 - (4) meet the requirements of at least one of the ratings set out in Subsection 2.5.2.6 of this section.

2.5.2.4 KNOWLEDGE REQUIREMENTS

- (a) An applicant for an air traffic controller licence shall have demonstrated knowledge appropriate to the holder of an air traffic controller licence in at least the following subjects—
- (1) Air Law – Rules and regulations relevant to the air traffic controller;
 - (2) Air traffic control equipment – Principles, use and limitations of equipment used in air traffic control;
 - (3) General Knowledge - Principles of flight; principles of operation and functioning of aircraft, power plants and systems; aircraft performances relevant to air traffic control operations;
 - (4) Human Performance - Human performance relevant to air traffic control including principles of threat and error management;
 - (5) Aeronautical meteorology; use and appreciation of meteorological documentation and information; origin and characteristics of weather phenomena affecting flight operations and safety; altimetry;

- (6) Navigation - Principles of air navigation; principle, limitation and accuracy of navigation systems and visual aids; and
- (7) Operational Procedures - Air traffic control, communication, radiotelephony and phraseology procedures (routine, non routine and emergency); use of the relevant aeronautical documentation; safety practices associated with flight.

2.5.2.5 SKILL REQUIREMENTS

- (a) An applicant for an Air Traffic Controller Licence shall pass a skill test on the following—
 - (1) safety of operation;
 - (2) separation;
 - (3) expedition and orderliness;
 - (4) method and application of Air Traffic Procedures and Practices;
 - (5) standard Chicago Convention phraseology;
 - (6) co-ordination and communication;
 - (7) correct use of equipment;
 - (8) emergency and abnormal situations; and
 - (9) impact of weather conditions on aircraft operations.

2.5.2.6 EXPERIENCE

- (a) The applicant shall have completed an approved training course and demonstrated the required competence, having accomplished not less than 3 months of satisfactory service engaged in the actual control of air traffic under the supervision of an ATC OJTI. The experience requirements specified for air traffic controller ratings in Subsection 2.5.2.7 of this section may be credited as part of the experience specified in this paragraph.
- (b) An air traffic controller acting as an ATC OJTI shall hold an appropriate rating and be qualified as an ATC OJTI.

2.5.2.7 AIR TRAFFIC CONTROLLER RATINGS AND ENDORSEMENTS

- (a) ATCO ratings shall comprise the following categories—
 - (1) Aerodrome control rating;
 - (2) Approach control procedural rating;
 - (3) Approach control surveillance rating;
 - (4) Approach precision radar control rating;
 - (5) Area control procedural rating; and
 - (6) Area control surveillance rating.
- (b) ATCO endorsements shall comprise the following categories—
 - (1) Air Traffic Instructor Endorsement; and
 - (2) Air Traffic Examiner Endorsement.

2.5.2.8 REQUIREMENTS FOR AIR TRAFFIC CONTROLLER RATINGS

- (a) An applicant shall have demonstrated a level of knowledge appropriate to the privileges granted in at least the following subjects in so far as they affect the area of responsibility—
- (b) KNOWLEDGE. The applicant for an ATCO rating shall have received knowledge instruction through an approved training course on the knowledge areas appropriate to the holder of an ATCO rating on the subjects as specified below for each rating sought—
 - (1) Aerodrome control rating—
 - (i) Aerodrome layout; physical characteristics and visual aids
 - (ii) Airspace structure
 - (iii) Applicable rules, procedures, and source of information
 - (iv) Air navigation facilities

- (v) Air traffic control equipment and its use
 - (vi) Terrain and prominent landmarks
 - (vii) Characteristics of air traffic
 - (viii) Weather phenomena
 - (ix) Emergency and search and rescue plans
- (2) Approach control procedural and area control procedural ratings—
- (i) Airspace structure
 - (A) Applicable rules, procedures, and source of information
 - (B) Air navigation facilities
 - (C) Air traffic control equipment and its use
 - (D) Terrain and prominent landmarks
 - (E) Characteristics of air traffic and traffic flow
 - (F) Weather phenomena
 - (G) Emergency and search and rescue plans
 - (ii) Approach control surveillance, approach precision radar control, and area control surveillance ratings—
 - (A) The applicant shall meet the requirements specified in Paragraph 2.5.2.8(b)(2) of this subsection insofar as they affect the area of responsibility, and shall have demonstrated a level of knowledge appropriate to the privileges granted, in at least the following additional subjects—
 - (i) Principles, use, and limitations of applicable ATS surveillance systems and associated equipment; and

- (ii) Procedures for the provision of ATS surveillance services, as appropriate, including procedures to ensure appropriate terrain clearance.
- (c) KNOWLEDGE TESTING. The applicant for an ATCO rating shall—
 - (1) Have received an endorsement for the knowledge test from an authorised instructor who—
 - (i) Conducted the training on the knowledge areas; and
 - (ii) Certifies that the person is prepared for the required knowledge test; and
 - (2) Pass the required knowledge test.
- (d) EXPERIENCE.
 - (1) The applicant for an ATCO licence shall have—
 - (i) Satisfactorily completed an approved training course;
 - (ii) Demonstrated the required competence while providing, under the supervision of an ATC OJTI, one or more of the following—
 - (A) Aerodrome control rating: an aerodrome control service, for a period of not less than 90 hours or 1 month, whichever is greater, at the unit for which the rating is sought;
 - (B) Approach control procedural, approach control surveillance, area control procedural, or area control surveillance rating: the control service for which the rating is sought, for a period of not less than 180 hours or 3 months, whichever is greater, at the unit for which the rating is sought; and
 - (C) Approach precision radar control rating: not less than 200 precision approaches of which not more than 100 shall have been carried out on a radar simulator approved for that purpose by the Authority. Not less than 50 of those precision approaches shall have been carried out at the unit and on the equipment for which the rating is sought; and

- (2) For the provision of Approach and Area Procedural control services, the minimum initial training requirements shall be Aerodrome, Approach and Area Procedural Control Service
 - (3) For the provision of Aerodrome Procedural Control Service, the minimum initial training requirements shall be Aerodrome and Approach Control Service
 - (4) For the provision Aerodrome Flight Information service, the minimum initial training requirement shall be Aerodrome Control Service
 - (5) The application for a rating shall be made within 6 months from the completion of experience specified in Paragraph 2.5.2.8(d)(1)(ii) of this subsection.
 - (6) When the applicant already holds an air traffic controller rating in another category or the same rating in another unit, the Authority shall determine whether the experience requirements of Paragraphs 2.5.2.8(c)(1) and (2) of this subsection may be reduced and to what extent.
- (d) SKILL. The applicant shall have demonstrated, by passing the required skill test, at a level appropriate to the privileges being granted, the skill, judgement, and performance required to provide a safe, orderly, and expeditious control service, including the recognition and management of threats and errors.
- (e) Concurrent issuance of two air traffic controller ratings. When two air traffic controller ratings are sought concurrently, the Authority shall determine the applicable requirements on the basis of the requirements for each rating. These requirements shall not be less than the those of the higher rating.

2.5.2.9 CONVERSION OF AIR TRAFFIC CONTROLLER LICENSES

- (a) Conversion of ATCO licenses, which have been verified in accordance with Subsection 2.5.2 of this part.
- (1) The holder of a current and valid foreign ATCO licence issued by another Contracting State, in accordance with ICAO Annex 1, may apply for conversion to the appropriate licence and

ratings issued by Grenada, by submitting to the Authority, the licence and a valid Class 3 Medical Certificate in support of the foreign licence.

- (2) The applicant shall pass a Class 3 Medical by an ECCAA Aviation Medical Examiner.
- (3) The Authority may issue the applicant an ATCO Licence without ratings.

2.5.2.10 PRIVILEGES AND LIMITATIONS.

- (a) Subject to compliance with the requirements specified in this part, the privileges of the holder of an ATCO licence with the following applicable rating(s) shall be—
 - (1) Aerodrome control rating: to provide or to supervise the provision of aerodrome control service for the aerodrome for which the licence holder is rated;
 - (i) Approach control procedural rating: to provide or to supervise the provision of approach control service for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service;
 - (ii) Approach control surveillance rating: to provide and/or supervise the provision of approach control service with the use of applicable ATS surveillance systems for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service;
 - (iii) Approach precision radar control rating: to provide and/or supervise the provision of precision approach radar service at the aerodrome for which the licence holder is rated;
 - (iv) Area control procedural rating: to provide and/or supervise the provision of area control service, within the control area or portion thereof, for which the licence holder is rated; and

- (v) Area radar control surveillance rating: to provide and/or supervise the provision of area control service with the use of an ATS surveillance system, within the control area or portion thereof, for which the licence holder is rated.
- (2) Before exercising the privileges indicated in Paragraph 2.5.2.9(a)(1), the licence holder shall be familiar with all pertinent and current information.
- (3) A holder of an ATCO licence and ratings(s) shall not provide instruction in an operational environment unless the licence holder has received proper authorisation from the Authority
- (4) The holder of an air traffic controller licence shall not carry out ab-initio instruction or instruct/supervise a non-rated controller in an operational environment unless such holder has received proper authorization from the Authority.

2.5.2.11 VALIDITY OF RATINGS.

- (a) A rating shall become invalid when an air traffic controller has ceased to exercise the privileges of the rating for a period determined by the Authority. That period shall not exceed 6 months. A rating shall remain invalid until the controller's ability to exercise the privileges of the rating has been re-established.
- (b) An Air Traffic Controller shall maintain currency of a rating by—
 - (1) Exercising the privileges associated with a rating for at least eight hours at each coordinating and control positions within the preceding thirty (30) days, of which at least five (5) hours must be done during a period when traffic volume and complexity are appropriate to maintain competency; or
 - (2) Successfully passing a competency evaluation assessment conducted by an Air Traffic Services Examiner within the preceding thirty (30) days.
- (c) An Air Traffic Controller who has not complied with Paragraph 2.5.2.10(b) of this subsection shall be removed from operational duties and shall only be reinstated after—
 - (1) Undergoing any coordinating and control retraining by the Air Navigation Service Provider and has been assessed by an Air

Traffic Services Examiner to be competent to perform the function and duties required for the required rating(s), or

- (2) Performed the coordinating and control functions and duties at the aerodrome or in the airspace to which the rating relates, under supervision of an OJTI, for a period determined by the Authority and has been assessed by an Air Traffic Services Examiner to be competent to perform the function and duties required for the required rating(s).

2.5.2.12 REST AND DUTY LIMITATIONS

- (a) Except where the Authority determines that an emergency air traffic situation has arisen, an Air Traffic Controller shall have a minimum of twenty-four consecutive hours free from duty within each seven consecutive days of duty.
- (b) Except where the Authority determines that an emergency air traffic situation has arisen, an Air Traffic Controller shall not work or be required to work for more than twelve consecutive hours.
- (c) An Air Traffic Controller shall be required to take a rest period of at least eight consecutive hours before each duty period.
- (d) Notwithstanding Paragraph 2.5.2.11(c) of this subsection, where the duty period is more than ten consecutive hours the rest period of the Air Traffic Controller shall be no less than the preceding duty period.

2.5.2.13 REQUIREMENT FOR ISSUE OF AIR TRAFFIC INSTRUCTOR ENDORSEMENT

- (a) An applicant for an Air Traffic Instructor Endorsement shall—
 - (1) apply to the Authority in the prescribed form;
 - (2) pay the fee;
 - (3) hold an Air Traffic Controller Licence issued in accordance with this part with a rating for the relevant service;
 - (4) meet the English language proficiency requirements of Section 2.2.2 of this part;
 - (5) have at least three years experience as a Senior Air Traffic Controller; and

- (6) provide the Authority with evidence of having satisfactorily completed an approved training course in the theory and practice of instruction.
- (b) Where an applicant meets the requirements of Paragraph 2.5.2.12 of this subsection, the Authority may issue the Air Traffic Instructor Endorsement.

2.5.2.14 PRIVILEGES AND LIMITATIONS OF AIR TRAFFIC CONTROLLER INSTRUCTOR ENDORSEMENT

- (a) Subject to Paragraph 2.5.2.13(b) of this subsection, the holder of an Air Traffic Instructor Endorsement (hereinafter referred to as “an Air Traffic Instructor”) may—
 - (1) instruct Air Traffic Control personnel;
 - (2) directly supervise Air Traffic Control personnel undergoing training or regaining recency or who are performing Air Traffic Control duties;
 - (3) assess the preparedness of an applicant for the issue of an Air Traffic Controller Licence or rating.
- (b) Subject to Paragraph 2.5.2.13(d) of this subsection, an Air Traffic Instructor in exercising the privileges under his Endorsement shall hold a current Air Traffic Controller Licence with a valid rating for the relevant service.
- (c) Where Air Traffic Instructor is not exercising the privileges of an Air Traffic Controller Licence, he shall not be required to hold a current medical certificate,
- (d) In exercising the privileges under Paragraph 2.5.2.13(a) of this subsection, an air traffic instructor shall within the preceding thirteen months have demonstrated to an air traffic examiner his ability to exercise such privileges by passing an examination and a skill test based on the exercise of such privileges.

2.5.2.15 REQUIREMENTS FOR AIR TRAFFIC EXAMINER ENDORSEMENT

- (a) An applicant for an Air Traffic Examiner Endorsement shall—

- (1) Have at least three years' experience exercising the privileges of an Air Traffic Instructor or at least five years as a Senior Air Traffic Controller, and is of good character;
 - (2) apply to the Authority in the prescribed form;
 - (3) pay the prescribed fee;
 - (4) hold an Air Traffic Controller Licence issued in accordance with this Part with a rating for the relevant service; and
 - (5) provide the Authority with evidence of having satisfactorily completed an approved training course in the ATS practical examination.
- (b) An applicant who has met the criteria of Paragraph 2.5.2.14(a)(1) to (5) of this subsection shall be designated by the Authority as an Air Traffic Examiner for aeronautical knowledge, skills and proficiency testing.

2.5.2.16 PRIVILEGES AND LIMITATIONS OF AIR TRAFFIC EXAMINERS AUTHORISATIONS

- (a) Subject to Paragraph 2.5.2.15(b) of this subsection, the holder of an Air Traffic Examiner Endorsement (hereinafter referred to as "an Air Traffic Examiner") shall conduct aeronautical knowledge and skill tests for initial issue or continued validity of air traffic licences and ratings.
- (b) An Air Traffic Examiner in exercising the privileges of his Air Traffic Examiner Authorisation shall—
- (1) hold a current Air Traffic Service Licence with a rating for the relevant service; and
 - (2) conduct the tests at an Air Traffic Control Facility or an Aviation Training Organisation approved for Air Traffic Control training.
 - (3) as far as practicable, not test an applicant to whom he has given instruction for that licence or rating except with the expressed consent in writing of the Authority.

2.5.2.17 AERODROME FLIGHT INFORMATION SERVICE (AFIS) OFFICERS

- (a) A person shall not provide an Aerodrome Flight Information Service (AFIS) unless he or she has been authorized by the Authority.
- (b) To be eligible for authorization to provide AFIS a person shall—
 - (1) be at least 18 years of age;
 - (2) hold a Class 3 medical certificate issued under this part;
 - (3) meet the English language proficiency requirements of Section 2.2.2; and
 - (4) meet the requirements of Subsection 2.5.2.10 of this part.

2.5.2.18 REQUIREMENTS FOR AUTHORIZATION TO PROVIDE AFIS

- (a) Knowledge—
 - (1) An applicant shall have demonstrated a level of knowledge appropriate to AFIS authorization in at least the following subjects—
 - (i) Rules of the Air and air traffic procedures pertinent to aerodrome operations;
 - (A) Procedures and practices pertaining to Flight Information Service (FIS) and alerting service;
 - (B) Terms used in the aeronautical mobile service to include words and phrases and the phonetic alphabet;
 - (C) Communication codes and abbreviations used;
 - (D) Radiotelephony phraseologies and operating procedures;
 - (E) General air traffic services and airspace organization within the State;
 - (F) Local aerodrome rules;

- (G) Characteristics of local traffic;
 - (H) Local terrain and prominent landmarks;
 - (I) Local air navigation facilities;
 - (J) Procedures for coordination between the AFIS unit and its associated ATC unit(s);
 - (K) Pertinent data regarding meteorological reports and effect of significant weather characteristics; and
 - (L) Local procedures for alerting of emergency services.
- (b) Experience
- (1) The applicant shall have satisfactorily;
 - (i) Completed an approved Aerodrome Control course; and
 - (ii) Provided Aerodrome Flight Information Service at that AFIS unit under the supervision of an authorized AFIS officer or an appropriately rated air traffic controller for not less than two months.
- (c) Skill
- (1) The applicant shall have demonstrated competency in—
 - (i) The manipulation and operation of typical transmit/receiver equipment and controls, including ancillary facilities and radio direction-finding apparatus in use;
 - (ii) The visual inspection and daily operational check of the radio equipment in use;
 - (iii) The transmission of radiotelephony messages, including correct microphone technique, enunciation, and speech quality; and
 - (iv) The reception of telephony messages and the ability to relay messages correctly

2.5.3 Flight Operations Officer**2.5.3.1 APPLICABILITY**

- (a) This subpart prescribes the requirements for the issue, renewal, and reissue of an FOO licence, instructors for FOO licences, and designation of FOO examiner.

2.5.3.2 GENERAL

- (a) An applicant shall, before being issued an FOO licence, meet such requirements with respect to age, knowledge, experience, skill, medical fitness, and language proficiency as are specified for that licence.
- (b) An applicant shall, for renewal or reissue of a licence, meet the requirements as are specified for that licence.
- (c) An applicant shall demonstrate the ability to read, write, speak, and understand the language of Grenada, and English if required by the Authority.

2.5.3.3 FLIGHT OPERATIONS OFFICER LICENCE - GENERAL REQUIREMENTS

- (a) AGE. The applicant for an FOO licence shall be at least 21 years of age.
- (b) KNOWLEDGE. The applicant for an FOO licence shall receive and log training from an authorised instructor on the following subjects appropriate to the privileges of the FOO—
 - (1) AIR LAW.
 - (i) Rules and regulations relevant for operational control and to the holder of an FOO licence;
 - (ii) Appropriate ATS practices and procedures;
 - (2) AIRCRAFT GENERAL KNOWLEDGE.
 - (i) Principles of operation of aeroplane powerplants, systems, and instruments;
 - (ii) Operating limitations of aeroplanes and powerplants;
 - (iii) MEL and configuration deviation list;

- (3) FLIGHT PERFORMANCE CALCULATION, PLANNING PROCEDURES, AND LOADING.
 - (i) Effects of loading and mass distribution on aircraft performance and flight characteristics; mass and balance calculations;
 - (ii) Operational flight planning; fuel consumption and endurance calculations; alternate aerodrome selection procedures; en route cruise control; extended range operation;
 - (iii) Take-off performance including field length, climb, and obstacle criteria and limitation;
 - (iv) Cruise performance including minimum altitudes, decompression/engine out/gear down scenario planning;
 - (v) Landing performance including approach climb and field length criteria and limitations;
 - (vi) Preparation and filing of ATS flight plans;
 - (vii) Basic principles of computer-assisted planning systems;
- (3) HUMAN PERFORMANCE.
 - (i) Human performance relevant to operational control duties, including principles of threat and error management;
- (4) METEOROLOGY.
 - (i) Aeronautical meteorology; the movement of pressure systems; the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en route, and landing conditions;
 - (ii) Interpretation and application of aeronautical meteorological reports, charts, and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information;

- (5) NAVIGATION.
 - (i) Principles of air navigation with particular reference to instrument flight;
- (6) OPERATIONAL PROCEDURES.
 - (i) Use of aeronautical documentation and standard operating procedures;
 - (A) Operational procedures for the carriage of freight and dangerous goods;
 - (B) Procedures relating to aircraft accidents and incidents; emergency flight procedures;
 - (C) Procedures relating to unlawful interference and sabotage of aircraft;
- (7) PRINCIPLES OF FLIGHT.
 - (i) Principles of flight relating to the appropriate category of aircraft; and
- (8) RT.
 - (i) Procedures for communicating with aircraft and relevant ground stations.
- (c) KNOWLEDGE TESTING. The applicant for an FOO licence shall—
 - (1) Have received an endorsement for the knowledge test from an authorised instructor who—
 - (i) Conducted the training on the knowledge areas; and
 - (ii) Certifies that the person is prepared for the required knowledge test; and
 - (2) Pass the required knowledge test.
- (d) EXPERIENCE.
 - (1) The applicant for an FOO licence shall have—

- (i) A total of 2 years of service in any one or in any combination of the capacities specified in Paragraphs 2.5.3.3(d)(1)(i)(A) to (C) of this subsection, inclusive, provided that in any combination of experience the period serviced in any capacity shall be at least 1 year—
 - (A) A flight crew member in air transportation; or
 - (B) A meteorologist in an organisation providing operational control to aircraft in air transportation; or
 - (C) An ATCO; or a technical supervisor of FOOs or air transportation flight operations systems; or
 - (ii) At least 1 year as an assistant in the dispatching of air transport; or
 - (iii) Satisfactorily completed a course of approved training.
- (2) The applicant shall have served under the supervision of an FOO for at least 90 working days within the 6 months immediately preceding the application.
- (e) SKILL. The applicant shall have demonstrated the ability, by passing a skill test on the areas of operation in the ECCAA STSs for FOO, to—
 - (1) Identify and to retrieve aeronautical data and other information relevant for the analysis of operational situations and risks;
 - (2) Identify and evaluate the risk factors and the possible consequences for flight operations;
 - (3) Identify and evaluate actions considering risk, the effect on flight safety and regularity of the operation;
 - (4) Determine an appropriate course of action based on the responsibilities and policies described in the OM;
 - (5) Apply appropriate standard and non-standard procedures from the OM for the initiation, planning, continuation, diversion, or termination of flights in the interest of safety of the aircraft and regularity and efficiency of the operation;

- (6) Make an accurate and operationally acceptable weather analysis; provide an operationally valid briefing on weather conditions of a specific air route; forecast weather trends pertinent to air transportation with particular reference to destination and alternates;
 - (7) Identify and apply operational limitations and minimums in relation to the weather, aircraft status, and appropriate navigation procedures;
 - (8) Determine the optimum flight path for a given segment and create accurate manual and/or computer-generated flight plans;
 - (9) Provide operating supervision and all other assistance to a flight in actual or simulated adverse weather conditions, as appropriate to the duties of the holder of an FOO licence; and
 - (10) Recognise and manage threats and errors.
- (f) PRIVILEGES. Subject to compliance with the requirements specified in this part, the privileges of the holder of an FOO licence shall be to serve in that capacity with responsibility for each area for which the applicant meets the Standards specified in ICAO Annex 6, as contained in Parts 8 and 9 of these regulations.
- (g) VALIDITY. The validity period of the licence is 1 year. A licence shall become invalid when an FOO has ceased to exercise the privileges of the licence for a period of 6 months. A licence shall remain invalid until the FOO's ability to exercise the privileges of the licence has been re-established.
- (h) RENEWAL. The FOO licence may be renewed by presenting to the Authority evidence of successfully passing a competency check on the areas of operation listed in the ECCAA STSs for FOO.
- (i) REISSUE. If the FOO licence has expired, the applicant shall have received refresher training acceptable to the Authority, and shall pass a skill test on the areas of operation contained in the ECCAA STSs for FOO.

2.5.3.4 SKILL TEST FOR THE FLIGHT OPERATIONS OFFICER LICENCE

- (a) The ECCAA STSs for FOO contain the list of operations included in the FOO licence skill test.

2.5.4 Instructors for Flight Operations Officers**2.5.4.1 REQUIREMENTS FOR THE FLIGHT OPERATIONS OFFICER INSTRUCTOR LICENCE**

- (a) AGE. An applicant for an FOO instructor licence and rating shall be at least 21 years of age.
- (b) KNOWLEDGE.
 - (1) An applicant for an FOO instructor licence shall have met the instructor requirements in Section 2.2.6 of this part; and
 - (2) Any additional requirements, as may be specified by the Authority.
- (c) EXPERIENCE. The applicant for an FOO instructor licence shall hold at least a current and valid FOO licence and shall have a minimum of 3 years of experience as an FOO.
- (d) PRIVILEGES. The privileges of an FOO instructor licence are to give instruction to FOO licence applicants and to endorse those applicants for a knowledge or skill test, as applicable.
- (e) VALIDITY. Subject to compliance with the requirements specified in this part, the validity period of the FOO instructor licence is 2 years.
- (f) RENEWAL. An FOO instructor licence that has not expired may be renewed for an additional 24 calendar months if the holder presents to the Authority evidence that he or she has, within the past 12 months preceding the expiry date—
 - (i) Conducted at least six exercises in an approved course for an FOO licence; or
 - (ii) Received refresher training acceptable to the Authority.
- (g) REISSUE. If the FOO instructor licence has expired, the applicant shall have received refresher training acceptable to the Authority.

2.5.5 Designated Examiners for Flight Operations Officers**2.5.5.1 GENERAL REQUIREMENTS**

- (a) AGE. The applicant for an FOO examiner shall be at least 23 years of age.

- (b) GENERAL ELIGIBILITY. The applicant for an FOO examiner shall—
- (1) Show evidence of a high level of aeronautical knowledge in the subject areas for the FOO certification;
 - (2) Have held an FOO licence for at least 5 years prior to the designation;
 - (3) Have been actively exercising the privileges of the FOO licence in commercial air transport in the previous 3 years;
 - (4) Have a good record as an FOO and as a person engaged in the industry and community, with a reputation for honesty and dependability;
 - (5) Have satisfactorily completed the FOO examiner orientation programme with the Authority; and
 - (6) Have available a test site that is fully capable of doing all items required for the proper dispatch of a commercial flight in accordance with the regulatory requirements. This may be the Flight Operations Office of an active commercial airline.

2.5.5.2 KNOWLEDGE

- (a) The applicant shall have passed a pre-designation test on the following—
- (1) Air law and regulations for FOO personnel;
 - (2) Aircraft knowledge on the aircraft used for testing;
 - (3) Flight performance calculation and planning procedures;
 - (4) Human performance;
 - (5) Meteorology;
 - (6) Navigation;
 - (7) Radio communication; and

- (8) Recent changes in technology, to include fly-by-wire aircraft systems, GPS navigation, required navigation performance (RNP) requirements, TCAS, ADS-B, and enhanced wind shear systems.

2.5.5.3 SKILL

- (a) The Authority shall observe the applicant conducting a complete, actual FOO certification using the approved STS in a satisfactory manner.
- (b) The applicant shall complete all required paperwork for the certification as required by the Authority.

2.5.5.4 CURRENCY

- (a) After designation, an FOO examiner shall maintain currency by—
 - (1) Attending initial and recurrent training conducted by the Authority; and
 - (2) Maintaining a current and valid FOO licence.
- (b) The FOO examiner shall conduct at least six skill tests during any 12-calendar-month period in order for the designation to remain current.
- (c) The FOO examiner shall be observed by the Authority in the conduct of a skill test at least once every 12 calendar months.

2.5.5.5 PRIVILEGES

- (a) The FOO examiner may conduct skill tests for the FOO licence in accordance with approved STS standards.
- (b) The FOO examiner may conduct or monitor any portion of a computerised knowledge test.

2.5.5.6 VALIDITY

- (a) The FOO examiner licence shall be valid for 3 years.

2.5.5.7 RENEWAL

- (a) The FOO examiner designation may be renewed by the Authority if—

- (1) The need for the designation remains valid; and
- (2) The performance of the examiner has been satisfactory.

2.5.6 Aviation Maintenance Technicians

Note: The terms “licenced Engineer,” “aviation maintenance engineer” or “aircraft maintenance engineer (AME)” may be used instead of “Aviation Maintenance Technician”

2.5.6.1 APPLICABILITY

- (a) This Section prescribes the requirements for issuance of an AMT licence and associated ratings which are issued and extended within the defined Categories given in Subsection 2.5.6.3 of this section.
- (b) There are two parts to each Category
 - (1) Licence Without Type Rating (LWTR). This licence does not confer any certification responsibilities or privileges. It is, however, a prerequisite for the grant of the relevant Type Ratings and Certification Authorisation within an AMO;
 - (2) Type Ratings. Type Ratings confer on the holder of a LWTR the privileges and certification responsibilities defined in Subsection 2.5.6.7 of this section.

2.5.6.2 ELIGIBILITY REQUIREMENTS: GENERAL

- (a) An applicant for the grant / extension of a licence shall—
 - (1) submit an application which is acceptable in content and presentation;
 - (2) provide evidence of acceptable experience required by IS 2.5.6.5 and any training course requirements relevant to the application;
 - (3) comply with the knowledge and competency requirements prescribed for the rating sought;
 - (4) be able to read, write, interpret technical reports and carry out technical discussions in the English language;
 - (5) pass all of the prescribed tests for the rating sought;

- (6) pay the appropriate fee.
- (b) An applicant for the conversion of a Licence based on a licence or certificate not issued by Grenada shall—
 - (1) submit an application which is acceptable in content in type and form;
 - (2) enclose original documents or acceptable certified copies of the licences and certificates supporting the application;
 - (3) be able to read, write, interpret technical reports and carry out technical discussions in the English language;
 - (4) pay the appropriate fee.

Implementing Standard: See IS 2.5.6.2 for further requirements and procedures for the acceptance of foreign licences and certificates.

2.5.6.3 RATINGS

- (a) Categories and Ratings defined in IS: 2.5.6.3 are issued under this subpart.

2.5.6.4 AIRCRAFT RATING: KNOWLEDGE REQUIREMENTS

- (a) An applicant for an AMT licence or rating shall, after meeting the applicable experience requirements of Subsection 2.5.6.5 of this Part, pass the applicable –
 - (1) knowledge tests covering the construction and maintenance of aircraft appropriate to the category and rating sought;
 - (2) the regulations; and
 - (3) the provisions of the applicable Parts.
- (b) The examination for the grant of a Licence will normally be in two parts—
 - (1) a written examination, comprising a multi-choice question paper and an essay question paper; and
 - (2) an oral examination.

- (c) All papers of the written examination must be taken at one sitting.
- (d) The oral examination can only be taken after the written examination has been passed and normally must be taken within 3 months of the written examination.
- (e) The applicant shall pass each section of the written test before completing any necessary oral examination.

Implementing Standard; See IS 2.5.6.4 for details of the examinations, the examination syllabus and procedures following partial passes.

2.5.6.5 EXPERIENCE REQUIREMENTS

- (a) Applications for the grant or extension of an AMT Licence in any category must demonstrate compliance with the experience requirements detailed in IS: 2.5.6.5.

2.5.6.6 SKILL REQUIREMENTS

- (a) Each applicant for an AMT licence or rating must pass an oral and a skill test on the rating he seeks. The tests cover the applicant's basic skill in performing practical projects on the subjects covered by the written test for that rating.
- (b) A skill test is not required provided the experience requirement of Subsection 2.5.6.5 of this section is satisfied.

2.5.6.7 PRIVILEGES AND LIMITATIONS

- (a) A licenced AMT may perform or supervise the maintenance, or modification of, or after inspection, approve for return to service, any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof, for which he or she has a valid appropriately type rated licence.
- (b) A licenced AMT in Category 'A' with the appropriate type rating may, after he or she has performed the 100 hour or annual inspection required by Part 8 of these regulations on an airframe, or any related part or appliance, approve it for return to service.
- (c) A licenced AMT in Category 'C' with the appropriate type rating may, after he or she has performed the 100 hour or annual inspection

required by Part 8 of these Regulations on a powerplant or propeller, or any related part or appliance, approve for return to service.

- (d) A licenced AMT in any Category shall not—
- (1) approve for return to service any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof which is operated on an AOC issued in accordance with Part 9 of these regulations unless he or she is approved by the AMO responsible for the maintenance and listed in the list of certifying staff;
 - (2) exercise the privileges of the licence unless the AMT understands the current instructions for continued airworthiness and the maintenance instructions for the specific operation concerned;
 - (3) perform or supervise—
 - (i) a major repair or major modification of a propeller; or
 - (ii) any repair or alteration of instruments;
 - (4) approve for return to service—
 - (i) any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof after completion of a major alteration or major repair; or
 - (ii) any instrument after completion of any repair or alteration.

2.5.6.8 (RESERVED)

2.5.6.9 (RESERVED)

2.5.6.10 AMT LICENCE RENEWAL

- (a) It is the responsibility of the Licence holder to ensure that his or her Licence remains valid.
- (b) An applicant for the renewal of a licence shall—
 - (1) submit an application for renewal which is acceptable in form and content;

- (2) provide evidence of having been engaged on the maintenance of operating aircraft for periods of at least 6 months during the 12 months before application for renewal.
 - (3) pay the appropriate fee.
- (c) Where a Licence holder is unable to show such experience, as required by Paragraph 2.5.6.10(b)(2), but has been actively involved for the same periods in matters concerned with aircraft maintenance (e.g. as a quality engineer or quality manager, an aeronautical engineering instructor or as a flight engineer) consideration will be given to renewing the Licence;
- (d) Expired Licences.
 - (1) A Licence which has lapsed for less than 2 years may be considered for renewal without examination of the holder provided that the requirements of Paragraph 2.5.6.10(b) and the implementing standards are met.
 - (2) A Licence which has lapsed for more than 2 years may not be renewed without examination of the holder. The amount of recent experience required may depend on the length of time since the Licence lapsed and the nature of employment.

2.5.7 Certification Authorisations

2.5.7.1 APPLICABILITY

- (a) This subpart prescribes the requirements for issuance of certification authorisations, and the conditions under which these authorisations are necessary.

2.5.7.2 ELIGIBILITY REQUIREMENTS: GENERAL

- (a) An AMO shall issue a Certification Authorisation to Certifying Staff in accordance with procedures approved by the Authority. Such procedures shall contain at least the following eligibility requirements—
 - (1) the applicant must hold a valid AMT LWTR issued by the Authority or an appropriate validation of a foreign licence in the appropriate category;

- (2) the applicant must have completed an appropriate type course approved by the Authority or hold the appropriate Type Rating;
- (3) the applicant must pass an examination on the AMO procedures;
- (4) the applicant must submit to the AMO, a satisfactory record of experience as specified in Subsection 2.5.6.5 of this section.

2.5.8 (Reserved)**2.6 MEDICAL PROVISIONS FOR LICENSING****2.6.1 General****2.6.1.1 APPLICABILITY**

- (a) This subpart prescribes the requirements and procedures for issuing and reissuing Class 1, Class 2, and Class 3 medical certificates;
- (b) The medical assessment process of licence holders shall include basic safety management principles in its—
 - (1) Routine analysis of in-flight incapacitation events and medical findings during medical assessments to identify areas of increased medical risk; and
 - (2) Continuous re-evaluation of the medical assessment process to concentrate on identified areas of increased medical risk.
- (c) The Authority will implement appropriate aviation-related health promotion for licence holders subject to a medical assessment to reduce future medical risks to flight safety.

Note: Paragraph 2.6.1.1(b) of this subsection indicates how appropriate topics for health promotion activities may be determined.

2.6.1.2 MEDICAL FITNESS

- (a) An applicant for a flight crew licence or ATCO license shall hold a medical certificate issued in accordance with this Part.

- (b) The flight crew members or ATCOs shall not exercise the privileges of their licence unless they hold a current medical certificate appropriate to the licence.
- (c) The period of validity of a medical certificate shall begin on the day the medical examination is performed. The duration of the period of validity shall be in accordance with the provisions of subsection 2.6.2.4 of this section.
- (d) The period of validity of a medical certificate may be extended, at the discretion of the Authority up to 45 days.
- (e) The period of validity of a medical certificate may be reduced when clinically indicated.

2.6.1.3 AVIATION MEDICAL EXAMINERS

- (a) Subject to compliance with the requirements specified in this Part, the Authority will designate and authorise qualified and licensed physicians in the practice of medicine, to be authorised as an Aviation Medical Examiner (AME) and to conduct medical examinations of fitness of applicants for the issue, renewal or re-issue of the licences or ratings specified in this Part. AMEs may be designated outside of Grenada;
- (b) AMEs shall have had training in Basic and Advanced aviation medicine. Before designation, medical examiners shall demonstrate adequate competency in aviation medicine;
- (c) AMEs shall receive refresher training every three years;
- (d) AMEs shall have practical knowledge and experience of the conditions in which the holders of licences and ratings carry out their duties;

Note: Examples of practical knowledge and experience are flight experience, simulator experience, on-site observation or any other hands-on experience deemed by the Authority to meet this requirement.

- (e) The authorisation of an AME is valid for 3 years. Re-authorisation will be at the discretion of the Authority

- (f) Having completed the medical examination of an applicant in accordance with this Section, the AME shall submit a signed report to the Authority detailing the results of the examination;
- (g) Medical confidentiality shall be respected at all times;
- (h) All medical reports and records shall be securely held with accessibility restricted to authorized personnel;
- (i) If the medical examination is carried out by a constituted group of AMEs, the head of the group will be appointed by the Authority, who will be responsible for coordinating the results of the examination and signing the report;
- (j) An AME shall report to the Authority any individual case where, in the examiner's judgement, an applicant's failure to meet any requirement could jeopardise flight safety;
- (k) The Authority shall use the services of physicians experienced in the practice of aviation medicine, when it is necessary to evaluate reports submitted to the Authority by medical examiners;
- (l) The Authority retains the right to reconsider any action of an AME.

2.6.1.4 AVIATION MEDICAL EXAMINATIONS

- (a) Applicants for licences or ratings for which medical fitness is prescribed shall sign and furnish to the AME a declaration stating whether they have previously undergone such an examination and, if so, the date, place and results of the last examination;
- (b) The applicant shall indicate to the medical examiner whether a medical certificate has previously been refused, revoked, or suspended and, if so, the reason for such refusal, revocation, or suspension
- (c) Each applicant for a medical certificate shall provide the AME with a personally certified statement of medical facts concerning personal, familial and hereditary history;
- (d) Each applicant for a medical certificate shall produce proof of identification;
- (e) Any false declaration to an AME made by an applicant for a licence or rating shall be reported to the Authority for such action as may be considered appropriate;

- (f) The applicant shall complete the appropriate form as prescribed by the Authority.

2.6.1.5 SPECIAL CIRCUMSTANCES

- (a) If the medical requirements prescribed in this part for a particular licence are not met, the appropriate medical certificate will not be issued, renewed or re-issued unless the following conditions are fulfilled—
 - (1) An accredited medical conclusion indicates that in special circumstances the applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence applied for is not likely to jeopardize flight safety;
 - (2) Operational conditions and the relevant ability, skill and experience of the applicant have been given due consideration; and
 - (3) The licence is endorsed by the Authority with any special limitation or limitations when the safe performance of the licence holder's duties is dependent on compliance with such limitation or limitations.
- (b) The AME shall report to the Authority any individual case where, in the AME's judgement, an applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence being applied for, or held, is not likely to jeopardize flight safety.

2.6.1.6 DECREASE OF MEDICAL FITNESS

- (a) Holders of licences provided for in this Part shall not exercise the privileges of their licences and related ratings at any time when they are aware of any decrease in their medical fitness which might render them unable to safely and properly exercise these privileges.

2.6.1.7 USE OF PSYCHOACTIVE SUBSTANCES

- (a) Holders of licences provided for in this Part shall not exercise the privileges of their licences and related ratings while under the influence of any psychoactive substance which might render them unable to safely and properly exercise these privileges;

- (b) Holders of licences provided for in this Part shall not engage in any problematic use of substances.

2.6.2 Medical Certification Procedures

2.6.2.1 APPLICABILITY

- (a) This Section prescribes the medical certification procedures required for the issuance of all medical certificates.

2.6.2.2 THE MEDICAL CERTIFICATE.

- (a) The Medical Certificate

- (1) The medical certificate shall be—

- (i) Issued in a form and manner prescribed by the Authority; and

- (ii) Carried in the possession of the personnel licence holder at all times while exercising the privileges of a personnel licence.

- (2) The items required on the medical certificate are prescribed in IS 2.6.2.2.

- (b) Issuance of Medical Certificate

- (1) The Authority shall issue the applicable medical certificate to any applicant who meets the medical requirements prescribed in this subpart, based on medical examination and evaluation of the applicant's history and condition.

- (2) Each applicant for a medical certificate shall undergo a medical examination based on the physical and mental requirements contained in this subpart.

- (3) Any applicant who does not meet the medical requirements of this subpart shall not be granted a medical certificate unless that person meets the requirements of Subsection 2.6.1.5 of this part;

2.6.2.3 MEDICAL ASSESSOR

- (a) The Authority's medical assessor will periodically evaluate the competence of each AME.
- (b) The Authority shall use the services of physicians experienced in the practice of aviation medicine when it is necessary to evaluate reports submitted to the Authority by medical examiners.

2.6.2.4 MEDICAL CERTIFICATE REQUIREMENTS

- (a) To conduct the following operations, except for a person employed by the Authority or on active duty with the armed forces of Grenada, an applicant shall—
 - (1) hold a Class 1 medical certificate when exercising the privileges of a commercial or an airline transport pilot licence;
 - (2) hold at least a Class 2 medical certificate when exercising the privileges of a student or private pilot licence; or
 - (3) hold at least a Class 3 medical certificate when exercising the privileges of an air traffic controller licence.
- (b) A flight engineer shall hold a Class 2 medical certificate.

Implementing Standard; See IS 2.6.2.4 for persons exempt from holding a medical certificate.

2.6.2.5 DURATION OF A MEDICAL CERTIFICATE

- (a) The duration of a Medical Certificate shall be—
 - (1) A Student pilot expires—
 - (a) 24 calendar months from the month of the date of the medical examination shown on the licence, if the person has not reached his or her 40th birthday on or before the date of the examination;
 - (b) 12 calendar months from the month of the date of the medical examination shown on the licence, if the person has reached his or her 40th birthday on or before the date of the examination;
 - (2) A Private pilot expires—

- (i) 24 calendar months from the month of the date of the medical examination shown on the licence, if the person has not reached his or her 40th birthday on or before the date of the examination;
 - (ii) 12 calendar months from the month of the date of the medical examination shown on the licence, if the person has reached his or her 40th birthday on or before the date of the examination;
- (3) Commercial and airline transport pilot expires—
 - (i) 6 calendar months after the month of the date of the medical examination shown on the licence;
- (4) Flight Engineer expires—
 - (i) 12 calendar months after the month of the date of the medical examination shown on the licence;
- (5) Air Traffic Controller expires—
 - (i) 48 calendar months from the month of the date of the medical examination shown on the licence if the person has not reached his or her 40th birthday on or before the date of the examination.
 - (ii) 24 calendar months from the month of the date of the medical examination shown on the licence if the person has reached his or her 40th birthday on or before the date of the examination.
 - (iii) 12 calendar months from the month of the date of the medical examination shown on the licence if the person has reached his or her 50th birthday on or before the date of the examination.
- (b) Circumstances in which a medical examination may be deferred—
 - (1) The prescribed re-examination of a licence holder operating in an area distant from designated medical examination facilities may be deferred at the discretion of the Authority, provided that such deferment shall only be made as an exception and shall not exceed—

- (i) a single period of six months in the case of a flight crew member of an aircraft engaged in noncommercial operations;
- (ii) two consecutive periods each of three months in the case of a flight crew member of an aircraft engaged in commercial operations provided that in each case a favourable medical report is obtained after examination by a designated medical examiner of the area concerned, or, in cases where such a designated medical examiner is not available, by a physician legally qualified to practise medicine in that area. A report of the medical examination shall be sent to the Authority
- (iii) in the case of a private pilot, a single period not exceeding 24 months where the medical examination is carried out by an examiner designated by the State in which the applicant is temporarily located. A report of the medical examination shall be sent to the Authority.

2.6.2.6 SPECIAL CIRCUMSTANCES

- (a) If the medical requirements prescribed in this Part for a particular licence are not met, the appropriate medical certificate will not be issued, renewed or re-issued unless the following conditions are fulfilled;
 - (1) Accredited medical conclusion indicates that in special circumstances the applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence applied for is not likely to jeopardize flight safety;
 - (2) Relevant ability, skill and experience of the applicant and operational conditions have been given due consideration; and
 - (3) The licence is endorsed by the Authority with any special limitation or limitations when the safe performance of the licence holder's duties is dependent on compliance with such limitation or limitations

2.6.2.7 RENEWAL OR REISSUE OF A MEDICAL CERTIFICATE

- (a) Renewal or Reissue of a Medical Certificate

- (1) The requirements for the renewal or reissue of a medical assessment are the same as those for the initial assessment except where otherwise specifically stated.
 - (2) The renewal of the Class 1, 2, and 3 medical certificates shall be done by the Authority.
 - (3) The reissue of the Class 1 medical certificate shall be done by the Authority.
 - (4) Reissue of the Class 2 and 3 medical certificates shall be done by the Authority.
- (b) Limitation or Denial of Medical Certificate
- (1) The Authority may, for medical reasons justified and notified to the applicant, limit or deny a medical certificate.
 - (2) An applicant who is denied a medical certificate based on the recommendation of an AME may, within 30 days after the date of the denial, apply in writing and in duplicate to the Authority for reconsideration of that denial. If the applicant does not ask for reconsideration during the 30-day period after the date of the denial, the Authority will consider that he or she has withdrawn the application for a medical certificate.
 - (3) The denial of a medical certificate—
 - (i) by an aviation medical examiner is not a denial by the Authority; and
 - (ii) by the Authority is considered to be a denial by the Authority.
- (c) Suspension or revocation of a medical certificate.
- (1) The Authority may, in accordance with Part 1, Subsection 1.2.1.6 of these regulations, suspend or revoke a medical certificate issued, if it is established that an applicant or a certificate holder has not met, or no longer meets, the requirements of this part

2.6.3 Medical Requirements**2.6.3.1 APPLICABILITY**

- (a) This Section prescribes the medical standards required for all medical certificates.

2.6.3.2 GENERAL

- (a) An applicant for a Medical Certificate issued in accordance with this part, shall undergo a medical examination based on the following requirements—
 - (1) Physical and mental;
 - (2) Visual and colour perception; and
 - (3) Hearing

2.6.3.3 PHYSICAL AND MENTAL REQUIREMENTS

- (a) An applicant for any class of medical certificate shall be required to be free from—
 - (1) Any abnormality, congenital or acquired; or
 - (2) Any active, latent, acute or chronic disability; or
 - (3) Any wound, injury or sequela from operation; or
 - (4) Any effect or side-effect of any prescribed or non-prescribed therapeutic medication taken; such as would entail a degree of functional incapacity that is likely to interfere with the safe operation of an aircraft or with the safe performance of duties
- (b) An applicant with depression, being treated with antidepressant medication, shall be assessed as unfit unless the medical assessor, having access to the details of the case concerned, considers the applicant's condition as unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

2.6.3.4 VISUAL ACUITY TEST REQUIREMENTS

- (a) Visual acuity tests shall be conducted in an environment with a level of illumination that corresponds to ordinary office illumination (30–60 cd/m²).

- (b) Visual acuity shall be measured by means of a series of Landolt rings or similar optotypes, placed at a distance from the applicant appropriate to the method of testing adopted.

2.6.3.5 COLOUR PERCEPTION REQUIREMENTS

- (a) The applicant shall be required to demonstrate the ability to perceive readily those colours the perception of which is necessary for the safe performance of duties.
- (b) The applicant shall be tested for the ability to correctly identify a series of pseudoisochromatic plates in daylight or in artificial light of the same colour temperature, such as that provided by CIE standard illuminants C or D65 as specified by the CIE.
- (c) An applicant obtaining a satisfactory result as prescribed by the Authority shall be assessed as fit.
- (d) An applicant failing to obtain a satisfactory result in such a test as described in Paragraph 2.6.3.5(b) of this subsection shall be assessed as unfit unless—
 - (1) able to readily distinguish the colours used in air navigation (red, green and white); and
 - (2) correctly identify aviation coloured lights.
- (e) Applicants who fail to meet these criteria shall be assessed as unfit except for Class 2 assessment with the following restriction: valid daytime only.

2.6.3.6 HEARING TEST REQUIREMENTS

- (a) Applicants shall be required to demonstrate hearing performance sufficient for the safe exercise of their licence and rating privileges.
- (b) The hearing test may be conducted using a pure-tone audiometer or alternate method that will provide equivalent results. This test shall be performed at the first medical examination and then at specified intervals according to the class of medical examination and the age of the applicant.
- (c) If a pure-tone audiometer is used for the hearing test, the reference zero for calibration shall be that of the ISO Recommendation R389, 1964.

- (d) For hearing tests where audiometry is not performed, applicants shall be tested in a quiet room by whispered and spoken voice tests under the following conditions—
 - (1) A quiet room is a room in which the intensity of the background noise is less than 35 dB(A) when measured on “slow” response of an “A”-weighted sound level meter.
 - (2) The sound level of an average conversational voice at 1 m from the point of output is 60 dB(A) and that of a whispered voice is 45 dB(A). At 2 m from the speaker, the sound is 6 dB(A) lower.

2.6.4 Medical Certificates

2.6.4.1 CLASS 1

- (a) CERTIFICATE ISSUE AND RENEWAL.
 - (1) The level of medical fitness to be met for the renewal of a Class 1 medical certificate shall be the same as that for the initial assessment except where otherwise specifically stated.
 - (2) An applicant for a CPL, or an ATPL shall undergo an initial medical examination for the issue of a Class 1 medical certificate.
 - (3) Except where otherwise stated in this subpart, the holder of a CPL, or an ATPL shall have his or her Class 1 medical certificate renewed at intervals not exceeding those specified below.
 - (4) A Class 1 medical certificate will be issued when the applicant complies with the requirements of this part.
- (b) PHYSICAL AND MENTAL REQUIREMENTS.
 - (1) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.
 - (2) The applicant shall have no established medical history or clinical diagnosis of any of the following such as might render

the applicant unable to safely exercise the privileges of the licence applied for or held—

- (i) An organic mental disorder;
 - (ii) A mental or behavioural disorder, due to the use of psychoactive substances, that induces dependence syndrome induced by alcohol or other psychoactive substances;
 - (iii) Schizophrenia or a schizotypal or delusional disorder;
 - (iv) A mood (affective) disorder;
 - (v) A neurotic, stress-related, or somatoform disorder;
 - (vi) A disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;
 - (vii) Mental retardation;
 - (viii) A disorder of psychological development;
 - (ix) A behavioural or emotional disorder, with onset in childhood or adolescence; or
 - (x) A mental disorder not otherwise specified.
- (3) The applicant shall have no established medical history or clinical diagnosis of any of the following—
- (i) A progressive or nonprogressive disease of the nervous system, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges;
 - (ii) Epilepsy; or
 - (iii) Any disturbance of consciousness without satisfactory medical explanation of cause.
- (4) An applicant who has suffered any head injury, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges, shall be assessed as unfit.

- (5) An applicant shall not possess any abnormality of the heart, congenital or acquired, that is likely to interfere with the safe exercise of the applicant's licence and rating privileges. A history of proven myocardial infarction shall be disqualifying.
- (6) An applicant who has undergone coronary bypass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant's cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.
- (7) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with the safe exercise of the applicant's licence or rating privileges.
- (8) Electrocardiography shall form part of the heart examination for the first issue of a medical certificate.
- (9) Electrocardiography shall be included in reexamination of applicants over the age of 50 at least annually.
Note 1: The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.
- (10) The systolic and diastolic blood pressures shall be within normal limits.
- (11) The use of drugs for control of high blood pressure is disqualifying except for those drugs, the use of which, according to accredited medical conclusion, is compatible with the safe exercise of the applicant's licence and rating privileges.
- (12) There shall be no significant functional or structural abnormality of the circulatory system.
- (13) There shall be no acute disability of the lungs or any active disease of the structures of the lungs, mediastinum, or pleura

likely to result in incapacitating symptoms during normal or emergency operations.

- (14) Radiography shall form a part of the initial chest examination.

Note: Periodic chest radiography is usually not necessary but may be a necessity in situations where asymptomatic pulmonary disease can be expected.

- (15) An applicant with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.
- (16) An applicant with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.
- (17) The use of drugs for control of asthma shall be disqualifying except for those drugs the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.
- (18) An applicant with active pulmonary tuberculosis shall be assessed as unfit.
- (19) An applicant with quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit.
- (20) An applicant with significant impairment of the function of the gastrointestinal tract or its adnexa shall be assessed as unfit.
- (21) An applicant shall be completely free from those hernias that might give rise to incapacitating symptoms.
- (22) An applicant with sequela of disease of, or surgical intervention on, any part of the digestive tract or its adnexa, likely to cause incapacity in flight, in particular, any obstructions due to stricture or compression, shall be assessed as unfit.
- (22) An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa, with a total or partial excision or a diversion of any of these organs

shall be assessed as unfit until such time as the medical authority designated for the purpose by Grenada and having access to the details of the operation concerned considers that the effects of the operation are not likely to cause incapacity in flight.

- (23) An applicant with metabolic, nutritional, or endocrine disorders likely to interfere with the safe exercise of the applicant's licence and rating privileges shall be assessed as unfit.
- (24) An applicant with insulin-treated diabetes mellitus shall be assessed as unfit.
- (25) An applicant with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral antidiabetic medication, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.
- (26) An applicant with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and the applicant's condition is found unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

Note: Sickle cell trait or other haemoglobinopathic traits are usually compatible with a fit assessment.

- (27) An applicant with renal or genitourinary disease shall be assessed as unfit unless adequately investigated and the applicant's condition is found unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.
- (28) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.
- (29) An applicant with sequelae of disease or surgical procedures on the kidneys or the genitourinary tract, in particular, any obstructions due to stricture or compression, shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

- (30) An applicant who has undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.
- (31) An applicant who is seropositive for HIV shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

Note 1: Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.

- (32) An applicant who is pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk, uncomplicated pregnancy. The fit assessment period may be limited from the end of the 12th week until the end of the 26th week of gestation.
- (33) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and has been assessed as fit to safely exercise the privileges of her licence and ratings.
- (34) The applicant shall not possess any abnormality of the bones, joints, muscles, tendons, or related structures that is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

Note: Any sequelae after lesions affecting the bones, joints, muscles, or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

- (35) The applicant shall not possess any abnormality or disease of the ear or related structures that is likely to interfere with the safe exercise of the applicant's licence and rating privileges.
- (36) There shall be—
 - (i) No disturbance of vestibular function;
 - (ii) No significant dysfunction of the Eustachian tubes; and

(iii) No unhealed perforation of the tympanic membranes.

- (37) A single dry perforation of the tympanic membrane need not render the applicant unfit.
- (38) There shall be no nasal obstruction and no malformation nor disease of the buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.
- (39) An applicant with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

(c) VISUAL REQUIREMENTS.

- (1) The function of the eyes and their adnexae shall be normal. There shall be no active pathological condition, acute or chronic, or any sequelae of surgery or trauma of the eyes or their adnexae likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's licence and rating privileges.
- (2) Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that—
- (i) Such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and
- (ii) In addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

Note: An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Authority. Both uncorrected and corrected visual acuity are normally measured and recorded at each reexamination. Conditions which indicate a need to

obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity, any decrease in bestcorrected visual acuity, and the occurrence of eye disease, eye injury, or eye surgery.

- (3) An applicant may use contact lenses to meet the requirement of Paragraph 2.4.6.1(c)(2) of this subsection, provided that—
- (i) The lenses are monofocal and non-tinted;
 - (ii) The lenses are well tolerated; and
 - (iii) A pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

Note: Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each reexamination provided the history of their contact lens prescription is known.

- (4) An applicant with a large refractive error shall use contact lenses or high-index spectacle lenses.

Note: If spectacles are used, high-index lenses are needed to minimise peripheral field distortion.

- (5) An applicant whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to the initial medical certificate and every 5 years thereafter.

Note: The purpose of the required ophthalmic examination is 1) to ascertain normal visual performance and 2) to identify any significant pathology.

- (6) An applicant who has undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless the applicant is free from those sequelae which are likely to interfere with the safe exercise of the applicant's licence and rating privileges.
- (7) An applicant shall have the ability to read, while wearing the correcting lenses, if any, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm and the ability to read the N14 chart or its equivalent at a

distance of 100 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correction already prescribed in accordance with this paragraph; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

Note 1: N5 and N14 refer to the size of typeface used.

Note 2: Any applicant who needs near correction to meet this requirement will require “look-over,” bifocal, or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

Note 3: Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

- (8) When near correction is required in accordance with Paragraph 2.6.4.1(c) of this subsection, a second pair of near-correction spectacles shall be kept available for immediate use.
- (9) The applicant shall be required to have normal fields of vision.
- (10) The applicant shall be required to have normal binocular function.
- (11) Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia may not be disqualifying.

(d) HEARING REQUIREMENTS.

- (1) The applicant shall be tested by pure-tone audiometry—
 - (i) At the initial medical examination;
 - (ii) At least once every 5 years up to the age of 40 years; and
 - (iii) At least once every 3 years after the age of 40 years.
- (2) An applicant shall not have a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000, or 2 000 Hz, or more than 50 dB at 3 000 Hz. However, an applicant with a hearing loss greater than the above may be declared fit provided that—
 - (i) The applicant has a hearing performance in each ear separately equivalent to that of a normal person, against a background noise that will simulate the masking properties of flight deck noise upon speech and beacon signals; and
 - (ii) The applicant has the ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 m from the examiner, with the back turned to the examiner.
- (3) Alternatively, a practical hearing test conducted in flight in the flight deck of an aircraft of the type for which the applicant's licence and ratings are valid may be used.

2.6.4.2 CLASS 2

(a) CERTIFICATE ISSUE AND RENEWAL.

- (1) An applicant for a PPL, or an FE licence shall undergo an initial medical examination for the issue of a Class 2 medical certificate.
- (2) Except where otherwise stated in this subpart, holders of a PPL, or an FE licence shall have their Class 2 medical certificate renewed at intervals not exceeding those specified in this subpart.
- (3) A Class 2 medical certificate will be issued when the applicant complies with the requirements of this part.

(b) PHYSICAL AND MENTAL REQUIREMENTS.

- (1) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.
- (2) The applicant shall have no established medical history or clinical diagnosis of any of the following such as might render the applicant unable to safely exercise the privileges of the licence applied for or held—
 - (i) An organic mental disorder;
 - (ii) A mental or behavioural disorder due to the use of psychoactive substances; this includes dependence syndrome induced by alcohol or other psychoactive substances;
 - (iii) Schizophrenia or a schizotypal or delusional disorder;
 - (iv) A mood (affective) disorder;
 - (v) A neurotic, stress-related, or somatoform disorder;
 - (vi) A disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;
 - (vii) Mental retardation;
 - (viii) A disorder of psychological development;
 - (ix) A behavioural or emotional disorder, with onset in childhood or adolescence; or
 - (x) A mental disorder not otherwise specified.
- (3) An applicant with depression, being treated with antidepressant medication, shall be assessed as unfit unless the medical assessor, having access to the details of the case concerned, considers the applicant's condition as unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.
- (4) The applicant shall have no established medical history or clinical diagnosis of any of the following—

- (i) A progressive or nonprogressive disease of the nervous system, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges;
 - (ii) Epilepsy; or
 - (iii) Any disturbance of consciousness without satisfactory medical explanation of cause.
- (5) An applicant who has suffered any head injury, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges, shall be assessed as unfit.
- (6) The applicant shall not possess any abnormality of the heart, congenital or acquired, that is likely to interfere with the safe exercise of the applicant's licence and rating privileges. A history of proven myocardial infarction shall be disqualifying.
- (7) An applicant who has undergone coronary bypass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant's cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.
- (8) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.
- (9) Electrocardiography shall form part of the heart examination for the first issue of a medical certificate—
 - (i) After the age of 40; and
 - (ii) In reexaminations every 2 years after the age of 50.

Note: The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify

disqualification without further thorough cardiovascular investigation.

- (10) The systolic and diastolic blood pressures shall be within normal limits.
- (11) The use of drugs for control of high blood pressure is disqualifying except for those drugs, the use of which, according to accredited medical conclusion, is compatible with the safe exercise of the applicant's licence and rating privileges.
- (12) There shall be no significant functional or structural abnormality of the circulatory system.
- (13) There shall be no acute disability of the lungs or any active disease of the structures of the lungs, mediastinum, or pleura likely to result in incapacitating symptoms during normal or emergency operations.
 - (i) Radiography shall form a part of the initial chest examination.

Note: Periodic chest radiography is usually not necessary but may be a necessity in situations where asymptomatic pulmonary disease can be expected.

- (14) An applicant with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.
- (15) An applicant with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.
- (16) The use of drugs for control of asthma shall be disqualifying except for those drugs the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.
- (17) An applicant with active pulmonary tuberculosis shall be assessed as unfit.

- (18) An applicant with quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit.
- (19) An applicant with significant impairment of the function of the gastrointestinal tract or its adnexae shall be assessed as unfit.
- (20) The applicant shall be completely free from those hernias that might give rise to incapacitating symptoms.
- (21) An applicant with sequelae of disease of or surgical intervention on any part of the digestive tract or its adnexae, likely to cause incapacity in flight, in particular any obstructions due to stricture or compression, shall be assessed as unfit.
- (22) An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexae, with a total or partial excision or a diversion of any of these organs, shall be assessed as unfit until such time as the medical authority designated for the purpose by Grenada and having access to the details of the operation concerned considers that the effects of the operation are not likely to cause incapacity in flight.
- (23) An applicant with metabolic, nutritional, or endocrine disorders that are likely to interfere with the safe exercise of the applicant's licence and rating privileges shall be assessed as unfit.
- (24) An applicant with insulin-treated diabetes mellitus shall be assessed as unfit.
- (25) An applicant with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral antidiabetic medication, the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.
- (26) An applicant with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and the condition is found unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

Note: Sick cell trait or other haemoglobinopathic traits are usually compatible with a fit assessment.

- (27) An applicant with renal or genitourinary disease shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.
- (28) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.
- (29) An applicant with sequelae of disease or surgical procedures on the kidneys or the genitourinary tract, in particular, any obstructions due to stricture or compression, shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.
- (30) An applicant who has undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.
- (31) An applicant who is seropositive for HIV shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

Note 1: Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.

- (32) An applicant who is pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk, uncomplicated pregnancy.
- (33) For an applicant with a low-risk, uncomplicated pregnancy, evaluated and supervised in accordance with Paragraph 2.6.4.2(b)(32) of this subsection, the fit assessment shall be limited to the period from the end of the 12th week until the end of the 26th week of gestation.

(34) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and has been assessed as fit to safely exercise the privileges of her licence and ratings.

(35) The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures that is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

Note: Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

(36) The applicant shall not possess any abnormality or disease of the ear or related structures that is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(37) There shall be—

- (i) No disturbance of vestibular function;
- (ii) No significant dysfunction of the Eustachian tubes; and
- (iii) No unhealed perforation of the tympanic membranes.

(38) A single dry perforation of the tympanic membrane need not render the applicant unfit.

(39) There shall be no nasal obstruction and no malformation nor disease of the buccal cavity or upper respiratory tract that is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

(40) An applicant with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

(c) VISUAL REQUIREMENTS.

(1) The function of the eyes and their adnexae shall be normal. There shall be no active pathological condition, acute or chronic, or any sequelae of surgery or trauma of the eyes or their adnexae likely to reduce proper visual function to an

extent that would interfere with the safe exercise of the applicant's licence and rating privileges.

- (2) Distant visual acuity with or without correction shall be 6/12 or better in each eye separately, and binocular visual acuity shall be 6/9 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that—
 - (i) Such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and
 - (ii) In addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

Note: An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Authority. Both uncorrected and corrected visual acuity are normally measured and recorded at each reexamination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity; any decrease in best corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.

- (3) An applicant may use contact lenses to meet the requirement of Paragraph 2.6.4.2(c)(2) of this subsection provided that—
 - (i) The lenses are monofocal and non-tinted;
 - (ii) The lenses are well tolerated; and
 - (iii) A pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

Note: Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each reexamination provided the history of their contact lens prescription is known.

- (4) An applicant with a large refractive error shall use contact lenses or high-index spectacle lenses.

Note: If spectacles are used, high-index lenses are needed to minimise peripheral field distortion.

- (5) An applicant whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to the initial medical certificate and every 5 years thereafter.

Note: The purpose of the required ophthalmic examination is 1) to ascertain normal visual performance and 2) to identify any significant pathology.

- (6) An applicant who has undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless the applicant is free from those sequelae which are likely to interfere with the safe exercise of the applicant's licence and rating privileges.

- (7) An applicant shall have the ability to read, while wearing the correcting lenses, if any, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correction already prescribed in accordance with this paragraph; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

Note 1: N5 refers to the size of typeface used.

Note 2: Any applicant who needs near correction to meet this requirement will require "look-over," bifocal, or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

Note 3: Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

- (8) When near correction is required in accordance with Paragraph 2.6.4.2(c) of this subsection, a second pair of near-correction spectacles shall be kept available for immediate use.
 - (9) The applicant shall be required to have normal fields of vision.
 - (10) The applicant shall be required to have normal binocular function.
 - (11) Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia may not be disqualifying.
- (d) HEARING REQUIREMENTS.
- (1) The applicant shall be tested by pure-tone audiometry—
 - (i) At the initial medical examination; and
 - (ii) At least once every 2 years after the age of 50 years.
 - (2) When tested by pure-tone audiometry, an applicant with a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000, or 2 000 Hz, or more than 50 dB at 3 000 Hz, shall be assessed as unfit.
 - (3) The applicant shall have the ability to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 m from the examiner, with the back turned to the examiner, or be assessed as unfit.
 - (4) The applicant who holds a PPL with an IR shall meet the hearing requirements for a Class 1 medical certificate.

2.6.4.3 CLASS 3

- (a) CERTIFICATE ISSUE AND RENEWAL.

- (1) An applicant for an ATCO licence shall undergo an initial medical examination for the issue of a Class 3 medical certificate.
 - (2) Except where otherwise stated in this subpart, holders of ATCO licences shall have their Class 3 medical certificate renewed at intervals not exceeding those specified in this subpart.
 - (3) A Class 3 medical certificate will be issued when the applicant complies with the requirements of this part.
- (b) PHYSICAL AND MENTAL REQUIREMENTS.
- (1) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.
 - (2) The applicant shall have no established medical history or clinical diagnosis of any of the following such as might render the applicant unable to safely exercise the privileges of the licence applied for or held—
 - (i) An organic mental disorder;
 - (ii) A mental or behavioural disorder due to the use of psychoactive substances; this includes dependence syndrome induced by alcohol or other psychoactive substances;
 - (iii) Schizophrenia or a schizotypal or delusional disorder;
 - (iv) A mood (affective) disorder;
 - (v) A neurotic, stress-related, or somatoform disorder;
 - (vi) A disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;
 - (vii) Mental retardation;
 - (viii) A disorder of psychological development;

- (ix) A behavioural or emotional disorder, with onset in childhood or adolescence; or
 - (x) A mental disorder not otherwise specified.
- (3) An applicant with depression, being treated with antidepressant medication, shall be assessed as unfit unless the medical assessor, having access to the details of the case concerned, considers the applicant's condition as unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.
- (4) The applicant shall have no established medical history or clinical diagnosis of any of the following—
- (i) A progressive or nonprogressive disease of the nervous system, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges;
 - (ii) Epilepsy; or
 - (iii) Any disturbance of consciousness without satisfactory medical explanation of cause.
- (4) An applicant who has suffered any head injury, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges, shall be assessed as unfit.
- (5) The applicant shall not possess any abnormality of the heart, congenital or acquired, that is likely to interfere with the safe exercise of the applicant's licence and rating privileges. A history of proven myocardial infarction shall be disqualifying.
- (6) An applicant who has undergone coronary bypass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant's cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

- (7) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.
- (8) Electrocardiography shall form part of the heart examination for the first issue of a medical certificate and in reexaminations every 2 years after the age of 50.

Note : The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

- (9) The systolic and diastolic blood pressures shall be within normal limits.
- (10) The use of drugs for control of high blood pressure is disqualifying except for those drugs, the use of which, according to accredited medical conclusion, is compatible with the safe exercise of the applicant's licence and rating privileges.
- (11) There shall be no significant functional or structural abnormality of the circulatory system.
- (12) There shall be no acute disability of the lungs or any active disease of the structures of the lungs, mediastinum, or pleura likely to result in incapacitating symptoms during normal or emergency operations. Radiography shall form a part of the initial chest examination.

Note: Periodic chest radiography is usually not necessary but may be a necessity in situations where asymptomatic pulmonary disease can be expected.

- (13) An applicant with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

- (14) An applicant with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal or emergency operations shall be assessed as unfit.
- (15) The use of drugs for control of asthma shall be disqualifying except for those drugs the use of which is compatible with the safe exercise of the applicant's licence and rating privileges.
- (16) An applicant with active pulmonary tuberculosis shall be assessed as unfit.
- (17) An applicant with quiescent or healed lesions which are known to be tuberculous, or are presumably tuberculous in origin, may be assessed as fit.
- (18) An applicant with significant impairment of the function of the gastrointestinal tract or its adnexae shall be assessed as unfit.
- (19) An applicant with sequelae of disease of or surgical intervention on any part of the digestive tract or its adnexae, likely to cause incapacity in flight, in particular any obstructions due to stricture or compression, shall be assessed as unfit.
- (20) An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexae, with a total or partial excision or a diversion of any of these organs shall be assessed as unfit until such time as the medical authority designated for the purpose by Grenada and having access to the details of the operation concerned considers that the effects of the operation are not likely to cause incapacity in flight.
- (21) An applicant with metabolic, nutritional, or endocrine disorders that are likely to interfere with the safe exercise of the applicant's licence and rating privileges shall be assessed as unfit.
- (22) An applicant with insulin-treated diabetes mellitus shall be assessed as unfit.
- (23) Applicants with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible

with the safe exercise of the applicant's licence and rating privileges.

- (24) An applicant with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.

Note: Sickle cell trait or other haemoglobinopathic traits are usually compatible with a fit assessment.

- (25) An applicant with renal or genitourinary disease shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of the applicant's licence and rating privileges.
- (26) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.
- (27) An applicant with sequelae of disease or surgical procedures on the kidneys or the genitourinary tract, in particular any obstructions due to stricture or compression, shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.
- (28) An applicant who has undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.
- (29) An applicant who is seropositive for HIV shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed as not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

Note : Early diagnosis and active management of HIV disease with antiretroviral therapy reduces morbidity and improves prognosis and thus increases the likelihood of a fit assessment.

- (30) An applicant who is pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk, uncomplicated pregnancy.

- (31) During the gestational period, precautions shall be taken for the timely relief of an ATCO in the event of early onset of labour or other complications.
- (32) For an applicant with a low-risk, uncomplicated pregnancy, evaluated and supervised in accordance with Paragraph 2.6.4.3(b)(31) of this subsection, the fit assessment shall be limited to the period until the end of the 34th week of gestation.
- (33) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and has been assessed as fit to safely exercise the privileges of her licence and ratings.
- (34) An applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant's licence and rating privileges.

Note: Any sequelae after lesions affecting the bones, joints, muscles, or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

- (35) The applicant shall not possess any abnormality or disease of the ear or related structures that is likely to interfere with the safe exercise of the applicant's licence and rating privileges.
- (36) There shall be no malformation or any disease of the nose, buccal cavity, or upper respiratory tract that is likely to interfere with the safe exercise of the applicant's licence and rating privileges.
- (37) An applicant with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

(c) VISUAL REQUIREMENTS.

- (1) The function of the eyes and their adnexae shall be normal. There shall be no active pathological condition, acute or chronic, or any sequelae of surgery or trauma of the eyes or

their adnexae likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant's licence and rating privileges.

- (2) Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that—
 - (i) Such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and
 - (ii) In addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant's licence.

Note: An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Authority. Both uncorrected and corrected visual acuity are normally measured and recorded at each reexamination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity, any decrease in bestcorrected visual acuity, and the occurrence of eye disease, eye injury, or eye surgery.

- (3) An applicant may use contact lenses to meet the requirement of Paragraph 2.6.4.3(c)(2) of this subsection provided that—
 - (i) The lenses are monofocal and non-tinted;
 - (ii) The lenses are well tolerated; and
 - (iii) A pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

Note: Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each reexamination provided the history of their contact lens prescription is known.

- (4) An applicant with a large refractive error shall use contact lenses or high-index spectacle lenses.

Note: If spectacles are used, high-index lenses are needed to minimise peripheral field distortion.

- (5) An applicant whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to the initial medical certificate and every 5 years thereafter.

Note: The purpose of the required ophthalmic examination is 1) to ascertain normal visual performance and 2) to identify any significant pathology.

- (6) An applicant who has undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless the applicant is free from those sequelae which are likely to interfere with the safe exercise of the applicant's licence and rating privileges.

- (7) An applicant shall have the ability to read, while wearing the correcting lenses, if any, required by Paragraph 2.6.4.3(c)(2) of this subsection, the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm and the ability to read the N14 chart or its equivalent at a distance of 100 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correction already prescribed in accordance with this paragraph; if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

Note 1: N5 and N14 refer to the size of typeface used.

Note 2: Any applicant who needs near correction to meet this requirement will require "look-over," bifocal, or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

Note 3: An applicant who needs near correction to meet this requirement will require “look-over,” bifocal, or perhaps multifocal lenses in order to read radar screens, visual displays, and written or printed material, and also to make use of distant vision, through the windows, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) may be acceptable for certain air traffic duties. However, it should be realised that single-vision near correction significantly reduces distant visual acuity.

Note 4: Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for air traffic control duties the applicant is likely to perform.

- (8) When near correction is required in accordance with this Paragraph 2.6.4.3(c) of this subsection, a second pair of near-correction spectacles shall be kept available for immediate use.
 - (9) The applicant shall be required to have normal fields of vision.
 - (10) The applicant shall be required to have normal binocular function.
 - (11) Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment, where the fusional reserves are sufficient to prevent asthenopia and diplopia, need not be disqualifying.
- (d) HEARING REQUIREMENTS.
- (1) The applicant shall be tested by pure-tone audiometry—
 - (i) At the initial medical examination;
 - (ii) At least once every 4 years up to the age of 40 years; and
 - (iii) At least once every 2 years after the age of 40 years.
 - (2) The applicant, when tested on a pure-tone audiometer, shall not have a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000, or 2 000 Hz, or more than 50 dB at 3 000 Hz.

- (3) An applicant with a hearing loss greater than the above may be declared fit provided that the applicant has normal hearing performance against a background noise that reproduces or simulates that experienced in a normal air traffic control working environment.
- (4) Alternatively, a practical hearing test conducted in an air traffic control environment representative of the one for which the applicant's licence and ratings are valid may be used.

PART 2: IMPLEMENTING STANDARDS FOR PERSONNEL LICENSING

For ease of reference, the number assigned to each implementing standard corresponds to its associated regulation. For example, IS: 2.1.2.1 would reflect a standard required in subsection 2.1.2.1.

IS: 2.1.2.1 APPLICATION

- (a) An applicant for a pilot's licence shall submit an application in accordance with the guidelines outlined in the applicable Personnel Licensing Advisory Circular (PLAC).

IS: 2.2.1.5 VALIDITY OF LICENCES, RATINGS AUTHORISATIONS CERTIFICATES AND DESIGNATIONS

- (a) Pilot and Air Traffic Controller licences shall be issued without a specific expiration date.
- (b) Aviation Maintenance Technician licenses and ratings expire 12 calendar months from the date in which it was issued unless suspended, or revoked
- (c) Flight instructor rating expires 24 calendar months from the month in which it is issued and is effective only while the holder has a valid pilot license;
- (d) Category II and III pilot authorisation expires at the end of the sixth calendar month after the month in which it was issued or renewed.

IS: 2.2.2 LANGUAGE PROFICIENCY

- (a) General—

- (1) To meet the language proficiency requirements contained in 2.1.3, an applicant for a licence or a licence holder shall demonstrate, in a manner acceptable to the Authority, compliance with the holistic descriptors in paragraph (b) below and with the Operational Level 4 of the Language Proficiency Rating Scale as mentioned in paragraph (c) below.
- (b) Holistic descriptors—
 - (1) Proficient speakers shall—
 - (i) Communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face situations;
 - (ii) Communicate on common, concrete and work-related topics with accuracy and clarity;
 - (iii) Use appropriate communicative strategies to exchange messages and to recognize and resolve misunderstandings (e.g. to check, confirm, or clarify information) in a general or workrelated context;
 - (iv) Handle successfully and with relative ease the linguistic challenges presented by a complication or unexpected turn of events that occurs within the context of a routine work situation or communicative task with which they are otherwise familiar; and
 - (v) Use a dialect or accent which is intelligible to the aeronautical community.
- (c) Rating scale—
 - (1) Pre-elementary Level 1—
 - (i) Pronunciation: Performs at a level below the Elementary Level;
 - (ii) Structure: Performs at a level below the Elementary Level;
 - (iii) Vocabulary: Performs at a level below the Elementary Level;

- (iv) Fluency: Performs at a level below the Elementary Level;
 - (v) Comprehension: Performs at a level below the Elementary Level;
 - (vi) Interactions: Performs at a level below the Elementary Level;
- (2) Elementary Level 2—
- (i) Pronunciation: Pronunciation, stress, rhythm, and intonation are heavily influenced by the first language or regional variation and usually interfere with ease of understanding;
 - (ii) Structure: Shows only limited control of a few simple memorized grammatical structures and sentence patterns;
 - (iii) Vocabulary: Limited vocabulary range consisting only of isolated words and memorized phrases;
 - (iv) Fluency: Can produce very short, isolated, memorized utterances with frequent pausing and a distracting use of fillers to search for expressions and to articulate less familiar words;
 - (v) Comprehension: Comprehension is limited to isolated, memorized phrases when they are carefully and slowly articulated;
 - (vi) Interactions: Response time is slow and often inappropriate. Interaction is limited to simple routine exchanges;
- (3) Pre-operational Level 3—
- (i) Pronunciation: Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation and frequently interfere with ease of understanding;
 - (ii) Structure: Basic grammatical structures and sentence patterns associated with predictable situations are not

always well controlled. Errors frequently interfere with meaning;

- (iii) Vocabulary: Vocabulary range and accuracy are often sufficient to communicate on common, concrete, or work-related topics, but range is limited and the word choice often inappropriate. Is often unable to paraphrase successfully when lacking vocabulary;
 - (iv) Fluency: Produces stretches of language, but phrasing and pausing are often inappropriate. Hesitations or slowness in language processing may prevent effective communication. Fillers are sometimes distracting;
 - (v) Comprehension: Comprehension is often accurate on common, concrete, and work-related topics when the accent or variety used is sufficiently intelligible for an international community of users. May fail to understand a linguistic or situational complication or an unexpected turn of events;
 - (vi) Interaction: Responses are sometimes immediate, appropriate, and informative. Can initiate and maintain exchanges with reasonable ease on familiar topics and in predictable situations. Generally inadequate when dealing with an unexpected turn of events;
- (4) Operational Level 4—
- (i) Pronunciation: Pronunciation, stress, rhythm and intonation are influenced by the first language or regional variation but only sometimes interfere with understanding;
 - (ii) Structure: Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning;
 - (iii) Vocabulary: Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete, and work related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances;

- (iv) Fluency: Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting;
 - (v) Comprehension: Comprehension is mostly accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies;
 - (vi) Interactions: Responses are usually immediate, appropriate and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming or clarifying;
- (5) Extended Level 5—
- (i) Pronunciation: Pronunciation, stress, rhythm, and intonation, though influenced by the first language or regional variation, rarely interfere with ease of understanding;
 - (ii) Structure: Basic grammatical structures and sentence patterns are consistently well controlled. Complex structures are attempted but with errors which sometimes interfere with meaning;
 - (iii) Vocabulary: Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete, and work related topics. Paraphrases consistently and successfully. Vocabulary is sometimes idiomatic;
 - (iv) Fluency: Able to speak at length with relative ease on familiar topics, but may not vary speech flow as a

stylistic device. Can make use of appropriate discourse markers or connectors;

- (v) Comprehension: Comprehension is accurate on common, concrete, and work related topics and mostly accurate when the speaker is confronted with a linguistic or situational complication or an unexpected turn of events. Is able to comprehend a range of speech varieties (dialect and/or accent) or registers;
 - (vi) Interactions: Responses are immediate, appropriate, and informative. Manages the speaker/listener relationship effectively;
- (6) Expert Level 6—
- (i) Pronunciation: Pronunciation, stress, rhythm, and intonation, thought possibly influenced by the first language or regional variation, almost never interfere with ease of understanding;
 - (ii) Structure: Both basic and complex grammatical structures and sentence patterns are consistently well controlled;
 - (iii) Vocabulary: Vocabulary range and accuracy are sufficient to communicate effectively on a wide variety of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced, and sensitive to register;
 - (iv) Fluency: Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, e.g. to emphasize a point. Uses appropriate discourse markers and connectors spontaneously;
 - (v) Comprehension: Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties;
 - (vi) Interactions: Interacts with ease in nearly all situations. Is sensitive to verbal and non-verbal cues, and responds to them appropriately;

**IS: 2.2.3 GENERAL REQUIREMENTS: LICENCES, RATINGS,
AUTHORISATIONS AND CERTIFICATES**

- (a) An applicant shall receive training in the following subjects to satisfy the requirements of 2.2.3—
 - (i) High-altitude aerodynamics and meteorology.
 - (ii) Respiration.
 - (iii) Effects, symptoms, and causes of hypoxia and any other high-altitude sickness.
 - (iv) Duration of consciousness without supplemental oxygen.
 - (v) Effects of prolonged usage of supplemental oxygen.
 - (vi) Causes and effects of gas expansion and gas bubble formation.
 - (vii) Preventive measures for eliminating gas expansion, gas bubble formation, and high-altitude sickness.
 - (viii) Physical phenomena and incidents of decompression.
 - (ix) Any other physiological aspects of high-altitude flight.
- (b) The training and endorsement required by 2.2.3 is not required if the pilot or pilot applicant can document satisfactory accomplishment of any of the following in a pressurised aircraft, or in an approved flight simulator or approved flight training device that is representative of a pressurised aircraft—
 - (i) Serving as pilot;
 - (ii) Completing a skill test for a pilot license or rating;
 - (iii) Completing an official pilot check conducted by the military services of Grenada; or
 - (iv) Completing a PIC proficiency check under Part 9 conducted by the Authority or by an approved check airman.

IS: 2.2.5.5 PREREQUISITES FOR SKILL TESTS

- (a) Except as provided in paragraph (b), to be eligible for a skill test for a license or rating issued under Part 2, an applicant shall—

- (1) Pass the required knowledge test within the 12-calendar-month period preceding the month the applicant completes the skill test, if a knowledge test is required;
 - (2) Present the knowledge test report at the time of application for the skill test, if a knowledge test is required;
 - (3) Have satisfactorily accomplished the required training and obtained the aeronautical experience prescribed by Part 2 for the license or rating sought;
 - (4) Meet the prescribed age requirement of this Subpart for the issuance of the license or rating sought; and
 - (5) Have an endorsement in his or her logbook or training record that has been signed by an authorised instructor who certifies that the applicant—
 - (i) Has received and logged training time within 60 days preceding the date of application in preparation for the skill test;
 - (ii) Is prepared for the required skill test; and
 - (iii) Has demonstrated satisfactory knowledge of the subject areas in which the applicant was deficient on the airman knowledge test.
- (b) An applicant for a commercial or an airline transport pilot license or an additional rating to a commercial or an airline transport license may take the skill test for that license or rating with an expired knowledge test report, provided that the applicant—
- (1) Is employed as a flight crewmember by a certificate holder under Part 9 at the time of the skill test and has satisfactorily accomplished that operator's approved—
 - (i) Pilot aircraft qualification training program that is appropriate to the license and rating sought; and
 - (ii) Qualification training requirements appropriate to the license and rating sought.

IS: 2.2.5.7 SKILL TESTS: REQUIRED AIRCRAFT, AND EQUIPMENT

- (a) General. Except as provided in paragraph (a)(2), or when permitted to accomplish the entire flight increment of the skill test in an approved flight simulator or an approved flight training device, an applicant for a license or rating issued under Part 2 shall furnish and aircraft with the necessary equipment and controls
- (b) Required equipment (other than controls). Each applicant for a skill test shall use an aircraft that has—
 - (1) The equipment for each area of operation required for the skill test;
 - (2) No prescribed operating limitations that prohibit its use in any of the areas of operation required for the skill test;
 - (3) Except as provided in paragraph (e), at least two pilot stations with adequate visibility for each person to operate the aircraft safely; and
 - (4) Cockpit and outside visibility adequate to evaluate the performance of the applicant when an additional jump seat is provided for the examiner.
- (c) Required controls. Each applicant for a skill test shall use an aircraft (other than a lighter-than-air aircraft) that has engine power controls and flight controls that are easily reached and operable in a conventional manner by both pilots, unless the examiner determines that the skill test can be conducted safely in the aircraft without the controls being easily reached.
- (d) Simulated instrument flight equipment. An applicant for a skill test that involves manoeuvring an aircraft solely by reference to instruments shall furnish—
 - (1) Equipment on board the aircraft that permits the applicant to pass the areas of operation that apply to the rating sought; and
 - (2) A device that prevents the applicant from having visual reference outside the aircraft, but does not prevent the examiner from having visual reference outside the aircraft, and is otherwise acceptable to the Authority.

- (e) Aircraft with single controls. An applicant may complete a skill test in an aircraft having a single set of controls, provided the—
 - (1) Examiner agrees to conduct the test;
 - (2) Test does not involve a demonstration of instrument skills; and
 - (3) Proficiency of the applicant can be observed by an examiner who is in a position to observe the applicant.

IS: 2.2.5.9 RECORDS OF TRAINING TIME

- (a) For the purposes of meeting the requirements of 2.2.5.9, each person shall enter the following information for each flight or lesson logged—
 - (1) General—
 - (i) Date.
 - (ii) Total flight time.
 - (iii) Location where the aircraft departed and arrived, or for lessons in an approved flight simulator or an approved flight training device, the location where the lesson occurred.
 - (iv) Type and identification of aircraft, approved flight simulator, or approved flight training device, as appropriate.
 - (v) The name of a safety pilot, if required by Part 8.
 - (2) Type of pilot experience or training—
 - (i) Solo.
 - (ii) Pilot,
 - (iii) Co-pilot.
 - (iv) Flight and ground training received from an authorised instructor.

- (v) Training received in an approved flight simulator or approved flight training device from an authorised instructor.
- (3) Conditions of flight—
 - (i) Day or night.
 - (ii) Actual instrument.
 - (iii) Simulated instrument conditions in flight, an approved flight simulator, or an approved flight training device.
- (b) Logging of pilot time. The pilot time described in this subsection may be used to—
 - (1) Apply for a license or rating issued under Part 2; or
 - (2) Satisfy the recent flight experience requirements of Part 8.
- (c) Logging of solo flight time. Except for a student pilot acting as pilot of an airship requiring more than one flight crewmember, a pilot may log as solo flight time only that flight time when the pilot is the sole occupant of the aircraft.
- (d) Logging pilot flight time.
 - (1) A private or commercial pilot may log pilot time only for that flight time during which that person is—
 - (i) The sole manipulator of the controls of an aircraft for which the pilot is rated;
 - (ii) Acting as PIC of an aircraft on which more than one pilot is required under the type certification of the aircraft or the regulations under which the flight is conducted; or
 - (iii) A sole occupant.
 - (2) An airline transport pilot may log as pilot time all of the flight time while acting as pilot of an operation requiring an airline transport pilot license.
 - (3) An authorised instructor may log as pilot time all flight time while acting as an authorised instructor.

- (4) A student pilot may log pilot time when the student pilot—
 - (i) Is the sole occupant of the aircraft or is performing functions of the PIC of an airship requiring more than one flight crewmember;
 - (ii) Has a current solo flight endorsement as required under 2.2.2.4; or (iii) Is undergoing training for a pilot license or rating.
- (e) Logging co-pilot flight time. A person may log co-pilot flight time only for that flight time during which that person—
 - (1) Is qualified in accordance with the co-pilot requirements of 8.10.1.5, and occupies a crewmember station in an aircraft that requires more than one pilot by the aircraft's type certificate; or
 - (2) Holds the appropriate category, class, and instrument rating (if an instrument rating is required for the flight) for the aircraft being flown, and more than one pilot is required under the type certification of the aircraft or the regulations under which the flight is being conducted.

Note 1: The holder of a pilot licence, when acting as copilot of an aircraft required to be operated with a copilot, shall be entitled to be credited with not more than 50 per cent of the co-pilot flight time towards the total flight time required for a higher grade of pilot licence.

Note 2: The holder of a pilot licence, when acting as co-pilot performing under the supervision of the pilot-in command the functions and duties of a pilot-in-command, shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot licence.

- (f) Logging instrument flight time.
 - (1) A person may log instrument flight time only for that flight time when the person operates the aircraft solely by reference to instruments under actual or simulated instrument flight conditions.

- (2) An authorised instructor may log instrument flight time when conducting instrument flight instruction in actual instrument flight conditions.
 - (3) For the purposes of logging instrument flight time to meet the recent instrument experience requirements of 8.4.1.10, the following information shall be recorded in a person's logbook—
 - (i) The location and type of each instrument approach accomplished; and
 - (ii) The name of the safety pilot, if required.
 - (4) An approved flight simulator or approved flight training device may be used by a person to log instrument flight time, provided an authorised instructor is present during the simulated flight.
- (g) Logging training time.
- (1) A person may log training time when that person receives training from an authorised instructor in an aircraft, approved flight simulator, or approved flight training device.
 - (2) The training time shall be logged in a logbook and shall—
 - (i) Be endorsed in a legible manner by the authorised instructor; and
 - (ii) Include a description of the training given, the length of the training lesson, and the instructor's signature, license number, and license expiration date.

IS: 2.2.5.12 USE OF AN APPROVED FLIGHT SIMULATOR OR AN APPROVED FLIGHT TRAINING DEVICE FOR A PILOT LICENSE OR RATING

- (a) In an aeroplane. If an approved flight simulator or approved flight training device is used for accomplishing any of the training and the required skill test for a pilot license with an aeroplane category, class, and type rating, if applicable, the applicant, approved flight simulator, and approved flight training device are subject to the following requirements—
 - (1) Some or all of the limitations of paragraph (a)(2) through (a)(11) of this subsection may apply.

- (2) The flight simulator or flight training device permitted by paragraph (a)(1) of this subsection shall be conducted in accordance with an approved course at an ATO certified under Part 3.
- (3) To complete all training and testing (except preflight inspection) for an additional aeroplane rating without limitations when using a flight simulator—
 - (i) The flight simulator must be approved as Level C or Level D; and
 - (ii) The applicant must meet at least one of the following—
 - (A) Hold a type rating for a turbojet or turbofan aeroplane of the same class of aeroplane for which the type rating is sought;
 - (B) Hold a type rating for a turbopropeller aeroplane of the same class of aeroplane for which the type rating is sought;
 - (C) Have at least 2,000 hours of flight time, of which 500 hours is in turbine-powered aeroplanes of the same class of aeroplane for which the type rating is sought;
 - (D) Have at least 500 hours of flight time in the same type aeroplane as the aeroplane for which the rating is sought;
 - (E) Have at least 1,000 hours of flight time in at least two different aeroplanes requiring a type rating.
- (4) Subject to the limitation of paragraph (a)(5) of this subsection, an applicant who does not meet the requirements of paragraph (a)(3) of this subsection may complete all training and testing (except for preflight inspection) for a pilot license or rating when using a flight simulator if—
 - (i) The flight simulator is approved as a Level C or Level D; and
 - (ii) The applicant meets at least one of the following—

- (A) Holds a type rating in a propeller-driven aeroplane if a type rating in a turbojet or turbofan aeroplane is sought, or holds a type rating in a turbojet or turbofan aeroplane if a type rating in a propeller-driven aeroplane is sought; or
 - (B) Since the beginning of the 12th calendar month before the month in which the applicant completes the skill test for an additional aeroplane rating, has logged—
 - (I) At least 100 hours of flight time in aeroplanes of the same class for which the type rating is sought and which requires a type rating; and
 - (II) At least 25 hours of flight time in aeroplanes of the same type for which the rating is sought.
- (5) An applicant meeting only the requirements of paragraph (a)(4) of this subsection will be issued a rating with a limitation.
- (6) The limitation on a license issued under the provisions of paragraph (a)(5) of this subsection shall state, "This license is subject to pilot or co-pilot limitations for the additional rating."
- (7) An applicant who has been issued a pilot license with the limitation specified in paragraph (a)(6) of this subsection—
 - (i) May not act as pilot or co-pilot of that aeroplane for which the rating was obtained under the provisions of this subsection until the limitation is removed from the pilot certificate; and
 - (ii) May have the limitation removed by accomplishing 15 hours of supervised operating experience as pilot or co-pilot under the supervision of a qualified and current pilot, in the seat normally occupied by the pilot or co-pilot, in the same type of aeroplane to which the limitation applies.
- (8) An applicant who does not meet the requirements of paragraph (a)(3) or paragraph (a)(4) of this subsection may be

issued a rating after successful completion of one of the following requirements—

- (i) Compliance with paragraph (a)(2) of this subsection and the following tasks, which shall be successfully completed on a static aeroplane or in flight, as appropriate—
 - (A) Preflight inspection;
 - (B) Normal takeoff;
 - (C) Normal ILS approach;
 - (D) Missed approach; and
 - (E) Normal landing.
 - (ii) Compliance with paragraphs (a)(9) through (a)(11) of this subsection.
- (9) An applicant not meeting the requirements of paragraph (a)(3), (a)(4), or (a)(8)(i) of this subsection will be issued a license or rating with a limitation.
- (10) The limitation on a license issued under the provisions of paragraph (a)(9) of this subsection shall state, "This license is subject to PIC or co-pilot limitations for the additional rating."
- (11) An applicant who has been issued a pilot license with the limitation specified in paragraph (a)(10) of this subsection—
- (i) May not act as PIC or co-pilot of that aeroplane for which the rating was obtained under the provisions of this subsection until the limitation is removed from the pilot certificate; and
 - (ii) May have the limitation removed by accomplishing 25 hours of supervised operating experience as PIC or co-pilot under the supervision of a qualified and current pilot, in the seat normally occupied by the PIC or co-pilot, in that aeroplane of the same type to which the limitation applies.

- (b) In a helicopter. If an approved flight simulator or approved flight training device is used for accomplishing any of the training and the required skill test for a pilot license with a rotorcraft-helicopter class and type rating, if applicable, the applicant, approved flight simulator, and approved flight training device are subject to the following requirements—
- (1) Some or all of the limitations of paragraph (b)(2) through (b)(11) of this subsection may apply.
 - (2) The use of an approved flight simulator or an approved flight training device permitted by this subsection shall be conducted in accordance with an approved course at an ATO certified under Part 3.
 - (3) The applicant must meet at least one of the following if a type rating is sought in a turbine-powered helicopter—
 - (i) Hold a type rating in a turbine-powered helicopter.
 - (ii) Have at least 2,000 hours of flight time that includes at least 500 hours in turbine-powered helicopters.
 - (iii) Have at least 500 hours of flight time in turbine-powered helicopters.
 - (iv) Have at least 1,000 hours of flight time in at least two different turbine-powered helicopters.
 - (4) Subject to the limitation of paragraph (b)(5) of this subsection, an applicant who does not meet the requirements of paragraph (b)(3) of this subsection may complete all training and testing (except for preflight inspection) for a pilot license or rating when using a flight simulator if—
 - (i) The flight simulator is approved as Level C or Level D; and
 - (ii) The applicant meets at least one of the following—
 - (A) Holds a type rating in a turbine-powered helicopter if a type rating in a turbine-powered helicopter is sought; or

- (B) Since the beginning of the 12th calendar month before the month in which the applicant completes the skill test for an additional helicopter rating, has logged at least 25 hours of flight time in helicopters of the same type for which the rating is sought.
- (5) An applicant meeting only the requirements of paragraph (b)(4) of this subsection will be issued a rating with a limitation.
- (6) The limitation on a license issued under the provisions of paragraph (b)(5) of this subsection shall state, "This license is subject to PIC or co-pilot limitations for the additional rating."
- (7) An applicant who is issued a pilot license with the limitation specified in paragraph (b)(6) of this subsection—
 - (i) May not act as PIC or co-pilot of that helicopter for which the rating was obtained under the provisions of this subsection until the limitation is removed from the pilot certificate; and
 - (ii) May have the limitation removed by accomplishing 15 hours of supervised operating experience as PIC or co-pilot under the supervision of a qualified and current pilot, in the seat normally occupied by the pilot or co-pilot, in the same type of helicopter to which the limitation applies.
- (8) An applicant who does not meet the requirements of paragraph (b)(3) or paragraph (b)(4) of this subsection may be issued a rating after successful completion of one of the following requirements—
 - (i) Compliance with paragraphs (b)(1) and (b)(2) of this subsection and the following tasks, which must be successfully completed on a static helicopter or in flight, as appropriate—
 - (A) Preflight inspection;
 - (B) Normal takeoff;
 - (C) Normal ILS approach;

- (D) Missed approach; and
- (E) Normal landing.
- (ii) Compliance with paragraphs (b)(1), (b)(2), and (b)(9) through (b)(11) of this subsection.
- (9) An applicant not meeting the requirements of paragraph (b)(3), (b)(4), or (b)(8)(i) of this subsection will be issued a rating with a limitation.
- (10) The limitation on a license issued under the provisions of paragraph (b)(9) of this subsection shall state, "This license is subject to PIC or co-pilot limitations for the additional rating."
- (11) An applicant who has been issued a pilot license with the limitation specified in paragraph (b)(10) of this subsection—
 - (i) May not act as PIC or co-pilot of that helicopter for which the rating was obtained under the provisions of this subsection until the limitation is removed from the pilot certificate; and
 - (ii) May have the limitation removed by accomplishing 25 hours of supervised operating experience as PIC or co-pilot under the supervision of a qualified and current pilot, in the seat normally occupied by the PIC or co-pilot, in that helicopter of the same type as to which the limitation applies.

IS: 2.2.8 SPECIFICATIONS AND FORMAT OF THE LICENCE

- (a) The following details shall appear on the licence and the numbering scheme shall be in Roman numerals—
 - (I). Name of Grenada (in bold type);
 - (II). Title of licence (in very bold type);
 - (III). Serial number of the licence, in Arabic numerals, given by the authority issuing the licence;
 - (IV). Name of licence holder in full (in Roman alphabet also if script of national language is other than Roman);

- (IVa) Date of birth;
 - (V). Address of licence holder;
 - (VI). Nationality of licence holder;
 - (VII). Signature of licence holder;
 - (VIII). Authority and, where necessary, conditions under which the licence is issued;
 - (IX). Certification concerning validity and authorisation for holder to exercise privileges appropriate to the licence;
 - (X). Signature of the officer issuing the licence and the date of such issue;
 - (XI). Seal or stamp of the authority issuing the licence;
 - (XII). Ratings (e.g., category, class, type of aircraft, airframe, aerodrome control);
 - (XIII). Remarks (i.e., special endorsements relating to limitations, endorsements for privileges, including an endorsement of language proficiency, and other information required in pursuance to Article 39 of the Chicago Convention); and
 - (XIV). Any other details desired by the authority issuing the licence.
- (b) The privileges and ratings shall be clearly identified on the licence in items (IX) and (XII).

Note: Item (VI), Nationality, is presumed to be citizenship of the licence holder.

IS: 2.3.2.5 ADDITIONAL REQUIREMENTS FOR CATEGORY II AND CATEGORY III PILOT AUTHORISATIONS FOR PRIVATE OPERATORS

- (a) The Authority shall issue a Category II or Category III pilot authorisation by letter, as a part of an applicant's instrument rating or airline transport pilot certificate.
- (b) Upon original issue the authorisation will contain the following limitations—

- (1) For Category II operations, 1,600 feet RVR and a 150-foot decision height; and
 - (2) For Category III operations, as specified in the authorisation document.
- (c) To remove the limitations on a Category II or Category III pilot authorisation—
 - (1) A Category II limitation holder may remove the limitation by showing that, since the beginning of the sixth preceding month, the holder has made three Category II ILS approaches with a 150-foot decision height to a landing under actual or simulated instrument conditions; or
 - (2) A Category III limitation holder may remove the limitation by showing experience as specified in the authorisation.
- (d) An authorisation holder or an applicant for an authorisation may use a flight simulator or flight training device if it is approved by the Authority for such use, to meet the experience requirement of paragraph (e) of this subsection, or for the skill test required by Part 2 for a Category II or a Category III pilot authorisation, as applicable.
- (e) Category II: skill test requirements.
 - (1) An applicant for the following authorisations shall pass a skill test—
 - (i) Issuance or renewal of a Category II pilot authorisation.
 - (ii) The addition of another type aircraft to a Category II pilot authorisation.
 - (2) To be eligible for the skill test for an authorisation under this subsection, an applicant shall—
 - (i) Meet the requirements of 2.3.2.5; and
 - (ii) If the applicant has not passed a skill test for this authorisation during the 12 calendar months preceding the month of the test—
 - (A) Meet the requirements of 8.4.1.10; and

- (B) Have performed at least six ILS approaches during the 6 calendar months preceding the month of the test, of which at least three of the approaches shall have been conducted without the use of an approach coupler.
- (3) An applicant shall accomplish the approaches specified in paragraph (e)(2)(ii)(B) of this subsection—
 - (i) Under actual or simulated instrument flight conditions;
 - (ii) To the minimum decision height for the ILS approach in the type aircraft in which the skill test is to be conducted, except that the approaches need not be conducted to the decision height authorised for Category II operations;
 - (iii) To the decision height authorised for Category II operations only if conducted in an approved flight simulator or an approved flight training device; and
 - (iv) In an aircraft of the same category and class, and type, as applicable, as the aircraft in which the skill test is to be conducted or in an approved flight simulator that—
 - (A) Represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorisation is sought; and
 - (B) Is used in accordance with an approved course conducted by an ATO certified under part 3.
- (4) The flight time acquired in meeting the requirements of paragraph (e)(2)(ii)(B) of this subsection may be used to meet the requirements of paragraph (e)(2)(ii)(A) of this subsection.
- (f) Category II: skill test procedures. The skill test consists of an oral increment and a flight increment.
 - (1) Oral increment. In the oral increment of the skill test, an applicant shall demonstrate knowledge of the following—
 - (i) Required landing distance;

- (ii) Recognition of the decision height;
 - (iii) Missed approach procedures and techniques using computed or fixed attitude guidance displays;
 - (iv) Use and limitations of RVR;
 - (v) Use of visual clues, their availability or limitations, and altitude at which they are normally discernible at reduced RVR readings;
 - (vi) Procedures and techniques related to transition from nonvisual to visual flight during a final approach under reduced RVR;
 - (vii) Effects of vertical and horizontal windshear;
 - (viii) Characteristics and limitations of the ILS and runway lighting system;
 - (ix) Characteristics and limitations of the flight director system, auto approach coupler (including split axis type if equipped), auto throttle system (if equipped), and other required Category II equipment;
 - (x) Assigned duties of the SIC during Category II approaches, unless the aircraft for which authorisation is sought does not require an SIC; and
 - (xi) Instrument and equipment failure warning systems.
- (2) Flight increment. The following requirements apply to the flight increment of the skill test—
- (i) The flight increment shall be conducted in an aircraft of the same category, class, and type, as applicable, as the aircraft in which the authorisation is sought or in an approved flight simulator that—
 - (A) Represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorisation is sought; and
 - (B) Is used in accordance with an approved course conducted by an ATO certified under Part 3.

- (ii) The flight increment shall consist of at least two ILS approaches to 100 feet AGL including at least one landing and one missed approach.
 - (iii) All approaches performed during the flight increment shall be made with the use of an approved flight control guidance system, except if an approved auto approach coupler is installed, at least one approach shall be hand flown using flight director commands.
 - (iv) If a multiengine aeroplane with the performance capability to execute a missed approach with one engine inoperative is used for the skill test, the flight increment shall include the performance of one missed approach with an engine, which shall be the most critical engine, if applicable, set at idle or zero thrust before reaching the middle marker.
 - (v) If an approved multiengine flight simulator or approved multiengine flight training device is used for the skill test, the applicant shall execute a missed approach with the most critical engine, if applicable, failed.
 - (vi) For an authorisation for an aircraft that requires a type rating, the applicant shall pass a skill test in co-ordination with a SIC who holds a type rating in the aircraft in which the authorisation is sought.
 - (vii) An inspector or evaluator may conduct oral questioning at any time during a skill test.
- (h) Category III: skill test requirements.
- (1) The Authority shall require that an applicant pass a skill test for—
 - (i) Issuance or renewal of a Category III pilot authorisation.
 - (ii) The addition of another type of aircraft to a Category III pilot authorisation.
 - (2) To be eligible for the skill test an applicant shall—
 - (i) Meet the requirements of 2.3.2.5; and

- (ii) If the applicant has not passed a skill test for this authorisation during the 12 calendar months preceding the month of the test—
 - (A) Meet the requirements of 8.4.1.10 and 8.10.1.20, 8.10.1.32.; and
 - (B) Have performed at least six ILS approaches during the 6 calendar months preceding the month of the test, of which at least three of the approaches shall have been conducted without the use of an approach coupler.
- (3) An applicant shall conduct the approaches specified in paragraph (2)(ii)(B) of this subsection—
 - (i) Under actual or simulated instrument flight conditions;
 - (ii) To the alert height or decision height for the ILS approach in the type aircraft in which the skill test is to be conducted;
 - (iii) Not necessarily to the decision height authorised for Category III operations;
 - (iv) To the alert height or decision height, as applicable, authorised for Category III operations only if conducted in an approved flight simulator or approved flight training; and
 - (v) In an aircraft of the same category and class, and type, as applicable, as the aircraft in which the skill test is to be conducted or in an approved flight simulator that—
 - (A) Represents an aircraft of the same category and class, and type, as applicable, as the aircraft for which the authorisation is sought; and
 - (B) Is used in accordance with an approved course conducted by an ATO certified under Part 3.
- (4) Knowledge requirements: An applicant shall demonstrate knowledge of the following—
 - (i) Required landing distance.

- (ii) Determination and recognition of the alert height or decision height, as applicable, including use of a radar altimeter.
- (iii) Recognition of and proper reaction to significant failures encountered prior to and after reaching the alert height or decision height, as applicable.
- (iv) Missed approach procedures and techniques using computed or fixed attitude guidance displays and expected height loss as they relate to manual go-around or automatic go-around, and initiation altitude, as applicable.
- (v) Use and limitations of RVR, including determination of controlling RVR and required transmissometers.
- (vi) Use, availability, or limitations of visual cues and the altitude at which they are normally discernible at reduced RVR readings including—
 - (A) Unexpected deterioration of conditions to less than minimum RVR during approach, flare, and rollout;
 - (B) Demonstration of expected visual references with weather at minimum conditions;
 - (C) The expected sequence of visual cues during an approach in which visibility is at or above landing minima; and
 - (D) Procedures and techniques for making a transition from instrument reference flight to visual flight during a final approach under reduced RVR.
- (vii) Effects of vertical and horizontal windshear.
- (viii) Characteristics and limitations of the ILS and runway lighting system.
- (ix) Characteristics and limitations of the flight director system auto approach coupler (including split axis type

if equipped), auto throttle system (if equipped), and other Category III equipment.

- (x) Assigned duties of the SIC during Category III operations, unless the aircraft for which authorisation is sought does not require a SIC.
 - (xi) Recognition of the limits of acceptable aircraft position and flight path tracking during approach, flare, and, if applicable, rollout.
 - (xii) Recognition of, and reaction to, airborne or ground system faults or abnormalities, particularly after passing alert height or decision height, as applicable.
- (5) Flight skill requirements—
- (i) An applicant may conduct the skill test in an aircraft of the same category and class, and type, as applicable, as the aircraft for which the authorisation is sought, or in an approved flight simulator that—
 - (A) Represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorisation is sought; and
 - (B) Is used in accordance with an approved course conducted by an ATO certified under Part 3.
 - (ii) The skill test shall consist of at least two ILS approaches to 100 feet AGL, including one landing and one missed approach initiated from a very low altitude that may result in a touchdown during the go-around manoeuvre;
 - (iii) The applicant shall perform all approaches during the skill test with the approved automatic landing system or an equivalent landing system approved by the Authority;
 - (iv) If a multiengine aircraft with the performance capability to execute a missed approach with one engine inoperative is used for the skill test, the skill test shall include the performance of one missed approach with the most critical engine, if applicable, set at idle or zero thrust before reaching the middle or outer marker;

- (v) If an approved multiengine flight simulator or approved multiengine flight training device is used, the applicant shall execute a missed approach with an engine, which shall be the most critical engine, if applicable, failed;
 - (vi) For an authorisation for an aircraft that requires a type rating, the applicant shall pass a skill test in co-ordination with a SIC who holds a type rating in the aircraft in which the authorisation is sought; and
 - (vii) Subject to the limitations of this paragraph, for Category IIIb operations predicated on the use of a fail-passive rollout control system, the applicant shall execute at least one manual rollout using visual reference or a combination of visual and instrument references. The applicant shall initiate this manoeuvre by a fail-passive disconnect of the rollout control system—
 - (A) After main gear touchdown;
 - (B) Prior to nose gear touchdown;
 - (C) In conditions representative of the most adverse lateral touchdown displacement allowing a safe landing on the runway; and
 - (D) In weather conditions anticipated in Category IIIb operations
- (6) An inspector or evaluator may conduct oral questioning at any time during the skill test.

IS: 2.3.3.4 MANOEUVRES AND PROCEDURES FOR PRE-SOLO FLIGHT TRAINING

- (a) A student pilot who is receiving training for solo flight shall receive and log flight training for the following manoeuvres and procedures, as applicable, for each category, class and type rating—
 - (1) Proper flight preparation procedures, including preflight planning and preparation, powerplant operation, and aircraft systems.
 - (2) Taxiing or surface operations, including runups.

- (3) Takeoffs and landings, including normal and crosswind.
 - (4) Straight and level flight, and turns in both directions.
 - (5) Climbs and climbing turns.
 - (6) Airport traffic patterns, including entry and departure procedures.
 - (7) Collision avoidance, windshear avoidance, and wake turbulence avoidance.
 - (8) Descents, with and without turns, using high and low drag configurations.
 - (9) Flight at various airspeeds from cruise to slow flight.
 - (10) Stall entries from various flight attitudes and power combinations with recovery initiated at the first indication of a stall, and recovery from a full stall.
 - (11) Emergency procedures and equipment malfunctions.
 - (12) Ground reference manoeuvres.
 - (13) Approaches to a landing area with simulated engine malfunctions.
 - (14) Slips to a landing.
 - (15) Go-arounds.
- (b) A student pilot shall who is receiving training for solo flight shall receive and log flight training for the following additional manoeuvres and procedures, as applicable, as indicated for each category and class rating—
- (1) In a helicopter—
 - (a) Approaches to the landing area;
 - (b) Hovering and hovering turns;

- (c) Simulated emergency procedures, including autorotational descents with a power recovery and power recovery to a hover;
- (d) Rapid decelerations; and
- (e) Simulated one-engine-inoperative approaches and landings for multiengine helicopters.

IS: 2.3.3.6 MANOEUVRES AND PROCEDURES FOR CROSS-COUNTRY FLIGHT TRAINING

- (a) A student pilot who is receiving training for cross-country flight shall receive and log flight training in the following manoeuvres and procedures—
 - (1) In an aeroplane or rotorcraft—
 - (i) Use of aeronautical charts for VFR navigation using pilotage and dead reckoning with the aid of a magnetic compass;
 - (ii) Use of aircraft performance charts pertaining to cross-country flight;
 - (iii) Procurement and analysis of aeronautical weather reports and forecasts, including recognition of critical weather situations and estimating visibility while in flight;
 - (iv) Recognition, avoidance, and operational restrictions of hazardous terrain features in the geographical area where the student pilot will conduct cross-country flight;
 - (v) Use of radios for VFR navigation and two-way communications;
 - (vi) Climbs at best angle and best rate; and
 - (vii) Control and manoeuvring solely by reference to flight instruments, including straight and level flight, turns, descents, climbs, use of radio aids, and ATC directives.

IS: 2.3.4.3 PRIVATE PILOT AERONAUTICAL KNOWLEDGE AREAS

- (a) General. An applicant for a private pilot license shall log ground training on the aeronautical knowledge areas of paragraph (b) of this subsection that apply to the aircraft category and class rating sought.
- (b) Aeronautical knowledge areas—
 - (1) Applicable regulations of this Subpart that relate to private pilot privileges, limitations, and flight operations.
 - (2) Accident reporting requirements of the Authority.
 - (3) Use of the applicable portions of advisory material published by the Authority.
 - (4) Use of aeronautical charts for VFR navigation using pilotage, dead reckoning, and navigation systems.
 - (5) Radio communication procedures.
 - (6) Recognition of critical weather situations from the ground and in flight, windshear avoidance, and the procurement and use of aeronautical weather reports and forecasts.
 - (7) Safe and efficient operation of aircraft, including collision avoidance, and recognition and avoidance of wake turbulence.
 - (8) Effects of density altitude on takeoff and climb performance.
 - (9) Weight and balance computations.
 - (10) Principles of aerodynamics, powerplants, and aircraft systems.
 - (11) Stall awareness, spin entry, spins, and spin recovery techniques for aeroplane and glider category ratings.
 - (12) Aeronautical decision making and judgement.
 - (13) Preflight action that includes—
 - (i) Obtaining information on runway lengths at airports of intended use, data on takeoff and landing distances, weather reports and forecasts, and fuel requirements; and

- (ii) Planning for alternatives if the planned flight cannot be completed or delays are encountered.

IS: 2.3.4.4 PRIVATE PILOT AERONAUTICAL EXPERIENCE REQUIREMENTS

- (a) Except as provided for in 2.3.4.4, an applicant for a private pilot license shall receive and log at least 40 hours of flight time that includes at least 20 hours of flight training from an authorised instructor and 10 hours of solo flight training, which shall include at least the following experience, unless shown otherwise below.

Note: See paragraphs below for specific requirements for categories and classes.

- (b) In the category and class of aircraft for each category and class rating sought, as applicable—
 - (1) 3 hours of cross-country flight training;
 - (2) 3 hours of night flight training that includes—
 - (i) One cross-country flight of over 100 nautical miles total distance; and
 - (ii) 10 takeoffs and 10 landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport.
 - (3) 3 hours of instrument flight training;
 - (4) 3 hours of flight training in preparation for the skill test performed within 60 days preceding the date of the test; and
 - (5) 10 hours of solo flight time, consisting of at least—
 - (i) 5 hours of solo cross-country flight;
 - (ii) One solo cross-country flight of at least 150 nautical miles total distance, with full-stop landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 50 nautical miles between the takeoff and landing locations; and

- (iii) Three takeoffs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.
- (c) For a helicopter rating.
 - (1) 3 hours of night flight training in a helicopter that includes one cross-country flight of over 50 nautical miles total distance; and
 - (2) 10 hours of solo flight time in a helicopter, consisting of at least—
 - (i) 3 hours cross-country flight time;
 - (ii) One solo cross-country flight of at least 75 nautical miles total distance, with landings at a minimum of three points, and one segment of the flight being a straight-line distance of at least 25 nautical miles between the takeoff and landing locations.

IS: 2.3.5.3 COMMERCIAL PILOT AERONAUTICAL KNOWLEDGE AREAS

- (a) An applicant for a commercial pilot license shall receive and log ground training from an authorised instructor on the aeronautical knowledge areas of paragraph (b) of this subsection that apply to the aircraft category and class rating sought.
- (b) Aeronautical knowledge areas—
 - (1) Applicable regulations of this Subpart that relate to commercial pilot privileges, limitations, and flight operations.
 - (2) Accident reporting requirements of the Authority.
 - (3) Basic aerodynamics and the principles of flight.
 - (4) Meteorology to include recognition of critical weather situations, windshear recognition and avoidance, and the use of aeronautical weather reports and forecasts.
 - (5) Safe and efficient operation of aircraft.

- (6) Weight and balance computations.
- (7) Use of performance charts.
- (8) Significance and effects of exceeding aircraft performance limitations.
- (9) Use of aeronautical charts and a magnetic compass for pilotage and dead reckoning.
- (10) Use of air navigation facilities.
- (11) Aeronautical decision making and judgement.
- (12) Principles and functions of aircraft systems.
- (13) Manoeuvres, procedures, and emergency operations appropriate to the aircraft.
- (14) Night and high-altitude operations.
- (15) Procedures for operating within the Grenada airspace system.
- (16) Procedures for flight and ground training for lighter-than-air ratings.

IS: 2.3.5.4 COMMERCIAL PILOT FLIGHT TRAINING PROFICIENCY REQUIREMENTS

- (a) General. An applicant for a commercial pilot license shall receive and log ground and flight training from an authorised instructor on the areas of operation of this subsection that apply to the aircraft category and class rating sought, as shown below.
 - (1) For all categories and class ratings, as applicable—
 - (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Airport and seaplane base operations;
 - (iv) Takeoffs, landings, and go-arounds;

- (v) Performance manoeuvres;
 - (vi) Ground reference manoeuvres;
 - (vii) Navigation;
 - (viii) Slow flight and stalls;
 - (ix) Emergency operations;
 - (x) High-altitude operations; and
 - (xi) Postflight procedures.
- (2) For the category and class ratings shown below, the applicable areas of operation shown in paragraph (a)(1); and
- (3) For the aeroplane category rating with a multiengine class rating—
- (i) Multiengine operations.
- (4) For a rotorcraft category rating with a helicopter class rating—
- (i) Airport and heliport operations;
 - (ii) Hovering manoeuvres; and
 - (iii) Special operations.

IS: 2.3.5.10 COMMERCIAL PILOT AERONAUTICAL EXPERIENCE REQUIREMENTS

- (a) Except as provided in 2.3.5.10, an applicant for a commercial pilot license shall log at least the following hours of flight time as a pilot in each category and class applied for, including at least the following—
- (b) Unless specified otherwise for a specific category or class, 250 hours of flight time as a pilot, including—
 - (1) 100 hours in powered aircraft, of which 50 hours shall be in the category of rating sought.
 - (2) 100 hours of PIC flight time, including at least—

- (i) 50 hours in the category sought; and
 - (ii) 50 hours in cross-country flight in the category sought, of which 10 hours must be in the category sought.
- (3) 20 hours of training on the areas of operation listed in IS: 2.3.5.4 including at least—
 - (i) 10 hours of instrument training of which at least 5 hours shall be in the category and class sought;
 - (ii) 10 hours of training in an aeroplane that has a retractable landing gear, flaps, and a controllable pitch propeller, or is turbine-powered if applicable;
 - (iii) One cross-country flight of at least 2 hours in the category and class sought in day VFR conditions, consisting of a total straight-line distance of more than 100 nautical miles from the original point of departure;
 - (iv) One cross-country flight of at least 2 hours in the category and class sought in night VFR conditions, consisting of a total straight-line distance of more than 100 nautical miles from the original point of departure; and
 - (v) 3 hours in the category and class sought in preparation for the skill test within the 60-day period proceeding the date of the test.
- (4) 10 hours of solo flight in the category and class sought on the areas of operation listed in IS: 2.3.5.4, including at least—
 - (i) One cross-country flight of not less than 300 nautical miles total distance, with landings at a minimum of three points, one of which is a straight-line distance of at least 250 nautical miles from the original departure point; and
 - (ii) 5 hours in night VFR conditions with 10 takeoffs and 10 landings (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.

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- (c) For a helicopter rating. 150 hours of flight time as a pilot, including—
 - (1) 100 hours of PIC flight time, which includes at least—
 - (i) 35 hours in helicopters; and
 - (ii) 10 hours in cross-country flight in helicopters.
 - (2) 10 hours of solo flight in a helicopter on the areas of operation listed in IS: 2.3.5.4, including at least—
 - (i) One cross-country flight with landings at a minimum of three points, with one segment consisting of a straight-line distance of at least 50 nautical miles from the original point of departure; and
 - (ii) One cross-country flight of at least 2 hours in a helicopter in night VFR conditions, consisting of a total straight-line distance of more than 50 nautical miles from the original point of departure.

IS: 2.3.6.2 AIRLINE TRANSPORT PILOT: AERONAUTICAL KNOWLEDGE AREAS

- (a) An applicant for an airline transport pilot license shall receive and log ground and flight training on the following areas of aeronautical knowledge—
 - (1) Applicable regulations that relate to airline transport pilot privileges, limitations, and flight operations.
 - (2) Meteorology, including knowledge of and effects of fronts, frontal characteristics, cloud formations, icing, and upper-air data.
 - (3) General system of weather and NOTAM collection, dissemination, interpretation, and use.
 - (4) Interpretation and use of weather charts, maps, forecasts, sequence reports, abbreviations, and symbols.
 - (5) Grenada Meteorological Services functions as they pertain to operations in the Grenada Airspace System.

- (6) Windshear and microburst awareness, identification, and avoidance.
- (7) Principles of air navigation under instrument meteorological conditions in the Grenada Airspace System.
- (8) Air traffic control procedures and pilot responsibilities as they relate to en route operations, terminal area and radar operations, and instrument departure and approach procedures.
- (9) Aircraft loading, weight and balance, use of charts, graphs, tables, formulas, and computations, and their effect on aircraft performance.
- (10) Aerodynamics relating to an aircraft's flight characteristics and performance in normal and abnormal flight regimes.
- (11) Human factors.
- (12) Aeronautical decision making and judgement.
- (13) Crew resource management to include crew communication and co-ordination.

IS: 2.3.6.3 AIRLINE TRANSPORT PILOT: FLIGHT PROFICIENCY

- (a) An applicant for an airline transport pilot license shall receive and log ground and flight training from an authorised instructor on the areas of operation of this subsection that apply to the aircraft category, class and type rating sought, as shown below.
 - (1) For an aeroplane category--single-engine class rating—
 - (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Takeoff and departure phase;
 - (iv) In-flight manoeuvres;
 - (v) Instrument procedures;
 - (vi) Landings and approaches to landings;

- (vii) Normal and abnormal procedures;
 - (viii) Emergency procedures; and (ix) Postflight procedures.
- (2) For an aeroplane category--multiengine class rating—
 - (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Takeoff and departure phase;
 - (iv) In-flight manoeuvres;
 - (v) Instrument procedures;
 - (vi) Landings and approaches to landings;
 - (vii) Normal and abnormal procedures;
 - (viii) Emergency procedures; and (ix) Postflight procedures.
- (3) For a rotorcraft category--helicopter class rating—
 - (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Takeoff and departure phase;
 - (iv) In-flight manoeuvres;
 - (v) Instrument procedures;
 - (vi) Landings and approaches to landings;
 - (vii) Normal and abnormal procedures;
 - (viii) Emergency procedures; and (ix) Postflight procedures.
- (b) The applicant shall have demonstrated the ability to perform the procedures and manoeuvres described in IS 2.3.6.3 (a) as applicable, with a degree of competency appropriate to the privileges granted to the holder of an airline transport pilot licence, and to—

- (1) operate the aircraft within its limitations;
- (2) complete all manoeuvres with smoothness and accuracy;
- (3) exercise good judgement and airmanship;
- (4) apply aeronautical knowledge;
- (5) maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is never in doubt;
- (6) understand and apply crew coordination and incapacitation procedures; and
- (7) communicate effectively with the other flight crew members

IS: 2.3.7.4 FLIGHT INSTRUCTOR AREAS OF OPERATION FOR FLIGHT PROFICIENCY

- (a) General. An applicant for a flight instructor rating shall receive and log flight and ground training from an authorised instructor, and obtain an endorsement that the applicant is proficient to pass a skill test on the following areas of operation that apply to the flight instructor rating sought.
- (b) For each category rating and class rating, as applicable—
 - (1) Fundamentals of instructing;
 - (2) Technical subject areas;
 - (3) Preflight preparation;
 - (4) Preflight lesson on a manoeuvre to be performed in flight;
 - (5) Preflight procedures;
 - (6) Airport and seaplane base operations;
 - (7) Takeoffs, landings, and go-arounds;
 - (8) Fundamentals of flight;

- (9) Performance manoeuvres;
 - (10) Ground reference manoeuvres;
 - (11) Slow flight, stalls, and spins;
 - (12) Basic instrument manoeuvres;
 - (13) Emergency operations; and
 - (14) Postflight procedures; and for
- (c) Aeroplane category rating with a multiengine class rating—
- (1) Multiengine operations.
- (d) Rotorcraft category rating with a helicopter class rating—
- (1) Airport and heliport operations;
 - (2) Hovering manoeuvres; and
 - (3) Special operations.
- (e) Instrument rating with the appropriate aircraft category and class rating—
- (1) Air traffic control clearances and procedures;
 - (2) Flight by reference to instruments;
 - (3) Navigation aids; and
 - (4) Instrument approach procedures.

IS: 2.3.7.8 FLIGHT INSTRUCTOR LIMITATIONS AND QUALIFICATIONS

- (a) Each holder of a flight instructor rating shall observe the following limitations and qualifications—
- (b) Hours of training. In any 24-consecutive-hour period, a flight instructor may not conduct more than 8 hours of flight training.
- (c) Required ratings. A flight instructor may not conduct flight training in any aircraft for which the flight instructor does not hold—

- (1) A pilot license and flight instructor license with the applicable category and class rating; and
- (2) If appropriate, a type rating.
- (d) For instrument flight training or for training for a type rating not limited to VFR, an appropriate instrument rating on his or her flight instructor license and pilot license.
- (e) Limitations on endorsements. A flight instructor may not endorse a—
 - (1) Student pilot's license or logbook for solo flight privileges, unless that flight instructor has—
 - (i) Given that student the flight training required for solo flight privileges required by this subpart;
 - (ii) Determined that the student is prepared to conduct the flight safely under known circumstances, subject to any limitations listed in the student's logbook that the instructor considers necessary for the safety of the flight;
 - (iii) Given that student pilot training in the make and model of aircraft or a similar make and model of aircraft in which the solo flight is to be flown; and
 - (iv) Endorsed the student pilot's logbook for the specific make and model aircraft to be flown.
 - (2) Student pilot's license and logbook for a solo cross-country flight, unless that flight instructor has determined that—
 - (i) The student's flight preparation, planning, equipment, and proposed procedures are adequate for the proposed flight under the existing conditions and within any limitations listed in the logbook that the instructor considers necessary for the safety of the flight; and
 - (ii) The student has the appropriate solo cross-country endorsement for the make and model of aircraft to be flown.

- (3) Student pilot's license and logbook for solo flight in a Class B airspace area or at an airport within Class B airspace unless that flight instructor has—
 - (i) Given that student ground and flight training in that Class B airspace or at that airport; and
 - (ii) Determined that the student is proficient to operate the aircraft safely.
- (4) Logbook of a pilot for a flight review, unless that instructor has conducted a review of that pilot in accordance with the requirements of 2.2.5.8; or
- (5) Logbook of a pilot for an instrument proficiency check, unless that instructor has tested that pilot in accordance with the requirements of 8.10.1.5.
- (f) Training in a multiengine aeroplane, a helicopter,. A flight instructor may not give training required for the issuance of a license or rating in a multiengine aeroplane, a helicopter, or a powered-lift unless that flight instructor has at least 5 flight hours of pilot time in the specific make and model of multiengine aeroplane, helicopter, or powered-lift, as appropriate.
- (g) Qualifications of the flight instructor for training first-time flight instructor applicants.
 - (1) No flight instructor may provide instruction to another pilot who has never held a flight instructor license unless that flight instructor—
 - (i) Holds a current ground or flight instructor license with the appropriate rating, has held that license for at least 24 months, and has given at least 40 hours of ground training; or
 - (ii) Holds a current ground or flight instructor license with the appropriate rating, and has given at least 100 hours of ground training in a course which has been approved by the Authority.
 - (2) Meets the eligibility requirements prescribed in 2.3.7.2.

- (3) For training in preparation for an aeroplane or rotorcraft, has given at least 200 hours of flight training as a flight instructor; and
- (h) Prohibition against self endorsements. A flight instructor may not make any self-endorsement for a license, rating, flight review, authorisation, operating privilege, skill test, or knowledge test that is required by Part 2.
- (i) Category II and Category III instructions: A flight instructor may not give training in Category II or Category III operations unless the flight instructor has been trained and tested in Category II or Category III operations as applicable.

IS: 2.3.8.1 INSTRUMENT RATING REQUIREMENTS

- (a) Aeronautical knowledge. An applicant for an instrument rating shall have received and logged ground training from an authorised instructor on the areas of following aeronautical knowledge areas that apply to the instrument rating sought—
 - (1) The provisions of these regulations that apply to flight operations under IFR.
 - (2) Appropriate information in advisory material published by the Authority that applies to flight operations under IFR.
 - (3) Air traffic control system and procedures for instrument flight operations.
 - (4) IFR navigation and approaches by use of navigation systems.
 - (5) Use of IFR en route and instrument approach procedure charts.
 - (6) Procurement and use of aviation weather reports and forecasts and the elements of forecasting weather trends based on that information.
 - (7) Personal observation of weather conditions.
 - (8) Safe and efficient operation of aircraft under instrument flight rules and conditions.

- (9) Recognition of critical weather situations and windshear avoidance.
 - (10) Aeronautical decision making and judgement.
 - (11) Crew resource management, including crew communication and co-ordination.
- (b) Flight proficiency. An applicant for an instrument rating shall receive and log training from an authorised instructor in an aircraft, or in an approved flight simulator or approved flight training device that includes the following areas of operation—
 - (1) Preflight preparation;
 - (2) Preflight procedures;
 - (3) Air traffic control clearances and procedures;
 - (4) Flight by reference to instruments;
 - (5) Navigation systems;
 - (6) Instrument approach procedures;
 - (7) Emergency operations; and
 - (8) Postflight procedures.
- (c) Aeronautical experience. An applicant for an instrument rating shall have logged the following—
 - (1) At least 50 hours of cross-country flight time as pilot, of which at least 10 hours shall be in aeroplanes for an instrument: aeroplane rating; and
 - (2) A total of 40 hours of actual or simulated instrument time on the areas of operation of this subsection, to include—
 - (i) At least 15 hours of instrument flight training from an authorised instructor in the aircraft category for which the instrument rating is sought;
 - (ii) At least 3 hours of instrument training that is appropriate to the instrument rating sought from an

authorised instructor in preparation for the skill test within the 60 days preceding the date of the test;

- (iii) For an instrument - aeroplane rating, instrument training on cross-country flight procedures specific to aeroplanes that includes at least one cross-country flight in an aeroplane that is performed under IFR, and consists of—
 - (A) A distance of at least 250 nautical miles along airways or ATC-directed routing;
 - (B) An instrument approach at each airport; and
 - (C) Three different kinds of approaches with the use of navigation systems;
- (iv) For an instrument - helicopter rating, instrument training specific to helicopters on cross-country flight procedures that includes at least one cross-country flight in a helicopter that is performed under IFR, and consists of—
 - (A) A distance of at least 100 nautical miles along airways or ATC-directed routing;
 - (B) An instrument approach at each airport; and
 - (C) Three different kinds of approaches with the use of navigation systems.

IS: 2.5.6.2 ELIGIBILITY REQUIREMENTS: GENERAL

- (a) Prior to the grant / extension of a license an applicant shall be not less than—
 - (1) 20 years of age for an LWTR
 - (2) 21 years of age for a Type Rating
- (b) An applicant for the grant of a Type Rating in respect of the type of aircraft, engine or system will be considered provided that—
 - (1) The applicant holds the appropriate LWTR and submits an application which is acceptable in content and form.

- (2) The aircraft is of a type or the engine or system is installed in a type that is registered in the OECS and in respect of which an OECS Certificate of Airworthiness is in force or has been applied for.
 - (3) The aircraft its engines or systems are not of a type that are listed in paragraph 14 of AC No 10.
 - (4) Submit a satisfactory Record of Experience which shall be certified by an engineer acceptable to the ECCAA who shall normally have had regular professional contact with the applicant and who has held an OECS Licence, in the discipline for which application is made, for a minimum period of 24 months. The Licence must be valid. The signatory may be an experienced person other than an appropriately licensed engineer with the prior agreement of the Authority.
 - (5) Where the applicant is required to undergo an ECCAA approved course a copy of the course certificate must be submitted and the course must have been completed within the 36 months preceding the application.
 - (6) Pay the appropriate fee.
- (c) OECS Licences - Applicants already holding a Licence issued by a member state of the OECS, who wish to obtain a Licence of another member state, will have their Licences converted without examination for the same Categories and Ratings already held, on payment of the required fee. The only exception is that the type ratings must apply to aircraft on the local register.
- (d) Valid UK Licences - Applicants holding a valid UK Licence, first issued prior to 1st June 2000 will have their Licences converted to an OECS Licence provided that they pass the written, multi-choice and oral examination on the local Regulations. UK licences issued after 1st June 2000 will be individually assessed at the time of the application, but in any case will only be applicable in any category to aircraft below 5700kg.

Note: The only type ratings that will be converted from the UK Licence will be for those aircraft that are on the local register.

- (e) Holders of Valid ICAO Type I and II Licences - When an applicant can demonstrate to the satisfaction of the Directorate that he is the

holder of a valid Aircraft Maintenance Engineer's Licence that meets ICAO Annex I Type I and Type II requirements then the following will apply—

- (1) If the licence has clearly defined categories which can be identified with the categories used in the OECS together with type ratings, then their licence will be converted to a similar OECS licence provided they pass the written, multi-choice and oral examinations on the local regulations;
- (2) pay the required fee; and
- (3) In the course of the examination process it will be necessary for the applicant to demonstrate that he has a satisfactory command of the English language.

Note: The only type ratings that will be converted will be for aircraft on the local register.

Note: As a guideline, licences issued by Transport Canada will fall into the above category.

- (f) If the applicant does not meet the requirements of (d), then on payment of the required fee, he will be required to take the technical written and oral examination for all categories applied for, together with the written, multi-choice and oral examination on the local regulations. If the candidate's results are such that all of the examinations must be retaken or following a partial pass the candidate again fails, then the exemption from the multi-choice will be withdrawn. In the course of the examination the applicant will be required to demonstrate that he has a satisfactory command of the English language.
- (g) Holders of a FAA A & P Certificate (Not a Temporary Certificate) - Applicants for an OECS licence in category "A&C" who are the holders of an A & P certificate issued by the FAA, will be exempted from the multi-choice elements of the examination for the category applied for (including Human Factors). They will be required to take the written, multi-choice and oral examinations on the local regulations. If the applicant's results are such that all of the examination must be retaken or following a partial pass the applicant again fails, then their exemption from the multi-choice modules will be withdrawn for further application for that category.

Note1: An A & P certificate will gain no exemptions from examinations required in categories “X& R”.

Note2: Human Factors must be done if the applicant fails the examination.

Note3: An applicant for a category “A & C” rotorcraft with an A & P certificate will also be required to take the multi-choice examination in Module 9.

- (h) Holders of Licences Supervised by the CAA - Applicants holding a valid foreign AMEL, the examinations for which were conducted by a UK Surveyor, or, which were issued under the direct supervision of UK CAA personnel, will be exempt all written examinations (except local regulations) provided—
 - (1) written confirmation of the above is provided from the relevant foreign authority;
 - (2) the examinations were conducted to the requirements of IS: 2.5.6.5;
 - (3) any type ratings must be for a type currently on the local register and not a type for which completion of a course is required by IS: 2.5.6.5.
- (i) Type Rating - Where the holder of ICAO Type I or II Licence shows a type Rating which is clearly identifiable, then a straight transfer of that rating will be made, provided—
 - (1) the aircraft type appears on the local register;
 - (2) the holder can produce evidence of recency on the type obtained during the preceding 12 months prior to application;
 - (3) the foreign licence must be valid.
- (j) Type Courses - Oral examinations cannot be conducted for a Type Rating where IS: 2.5.6.5 requires an approved type course. This applies to all jet and propeller turbine engines and all pressurized aeroplanes exceeding 5,700 Kg MTWA. At the discretion of the Airworthiness Inspector an oral examination may be carried out, but only in addition to the Type course. This is because it is not always possible for the Airworthiness Surveyor to travel worldwide to assess the suitability of all courses.

- (k) Advisory Circular No. 10 - Type Ratings will not be granted for aircraft or their respective engines and systems listed in Paragraph 14 of Advisory Circular No. 10.

IS: 2.5.6.3 RATINGS

- (a) Categories and Type Ratings—

Categories	License Rating	Without Sub-Divisions	TypeType defined in the following paragraphs of Advisory Circular No 10.	Ratings as
“A”- Aeroplanes	Aeroplanes 1 Aeroplanes 2			Paras 5.0, 5.1, 5.7, 5.9, 5.9.1. Para 5.6, 5.8.
“C”-Engines	Piston Aeroplanes Turbine Aeroplanes	Engines Engines	–Para 6.3. –Paras 6.4, 6.5.	
“A & C”-Rotorcraft	Piston Rotorcraft Turbine Rotorcraft	– –	engined engined	Para 7.1 Paras 7.3, 7.4
“X”- Electrical	Electrical			Paras 9.1, 9.2, 9.3, 9.4.
“X”-Instruments	Instruments			Paras 8.1, 8.2, 8.3, 8.4.
“X”-Automatic Pilots	Automatic Aeroplanes Automatic Rotorcraft		pilots- pilots-	Paras 13.1, 13.2, 13.3. Paras 13.4, 13.5.
“X”-Compass	Compass and Compensation Adjustment.	Compensation		Para 15
“R”-Radio	Communication Navigation. Radar		& Para	Para 12.2. 12.3.

Notes:

- (i) Aeroplanes 1: Un-pressurised Aircraft types.
- (ii) Aeroplanes 2: Pressurised Aircraft types.
- (iii) LWTR Aeroplanes 1 must be held before LWTR Aeroplanes 2 is granted.
- (iv) LWTR Aeroplanes 1 will be granted only in combination with either LWTR Category 'C' Piston Engines or LWTR Category 'C' Turbine Engines.
- (v) LWTR Category 'C' Piston Engines-Aeroplanes will be granted only in combination with LWTR Aeroplanes 1.
- (vi) A licence will be extended to include LWTR Category 'C' Turbine engines only when Category 'A' Aeroplanes 1 is held.
- (vii) LWTR Category 'R' Radio & Communication must be held before the license will be extended to include LWTR Category "R" Radar

IS: 2.5.6.4 AIRCRAFT RATING: KNOWLEDGE REQUIREMENTS

- (a) The syllabus relevant to the examinations for all Licence Categories is presented in Appendix No. 2 as a series of subjects or combinations of subjects referred to as Modules, the content of each of the Modules is detailed in Appendix No. 2.
- (b) The written and oral examinations for each Category of Licence, (and its Sub-Divisions where appropriate) are based on a number of the Modules, and the Module/Category relationship is set out in Appendix No. 1. It will be noted that the modular arrangements recognise that major areas of the syllabus are common to more than one Licence Category and/or its Sub-Divisions. Thus, when an existing Licence is to be extended to include another Category or Sub-Division, those Modules which have been satisfied by previous examinations may be excluded. Each module is numbered and contains a series of syllabus subject headings. Each subject is then further expanded in more detail against 'level numbers' corresponding to Licence Without Type Rating (LWTR) and Type Rating (TR). This expansion of detail provides an indication of the degree/level of knowledge, experience, competence and skill in aeronautical engineering required by the ECCAA.

- (c) There are three level numbers and they are defined as follows—

Level 1: General appreciation of principles and familiarisation of the subject.

Level 2: Comprehension of principles and salient features with a practical ability to assess operational condition.

Level 3: Detailed knowledge of all aspects of the subject.

- (d) In applying the levels in (c) to the subjects which, in particular relate to aircraft, engines, systems and items of equipment, the following aspects should be taken into account—

- (1) theoretical principles;
- (2) constructional arrangements, functional and design features;
- (3) maintenance practices;
- (4) normal, deteriorated and failed conditions.

IS: 2.5.6.5 EXPERIENCE REQUIREMENTS

1. License Without Type Rating (LWTR)

- (a) Applications for the grant or extension of a license, excepting “X” Compass Compensation, must show confirmed minimum specific periods of aviation maintenance engineering experience totalling 4 years.
- (b) Applications must also show the following minimum experience, which must have been gained whilst maintaining operating aircraft and not in component workshops or on static or non flying aircraft—
 - (1) For a Category “A” and / or “C” LWTR, 36 months relating to Airframe and /or Engine maintenance, 12 months of which must be in the 2 years immediately preceding the date of the application.
 - (2) For any Category “R” and / or “X” LWTR, (excluding “X” compass compensation and adjustment), 36 months relating to avionic systems, 12 months of which must be in the 2 years immediately preceding the date of the application.

- (3) 6 months, within the 12 months referred to in (1) and (2), relevant to the specific LWTR for which application is being made.
- (c) Where an applicant for Category “X” Electrical holds a valid License which includes both Category “A” and “C” LWTR sub divisions, the experience in paragraph (b) above need not be complied with and the applicant need show only the 6 months experience relevant to the LWTR as specified in paragraph (b), (3).
- (d) Category “X” Compass Compensation and Adjustment requires an applicant to hold any LWTR in Categories “A”, “C”, “X” or “R”. The applicant is required to have a minimum of 6 months engineering experience relating to the maintenance of operating aircraft in the 2 years preceding the date of the application.

2. TYPE RATINGS

- (a) Extension of a License to include a type rating does not require a period of general experience additional to that required for the relevant LWTR which must be held before a Type Rating will be granted. However a satisfactory Record of Experience appropriate to the Type applied for must be submitted as part of the application for a Type Rating. The experience shown must have been gained within the three years before the application.
- (b) An application for a Type Rating from a holder of an LWTR which was gained following successful completion of a Course approved by the Authority must show confirmed evidence that he or she has obtained at least 12 months relevant aircraft engineering experience with an organisation engaged upon the maintenance of operational aircraft in addition to that gained during the course.

3. Category ‘A’, and ‘C’ Type Ratings—

- (a) For—

Category ‘A’ – Aeroplanes in paragraphs 5.0, 5.1, 5.7, 5.7.1, 5.9 and 5.9.1 of Advisory Circular No. 10;

Category ‘C’ – Engines in paragraphs 6.0 or 6.3 of Advisory Circular No. 10;

Categories 'A/C' – Rotorcraft in paragraph 7.1 of Advisory Circular No. 10.

- (1) A Type Rating will normally be granted subject to a satisfactory oral examination on those items in the modular syllabus applicable to the Category/Type Rating.
- (2) Where application is made for the paragraph itself, the Record of Experience referred to in paragraph (e) must provide satisfactory evidence of relevant experience of at least 1 year on a minimum of three types of aeroplanes, rotorcraft and/or engines, as appropriate, of different manufacturers within that paragraph. The types must be representative of those within the paragraphs and one type must satisfy the following criteria—
 - (i) For paragraph 5.7.1: Aeroplanes having retractable landing gear.
 - (ii) For paragraph 5.7: Aeroplanes over 2730 kg and having retractable landing gear.
 - (iii) For paragraph 5.9.1: Aeroplanes below 2730 kg having retractable landing gear and are pressurised.
 - (iv) For paragraphs 6.0 or 6.3: Engines that are supercharged/turbocharged and of the type (Petrol or Diesel) covered by the paragraph.
- (3) Where application is made for a specific type only, the Record of Experience need only cover that specific type.

(b) For—

Category 'A' – Aeroplanes in paragraph 5.6 and 5.8 of Advisory Circular No. 10.

Category 'C' – Engines in paragraphs 6.4, 6.5 and 6.6 of Advisory Circular No. 10.

Category 'A' and 'C' – Rotorcraft in paragraphs 7.3 and 7.4 of Advisory Circular No. 10.

- (1) A Type Rating will normally be granted subject to evidence of satisfactory completion of an ECCAA Approved Course

covering the Type Rating. The course should have been completed within the 3 years immediately preceding the date of application.

- (2) Application may be made only for specific types of Aeroplanes, Rotorcraft and/or Engines listed in paragraphs 5.6, 5.8, 5.9, 6.4, 6.5, 6.6 and 7.4 and not for the complete paragraph.
 - (3) Applications will be considered for paragraph 7.3 or for specific types of Rotorcraft covered by the paragraph. Where application is made for the paragraph, the Record of Experience must provide satisfactory evidence of relevant experience of at least 1 year on a minimum of three types of Engines and/or Rotorcraft by two different manufacturers within that paragraph. The types must be representative of the paragraph. Where application is made for a specific type only, the Record of Experience need only cover that specific type.
- (c) Application for one of the complete paragraphs 5.0 (Category A only), 5.1, 5.7, 5.7.1, 5.9.1, 6.0, 6.3, 7.1 or 7.3, may be accepted without examination for the complete paragraph, or without a training course for the complete paragraph, provided that—
- (1) The applicant has obtained three Type Ratings of aircraft and/or engines of different manufacturers, representative of types within the paragraph, and
 - (i) For paragraphs 5.7, 5.7.1, 6.0 and 6.3, one of the Type Ratings must satisfy requirement (3) below.
 - (ii) For paragraph 7.3, engine types by two different manufacturers are required.
 - (2) The applicant must show confirmed experience of 2 years maintenance of aircraft and/or engines within the paragraph. For paragraphs 5.7, 5.7.1, 6.0 and 6.3, 1 year must be on types satisfying requirement (3).
 - (3) For paragraph 5.7.1: Aeroplanes having retractable landing gear but not necessarily pressurised.
 - (4) For paragraph 5.7: Aeroplanes over 2730 kg, and having retractable landing gear, but not necessarily pressurised.

- (5) For paragraph 5.9.1: Aeroplanes below 2730 kg having retractable landing gear and are pressurised.
- (6) For paragraphs 6.0 or 6.3: Engines that are supercharged/turbocharged and of a type (Petrol or Diesel) covered by the paragraph.

4. Category 'X' Type Ratings

- (a) Category 'X' – Instruments. A Type Rating for any of the paragraphs 8.1, 8.2, 8.3 or 8.4 of Advisory Circular No. 10 will be granted subject to a satisfactory oral examination on those items in the modular syllabus applicable to the Category and to the Type Ratings.
- (b) Category 'X' – Electrical
 - (1) A Type Rating for any of the paragraphs 9.1, 9.2 or 9.3 of Advisory Circular No. 10 will normally be granted subject to a satisfactory oral examination on those items in the modular syllabus applicable to the Category and to the Type Ratings.
 - (2) A Type Rating in paragraph 9.4 of Advisory Circular No. 10 will normally be granted subject to evidence of satisfactory completion either of an ACCAA Approved Course covering the Type Rating. The course should have been completed within the 3 years immediately preceding the date of application.
- (c) Category 'X' – Automatic Pilots – Aeroplanes or Rotorcraft. A Type Rating for any of the paragraphs 13.1, 13.2, 13.3, 13.4 and 13.5 of Advisory Circular No.10 will normally be granted subject to a satisfactory oral examination on those items in the modular syllabus applicable to the Category and to the Type Ratings.
- (d) Reserved
- (e) Category 'X' – Compass Compensation and Adjustment. For holders of Category 'X' – instruments LWTR a Type Rating for paragraph 8.8 of Advisory Circular No. 10 will be granted. For holders of Category 'X' – Compass Compensation and Adjustment LWTR a Type Rating for paragraph 15 of Advisory Circular No. 10 will be granted. These Type Ratings will normally be granted subject to the provision of evidence of compass swings, which have included the compensation and adjustment of compasses, on four aircraft within the preceding 12 months.

5. Category 'R' Type Ratings

- (a) A Type Rating for paragraph 12.2, 12.2.1, 12.3 or 12.3.1 of Advisory Circular No. 10, will normally be granted subject to assessment by the ECCAA of the Record of Experience required in paragraph 2(a).
- (b) Based on the assessment carried out in paragraph IS 2.5.6.5 (5)(a) an oral examination may be required.

IS: 2.6.2.2 MEDICAL CERTIFICATE

- (a) The following details shall appear on the medical certificate—

- (1) Name of State
- (2) Medical certificate number
- (3) Name of holder in full
- (4) Date of birth of holder
- (5) Address of holder
- (6) Nationality of holder
- (7) Signature of holder
- (8) Medical certificate Class 1, 2, or 3
- (9) Date of issue
- (10) Validity
- (11) Limitations
- (12) Issuing Authority
- (13) Signature of Issuing Authority
- (14) Examiner/CAA staff signature
- (15) Examiner/CAA staff name (printed)
- (16) Examiner's authorisation number
- (17) Date of examination and State of examination

IS: 2.6.2.4 MEDICAL CERTIFICATE REQUIREMENTS

- (a) A person is not required to hold a current and appropriate medical required by 2.2.1.5(d) and 2.6.2.4 if that person—
 - (1) is exercising the privileges of a flight instructor licence, provided the flight instructor is not acting as PIC or as a required crewmember;
 - (2) is operating an aircraft with a pilot licence, issued by the Authority on the basis of a foreign pilot licence under 2.1.2, and holds a current medical certificate issued by the country that issued the pilot licence; or
 - (3) is operating an aircraft within a foreign country using a pilot licence issued by that country and possesses evidence of current medical qualification for that licence.

**PART 3
AVIATION TRAINING ORGANISATIONS**

3.1 GENERAL**3.1.1 General****3.1.1.1 APPLICABILITY**

- (a) This Part prescribes the requirements for certifying and administering Aviation Training Organisations (ATO).

3.1.1.2 DEFINITIONS

- (a) For the purpose of this Part, the applicable definitions are contained in Part 1 of these regulations – “General Policies, Procedures and Definitions.”

3.1.1.3 ACRONYMS

- (a) The following acronyms are used in Part 3—
 - (1) AFM — Aircraft Flight Manual
 - (2) AMT – Aviation Maintenance Technician

- (3) ATO – Approved Training Organisation
- (4) CFI – Chief Flight Instructor
- (5) CGI – Chief Ground Instructor
- (6) CPL – Commercial Pilot Licence
- (7) CRM – Crew Resource Management
- (8) FE – Flight Engineer
- (9) FI – Flight Instructor
- (10) FSTD – Flight Simulation Training Device
- (11) GI – Ground Instructor
- (12) ICAO – International Civil Aviation Organization
- (13) IFR – Instrument Flight Rules
- (14) IR – Instrument Rating
- (15) IS – Implementing Standards
- (16) PIC – Pilot-In-Command
- (17) PDCA – Plan-Do-Check-Act
- (18) RPA – Remotely Piloted Aircraft
- (19) RPAS – Remotely Piloted Aircraft Systems
- (20) SMS – Safety Management System

3.1.2 Certificate Requirements

3.1.2.1 CERTIFICATE REQUIRED

- (a) A person shall not operate an ATO without, or in violation of, an ATO certificate and training specifications issued under this Part.

- (b) An AOC or AMO is exempted from 3.1.2.1(a) for conducting training of its own personnel
- (c) A person shall not conduct training, testing, or checking in advanced flight training devices or flight simulators without, or in violation of, the certificate and training specifications required by this part.
- (d) The Authority shall issue an ATO certificate and training specifications to an applicant who meets the requirements of this part.

3.1.2.2 CONTENTS OF AN ATO CERTIFICATE

- (a) An ATO certificate issued to a training organisation by Grenada shall consist of two documents—
 - (1) a one-page certificate for public display signed by the Authority, and
 - (2) training specifications containing the terms, conditions, and authorisations applicable to the ATO certificate signed by the Accountable Manger and the Authority.
- (b) An ATO shall conduct only the training, checking, and testing or part thereof, for which it is rated and that is within the limitations placed in its training specifications.
- (c) An ATO certificate shall contain—
 - (1) certificate number specifically assigned to the ATO;
 - (2) the name and location (main place of business) of the ATO;
 - (3) the certification Statement of Authority;
 - (4) rating(s) relating the course(s) to be taught;
 - (5) the date of issue and period of validity;
 - (6) the authorised locations of operations;
 - (7) signature, printed name, and title of the appropriate Authority; and

- (8) training specifications for the following categories, as applicable—
 - (i) pilot training.
 - (ii) other crewman training.
 - (iii) other airman training.
 - (iv) AMT training.
 - (v) other training.
 - (9) other authorisations, approvals and limitations issued by the Authority in accordance with the standards which are applicable to the training conducted by the ATO.
- (b) The training specifications issued to an ATO by Grenada will specify training programme requirements and authorise the conduct of training, checking, and testing with any limitations thereof, and will contain—
- (1) The certificate number specifically assigned to the ATO;
 - (2) The type of training authorised, including approved courses;
 - (3) The authorisations for the ATO, including limitations and approvals;
 - (4) The name and address of any satellite training centres and the approved training offered at each location;
 - (5) The facilities and equipment required to conduct the authorised training;
 - (6) The personnel required to perform the applicable duties under this part;
 - (7) The signatures of the accountable manager and the Authority;
 - (8) The date of issue or revision; and
 - (9) Any other items the Authority may require or allow.
- (c) The ATO shall display its ATO certificate in a place accessible to the public in the principal place of business of the training organisation.

- (d) The certificate and training specifications issued to an ATO shall be available on the premises for inspection by the public and the Authority.

3.1.2.3 APPLICATION FOR ISSUANCE, AMENDMENT OR RENEWAL

- (a) An applicant for an ATO certificate and training specifications shall apply at least 120 calendar days before the beginning of any proposed training.
- (b) An applicant for an ATO certificate and training specification shall provide to the Authority that information shown in IS: 3.1.2.3.
- (c) The Authority may approve an ATO to provide the following—
 - (1) Any training activity that leads towards the issuance of a licence, rating, authorisation, or approval under these regulations;
 - (2) Training services necessary for an operator to meet the requirements of Part 9 of these regulations;
 - (3) Training services necessary for a maintenance organisation to meet the requirements of Part 6 of these regulations;
 - (4) Special curricula training designed to meet—
 - (i) Qualification-based training requirements, including those deemed acceptable through the approval of an “alternative means of compliance” mechanism; or
 - (ii) Competency-based training and assessment requirements; or
 - (iii) Those training requirements deemed acceptable through the approval of an “alternative means of compliance” mechanism.
- (d) An applicant for an ATO certificate shall ensure that the facilities and equipment described in its application are—
 - (1) available for inspection and evaluation prior to approval; and

- (2) in place and operational at the location of the proposed ATO prior to issuance of a certificate under this Subsection.
- (e) The Authority—
 - (1) shall issue to an applicant who meets the requirements for an ATO by Grenada and is approved by the Authority an ATO Certificate and Training Specifications;
 - (2) may, when satisfied that an ATO, approved by another Contracting State meets the requirements of these Regulations, accept an Approved Training Organisation Certificate and Training Specifications issued by the Contracting State.
- (f) The Authority may deny, suspend, revoke, or terminate an organisation's ATO certificate under this Subsection if the Authority finds that the organisation—
 - (1) held an ATO certificate that was revoked, suspended, or terminated within the previous 5 years; or
 - (2) employs or proposes to employ a person who—
 - (i) was previously employed in a management or supervisory position by another organisation whose ATO certificate was revoked, suspended, or terminated within the previous 5 years;
 - (ii) exercised control over another organisation whose certificate has been revoked, suspended, or terminated within the last 5 years; and
 - (iii) contributed materially to the revocation, suspension, or termination of that ATO certificate and who will be employed in a management or supervisory position, or who will be in control of or have a substantial ownership interest in the first mentioned organisation.
 - (3) Has provided incomplete, inaccurate, fraudulent, or false information for an ATO certificate.
- (g) At any time, the Authority may amend an ATO certificate—

- (1) on the Authority's own initiative, under applicable Grenada legislation; or
 - (2) upon timely application by the certificate holder.
- (h) An ATO shall file an application to amend an ATO certificate at least 60 calendar days prior to the applicant's proposed effective amendment date unless a different filing period is approved by the Authority.
- (i) The Authority may issue an ATO certificate to an applicant—
 - (1) for an ATO inside or outside of Grenada; and
 - (2) whose business office or primary location, or both are located inside or outside Grenada.

Implementing Standard: See IS: 3.1.2.3 for certificate information needed by the Authority.

3.1.2.4 DURATION OF CERTIFICATE

- (a) An ATO certificate expires, unless surrendered, suspended, or revoked—
 - (1) 12 calendar months after the certificate was issued;
 - (2) on the date that any change in ownership of the school occurs;
 - (3) on the date of any significant change in the school's facilities occurs; or
 - (4) upon notice by the Authority that the school has failed for more than 60 days to maintain the required facilities, aircraft, or personnel.
- (b) An exemption to paragraph 3.1.2.4(a)(2) will be granted provided that within 30 days—
 - (1) the certificate holder makes application for an appropriate amendment to the certificate; and
 - (2) no significant change in the facilities, operating personnel, or approved training courses is involved.

- (c) If the Authority suspends, revokes, or terminates an ATO certificate issued pursuant to this part, the holder of that certificate shall return the certificate to the Authority within five working days after being notified that the certificate is suspended, revoked, or terminated.

3.1.2.5 AUTHORITY TO INSPECT

- (a) The Authority may, at any time, inspect an ATO on the ATO's premises to determine the organisation's continuing compliance with the requirements of this part.
- (b) Inspections will be conducted at least annually.
- (c) After an inspection is conducted, the ATO will be notified, in writing, of any deficiencies identified during the inspection.
- (d) Inspections will also be performed on an applicant for, or the holder of, an ATO certificate held outside the authorising Contracting State. This inspection may be delegated to the Authority of the State where the ATO is located, provided an arrangement exists.

3.1.2.6 ADVERTISING LIMITATIONS

- (a) An ATO shall not—
 - (1) advertise as an ATO certificated under this part until the Authority has issued an ATO certificate and associated training specifications to the ATO;
 - (2) make, either orally or in writing, any statement relating to its ATO certification and training specifications that is false or designed to mislead any person contemplating enrolment in that ATO;
 - (3) advertise that the ATO is certified unless it clearly differentiates between courses that have been approved under this Part and those that have not been approved under this part;
 - (4) include the ATO certificate number whenever advertising as an ATO that is certificated under this part,
- (b) An ATO whose certificate has been surrendered, suspended, revoked, or terminated shall promptly—

- (1) remove all indications, including signs, wherever located, that the ATO was certified by the Authority; and
- (2) notify all advertising agents, and advertising media employed by the certificate holder to cease all advertising indicating that the ATO is certified by the Authority.

3.1.3 Location and Facilities

3.1.3.1 FACILITIES, EQUIPMENT, AND MATERIAL

- (a) An ATO shall provide facilities, equipment, and material equal to the standards currently required for the issue of the certificate and rating that it holds. The facility shall be acceptable to the Authority.
- (b) The training organization shall have, or have access to, the necessary information, equipment, training devices and material to conduct the courses for which it is approved.
- (c) Any training devices used by the ATO shall be qualified according to requirements established by the Authority, and their use shall be approved by the Authority to ensure that they are appropriate to the task.
- (d) An ATO shall not make a substantial change in facilities, equipment, or material that have been approved for a particular curriculum, unless that change is approved by the Authority in advance.
- (e) An ATO with approved AMT courses shall not make any change in the ATO's location unless the change is approved by the Authority in advance.
- (f) If the certificate holder desires to change the location of the ATO, the certificate holder shall notify the Authority, in writing, at least 30 days before the date of the relocation. The Authority may prescribe the conditions under which the ATO may operate while it is changing its location or housing facilities. If the certificate holder changes the location of the ATO without notification, the certificate shall be revoked.
- (g) An ATO shall establish and maintain a principal business office that is physically located at the address shown on its certificate.
- (h) The principal business office of an ATO shall not be shared with, or used by, another ATO.

- (i) An ATO shall ensure that—
 - (1) each room, training booth, or other space used for instructional purposes is heated, lighted, and ventilated to conform to local building, sanitation, and health codes; and
 - (2) the facilities used for instruction are not routinely subject to significant distractions caused by flight operations and maintenance operations at the airport.
- (j) An ATO shall maintain the records required by this part in facilities adequate for that purpose.
- (i) An ATO with approved AMT courses shall have and maintain the following instructional equipment as is appropriate to the rating sought—
 - (1) various kinds of airframe structures, airframe systems and components, powerplants, and powerplant systems and components (including propellers), of a quantity and type suitable to complete the practical projects required by its approved curricula;
 - (2) at least one aircraft of a type acceptable to the Authority;
 - (3) the equipment required by paragraph 3.1.3.1(k)(1) need not be in an airworthy condition, and if damaged prior to use by the ATO, shall have been repaired enough for complete assembly.
- (j) An ATO with an AMT rating shall have airframes, powerplants, propellers, appliances, and components thereof, to be used for instruction and from which students will gain practical working experience, and shall insure that the airframes, powerplants, propellers, appliances, and components thereof be sufficiently diversified as to show the different methods of construction, assembly, inspection, and operation when installed in an aircraft for use.
- (k) An ATO with an AMT rating shall ensure that it maintains a sufficient number of units of the material described in paragraph 3.1.3.1(k)(3) so that no more than eight students will work on any one unit at one time.

- (l) An ATO with an AMT rating using an aircraft for instructional purposes that does not have retractable landing gear and wing flaps, shall provide training aids, or operational mock-ups of the retractable landing gear and wing flaps which are acceptable to the Authority.
- (m) An ATO with an AMT rating, seeking an additional AMT rating, shall have at least the facilities, equipment, and materials appropriate to the rating sought.
- (n) An ATO with an AMT rating shall maintain, on the premises and under the full control of the ATO, an adequate supply of material, special tools, and shop equipment used in constructing and maintaining aircraft as is appropriate to the approved curriculum of the ATO, in order to assure that each student will be properly instructed.
- (o) An ATO with an AMT rating shall insure that the special tools and shop equipment required by paragraph (h) be in satisfactory working condition for instructional and practice purposes.

Implementing Standard: See IS: 3.1.3.1 for specific requirements for facilities for AMT courses.

3.1.3.2 PERSONNEL REQUIREMENTS

- (a) The ATO shall employ an Accountable Manager responsible for ensuring that it is in compliance with the requirements for an approved organisation.
- (b) The ATO shall employ a Quality Manager responsible for the quality system.
- (c) The Quality Manager and the Director of Training shall report directly to the Accountable Manager.
- (d) The ATO shall employ the necessary personnel to plan, perform, and supervise the training to be conducted.
 - (1) for instructing flight crew curricula—
 - (i) A Director of Training;
 - (ii) A CFI, as applicable;

- (iii) A CGI, as applicable; and
 - (iv) An adequate number of GIs and FIs relevant to the courses provided.
 - (2) for instructing maintenance curricula—
 - (i) A Director of Training; and
 - (ii) An adequate number of instructors relevant to the courses provided.
- (e) Each instructor to be used for training shall have received the appropriate training and shall hold the appropriate licences and/or ratings as required by Part 2 of these regulations.
- (f) The competence of instructional personnel shall be in accordance with procedures and of a level acceptable to the Authority.
- (g) The ATO shall ensure that all instructional personnel receive initial and recurrent training appropriate to their assigned duties and responsibilities.
- (h) The training programme established by the ATO shall include training in knowledge and skills related to human performance.
- (i) An ATO shall maintain, a sufficient number of management personnel who are qualified and competent to perform required duties;
- (j) A management representative, and all personnel who are designated by the ATO to conduct and direct student training, shall be able to understand, read, write, and fluently speak the English language.
- (k) The persons listed in this subsection may serve in more than one position for an ATO, provided that person is qualified for each position.
- (i) An ATO shall have designated, and shall maintain, a sufficient number of approved evaluators to provide required checks and tests to graduation candidates within 7 calendar days of training completion for any curriculum leading to airman licenses or ratings, or both.

3.1.3.3 QUALITY SYSTEM AND QUALITY ASSURANCE PROGRAMME

- (a) The ATO shall establish a quality system and a quality assurance programme, acceptable to the Authority that shall ensure that training and instructional practices comply with all relevant requirements.
- (b) The ATO quality system and quality assurance programme shall be established in accordance with the instruction and information prescribed in IS 3.1.3.3.

3.1.3.4 ATO PROCEDURES MANUAL – GENERAL REQUIREMENTS

- (a) The ATO shall provide an ATO Procedures Manual, approved by the Authority, for the use and guidance of personnel concerned. This manual may be issued in separate parts and shall contain at least the following information—
 - (1) A general description of the scope of training authorised under the training specifications issued to the ATO;
 - (2) The content of the training programmes offered, including the courseware and equipment to be used;
 - (3) A description of the organisation's quality system;
 - (4) A description of the organisation's facilities;
 - (5) The name, duties, and qualifications of the person designated as the Accountable Manager;
 - (6) A description of the duties and qualifications of the personnel responsible for planning, performing, and supervising the training;
 - (7) A description of the procedures used to establish and maintain the competence of instructional personnel;
 - (8) A description of the method used for the completion and retention of the training records;
 - (9) A description, when applicable, of additional training needed to comply with an operator's or maintenance organisation's procedures and requirements; and

- (10) When the Authority has authorised an ATO to conduct the testing required for the issuance of a licence or rating in accordance with Section 3.1.3.5 of this part, a description of the selection, role, and duties of authorised personnel, as well as the applicable requirements established by the Authority.
- (b) The ATO shall ensure that the ATO Procedures Manual is amended as necessary to keep the information contained therein up-to-date.
- (c) The ATO shall promptly furnish copies of all amendments to the ATO Procedures Manual to the Authority and all organisations and personnel to which the manual has been issued.

3.1.3.5 ATO APPROVED FOR TESTING

- (a) The Authority may authorise an ATO to conduct the testing required for the issuance of a licence or rating.
- (b) The ATO personnel authorised to conduct the testing shall be approved by the Authority.

3.1.3.6 APPROVAL OF TRAINING PROGRAM

- (a) Each ATO shall apply to the Authority for training program approval.
- (b) Each applicant for training program approval shall indicate in the application—
 - (1) which courses are part of the core curriculum and which courses are part of the speciality curriculum;
 - (2) which requirements of Part 2 of these Regulations would be satisfied by the curriculum or curricula; and
 - (3) which requirements of Part 2 of these Regulations would not be satisfied by the curriculum or curricula.
- (c) After an ATO begins operations under an approved training program, the Authority may require the ATO to make revisions to that training program if the Authority finds that the certificate holder is not meeting the provisions of its approved training program.
- (d) If the Authority requires an ATO to make revisions to an approved training program and the ATO does not make those required

revisions within 30 calendar days, the Authority may suspend, revoke, or terminate the certificate under the provisions of Paragraph 3.1.2.3(f).

3.1.3.7 TRAINING PROGRAM CURRICULUM REQUIREMENTS

- (a) An ATO shall ensure that a training program curriculum it submits to the Authority for approval meets the applicable requirements and contains—
 - (1) a syllabus for each proposed curriculum;
 - (2) minimum aircraft and flight training equipment requirements for each proposed curriculum;
 - (3) minimum instructor and evaluator qualifications for each proposed curriculum;
 - (4) a curriculum for initial training and continuing training of each instructor or evaluator employed to instruct in a proposed curriculum; and
 - (5) for each curriculum that provides for the issuance of a license or rating in fewer than the minimum hours prescribed by Part 2 of these Regulations—
 - (i) a means of demonstrating the ability to accomplish such training in the reduced number of hours; and
 - (ii) a means of tracking student performance.
- (b) An ATO shall adhere to its approved curriculum.
- (c) An ATO shall not change its approved curriculum unless the change is approved by the Authority in advance.
- (d) An ATO shall show that for each proposed curriculum, the ATO has, and shall maintain, a sufficient number of instructors who are qualified to perform the duties to which they are assigned;
- (e) The training programme established by the ATO shall include training in knowledge and skills related to human performance.
- (f) The training programme for ATO personnel shall be contained in the ATO Procedures Manual.

3.1.3.8 SATELLITE ATOS

- (a) An ATO may conduct training in accordance with a training program approved by the Authority at a satellite ATO if—
 - (1) the facilities, equipment, personnel, and course content of the satellite ATO meet the applicable requirements;
 - (2) the instructors and evaluators at the satellite ATO are under the direct supervision of management personnel of the principal ATO;
 - (3) the certificate holder notifies the Authority in writing that a particular satellite ATO is to begin operations at least 60 days prior to proposed commencement of operations at that satellite ATO; and
 - (4) the certificate holder's training specifications reflect the name and address of the satellite ATO and the approved courses offered at the satellite ATO.
- (b) The Authority will issue training specifications which prescribe the operations required and authorised at each satellite ATO.

3.1.3.9 CHANGES REQUIRING NOTICE TO THE AUTHORITY

- (a) An ATO shall notify the Authority within 30 days of any of the following changes—
 - (1) the accountable manager;
 - (2) the instructional and evaluation staff;
 - (3) the housing, training facilities and equipment, procedures, curricula, and work scope that could affect the approval.
- (b) The Authority may prescribe the conditions under which an ATO may operate during such changes unless the Authority determines that the approval should be suspended.

3.1.3.10 AUTHORITY TO INSPECTION

- (a) The Authority may, at any time, inspect an ATO on the ATO's premises to determine the ATO's compliance with this part.

- (b) Inspections pursuant to Paragraph 3.1.3.10(a) will normally be repeated on a twelve month basis, which may be extended to a twenty-four month basis if, in the opinion of the Authority, the holder continues to meet the requirements under which it was originally certificated.
- (c) After an inspection pursuant to Paragraph 3.1.3.10(a) is made, the certificate holder will be notified, in writing, of any deficiencies found during the inspection.

3.1.3.11 DUTY PERIOD LIMITATIONS

- (a) A person who holds an FI licence shall not conduct more than 8 hours of flight training in any 24 consecutive-hour period.
- (b) Excluding briefing and debriefing, an FSTD instructor shall not conduct more than 8 hours of instruction in any 24-consecutive-hour period.
- (c) A student in a certificated AMT school may not be required to attend classes of instruction more than 8 hours in any day or more than 6 days or 40 hours in any 7-day period.

3.1.3.12 SAFETY MANAGEMENT SYSTEM

- (a) An ATO shall implement an SMS acceptable to the Authority as outlined in Part 1, Subpart 1.4 of these regulations.

3.1.4 Administrative

3.1.4.1 RECORD KEEPING

- (a) An ATO shall maintain a record for each trainee that contains—
 - (1) the name of the trainee;
 - (2) a copy of the trainee's license, if any, and medical certificate, if required;
 - (3) the name of the course and the make and model of flight training equipment used, if applicable;
 - (4) the trainee's prerequisite experience and course time completed;

- (5) the date the student graduated, terminated training, or transferred to another school;
 - (6) the trainee's performance on each lesson and the name of the instructor providing instruction;
 - (7) a current progress record for each trainee showing the practical projects or laboratory work completed or to be completed for each subject;
 - (8) the date and result of each knowledge test and end-of-course practical test and the name of the evaluator conducting the test(s); and
 - (9) the number of hours of additional training that was accomplished after any unsatisfactory practical test.
- (b) The Authority shall not consider a student's logbook as sufficient for the records required by Paragraph 3.1.4.1(a).
- (c) An ATO shall maintain a record for each instructor or evaluator designated to instruct a course approved in accordance with this part that indicates that the instructor or evaluator has complied with the applicable requirements of this part.
- (d) An ATO shall—
 - (1) maintain the records required by Paragraph 3.1.4.1(a) for at least 2 years following the completion of training, testing or checking;
 - (2) maintain the qualification records required by Paragraph 3.1.4.1(c) while the instructor or evaluator is in the employ of the certificate holder and for 2 years thereafter; and
 - (3) maintain the recurrent demonstration of proficiency records, if required by Paragraph 3.1.4.1(c), for at least 2 years.
- (e) An ATO shall provide the records required by this section to the Authority upon request, within a reasonable time, and shall store and maintain the records required by—

- (1) Paragraph 3.1.4.1(b) at the ATO, or satellite ATO where the training, testing, or checking, if appropriate, occurred, or at another location acceptable to the authority; and
 - (2) Paragraph 3.1.4.1(c) at the ATO or satellite ATO where the instructor or evaluator is primarily employed, or at another location acceptable to the authority.
- (f) An ATO shall provide to a trainee, upon request and at a reasonable time, a copy of his or her training records.
- (g) an ATO shall keep a current record of each student enrolled, showing, if applicable—
 - (1) the instruction credited under Subsection 3.4.2.6, if any; and
 - (2) the authenticated transcript of grades from a school previously attended.

3.1.4.2 GRADUATION CERTIFICATES AND TRANSCRIPTS

- (a) An ATO shall issue upon completion of training a graduation certificate to each student who completes its approved course of training.
- (b) An ATO shall include in each graduation certificate—
 - (1) the name of the school and the certificate number of the ATO;
 - (2) the name of the graduate to whom it was issued;
 - (3) the approved curriculum title;
 - (4) the date of graduation;
 - (5) a statement that the student has satisfactorily completed each required stage of the approved course of training including the tests for those stages;
 - (6) an authentication by an official of the school; and
 - (7) a statement showing the cross-country flight training that the student received in the course of training, if applicable.

- (c) An ATO shall not issue a graduation certificate to a student, or recommend a student for a license or rating, unless the student has—
 - (1) completed the training specified in the approved course of training; and
 - (2) passed the required final tests.

3.1.4.3 TRANSCRIPTS

- (a) Upon request, an ATO shall provide a transcript of a student's grades to each student who is graduated from that ATO or who leaves it before being graduated.
- (b) An ATO shall include in the transcript required by Paragraph 3.1.4.3(a)—
 - (1) the curriculum in which the student was enrolled;
 - (2) whether the student satisfactorily completed that curriculum;
 - (3) the final grades the student received; and
 - (4) an authentication by an official of the school.

3.2 FLIGHT CREW TRAINING

3.2.1 General

3.2.1.1 TRAINING COURSES

- (a) The Authority may approve the following courses of instruction to an applicant provided the applicant meets the requirements of Subsection 3.1.2.3—
 - (1) licensing and rating courses.
 - (i) private pilot course. (IS: 3.2.1.1 Appendix A)
 - (ii) commercial pilot course. (IS: 3.2.1.1 Appendix B)
 - (iii) instrument rating course. (IS: 3.2.1.1 Appendix C)
 - (iv) airline transport pilot course. (IS: 3.2.1.1 Appendix D)

- (v) flight instructor course. (IS: 3.2.1.1 Appendix E)
- (vi) flight instructor instrument course. (IS: 3.2.1.1 Appendix F)
- (vii) ground instructor course. (IS: 3.2.1.1 Appendix G)
- (viii) additional aircraft category or class rating course. (IS: 3.2.1.1 Appendix H)
- (ix) aircraft type rating course. (IS: 3.2.1.1 Appendix I)
- (2) Special preparation courses. (IS: 3.2.1.1 Appendix J)
 - (i) pilot refresher course;
 - (ii) flight instructor refresher course
 - (iii) ground instructor refresher course;
 - (iv) agricultural aircraft operations course;
 - (v) rotorcraft external-load operations course;
 - (vii) special operations course;
 - (viii) test pilot course.
- (3) pilot ground school course. (IS: 3.2.1.1 Appendix K)

3.2.2 Flight Training Equipment Requirements

3.2.2.1 APPLICABILITY

- (a) This section prescribes—
 - (1) The personnel and aircraft requirements for an ATO certificate; and
 - (2) The facilities that an ATO shall have available on a continuous basis.

3.2.2.2 AIRPORT REQUIREMENTS

- (a) Each applicant for, and holder of an ATO certificate shall show that it has continuous use of each airport at which training flights originate, and that the airport has an adequate runway and the necessary equipment.

Implementing Standard: See IS: 3.2.2.2 for specific runway and equipment requirements.

3.2.2.3 AIRCRAFT REQUIREMENTS

- (a) An ATO shall ensure, for each aircraft used for flight instruction and solo flights—
- (1) Except for flight instruction and solo flights in a curriculum for agricultural aircraft operations, external load operations, and similar aerial work operations, that the aircraft has a standard certificate of airworthiness issued by the Authority, or a foreign equivalent acceptable to the Authority;
 - (2) That each aircraft is maintained and inspected in accordance with the requirements of Part 8, Subpart 8.3; and
 - (3) That each aircraft is equipped as provided in the training specifications for the approved course for which it is used.
- (b) Except as provided in Paragraph 3.2.2.3(c), an ATO shall ensure that each aircraft used for flight instruction is at least a two-place aircraft with engine power controls and flight controls that are easily reached and that operate in a conventional manner from both pilot stations.
- (c) An ATO may use aeroplanes with controls such as nose-wheel steering, switches, fuel selectors, and engine air flow controls that are not easily reached and operated in a conventional manner by both pilots for flight instruction if the certificate holder determines that the flight instruction can be conducted in a safe manner considering the location of controls and their nonconventional operation, or both.
- (d) An ATO shall ensure that each aircraft used in a course involving IFR operations is equipped and maintained for IFR operations.
- (e) The Authority may approve aircraft with a restricted airworthiness certificate for use in the agricultural aircraft operations, external-load operations, test pilot, and special operations courses listed in

Paragraph 3.2.1.1(a)(2), if its use for training is not prohibited by the aircraft's operating limitations.

3.2.2.4 FLIGHT SIMULATORS AND FLIGHT TRAINING DEVICES

- (a) An ATO shall show that each flight simulator and flight training device used for training, testing, and checking will be or is specifically qualified and approved by the Authority for—
 - (1) each manoeuvre and procedure for the make, model, and series of aircraft, set of aircraft, or aircraft type simulated, as applicable; and
 - (2) each curriculum or training course in which the flight simulator or flight training device is used, if that curriculum or course is used to satisfy any requirement of these regulations.
- (b) A holder of an ATO certificate shall show that each of its flight simulators and flight training devices—
 - (1) represent the aircraft for which the course is approved;
 - (2) is used only for training given by an authorised instructor; and
 - (3) is not used for more than 25 percent of the total flight training hour requirements.
- (c) Each ATO shall ensure, prior to use, that the approval required by this section includes—
 - (1) the set of aircraft or type aircraft;
 - (2) if applicable, the particular variation within type for which the training, testing, or checking is being conducted; and
 - (3) the particular manoeuvre, procedure, or crewmember function to be performed.
- (d) Each ATO shall ensure that each flight simulator or flight training device used by the ATO is—
 - (1) maintained to ensure the reliability of the performances, functions, and all other characteristics that were required for qualification;

- (2) modified to conform with any modification to the aircraft being simulated if the modification results in changes to performance, function, or other characteristics required for qualification;
 - (3) given a functional preflight check each day before being used; and
 - (4) provided with a discrepancy log in which the instructor or evaluator, at the end of each training session, enters each discrepancy.
- (e) Unless otherwise authorised by the Authority, each ATO shall ensure that each component on a flight simulator or flight training device used by it is operative if the component is essential to, or involved in, the training, testing, or checking of airmen.
- (f) The Authority will not restrict ATO instructors or students to specific—
 - (1) route segments during line-oriented flight training scenarios; or
 - (2) visual data bases replicating a specific customer's bases of operation.
- (g) An ATO may request evaluation, qualification, and continuing evaluation for qualification of flight simulators and flight training devices without—
 - (1) holding an air operator certificate; or
 - (2) having a specific relationship to a holder of an air operator certificate.

3.2.3 Additional Personnel Requirements

3.2.3.1 APPLICABILITY

- (a) This section prescribes the personnel and flight training equipment requirements for an ATO that is conducting training necessary to meet the requirements of Part 2 of these Regulations.

3.2.3.2 INSTRUCTOR ELIGIBILITY REQUIREMENTS

- (a) An ATO shall not employ a person as an instructor in a flight training course that is subject to approval by the Authority unless that person—
 - (1) is at least 18 years of age;
 - (2) is able to read, write, speak, and understand the English language;
 - (3) if instructing in an aircraft in flight, holds a flight instructor certificate;
 - (4) if instructing in simulated flight, satisfies the requirements of Paragraph 3.2.3.2(c); and
 - (5) meets at least one of the following requirements—
 - (i) meets the aeronautical experience requirements for a commercial pilot license, excluding the required hours of instruction in preparation for the commercial pilot practical test;
 - (ii) if instructing in a flight simulator or flight training device that represents an aeroplane requiring a type rating or if instructing in a curriculum leading to the issuance of an airline transport pilot license, meets the aeronautical experience requirements for an airline transport pilot; or
 - (iii) is employed as a flight simulator instructor or a flight training device instructor for an ATO providing instruction and testing to meet the requirements of Part 2 of these Regulations.
- (b) An ATO shall designate each instructor in writing for each approved course, prior to that person functioning as an instructor in that course.
- (c) Prior to initial designation, each flight and simulator flight instructor shall complete the requirements of IS: 3.2.3.2(a).

Implementing Standard: See IS: 3.2.3.2 for specific training eligibility requirements.

3.2.3.3 INSTRUCTOR AND EVALUATOR PRIVILEGES AND LIMITATIONS

- (a) An ATO may allow an instructor to provide—
 - (1) instruction for each curriculum for which that instructor is qualified;
 - (2) testing and checking for which that instructor is qualified; and
 - (3) instruction, testing, and checking intended to satisfy the requirements of this part.
- (b) An ATO whose instructor or evaluator is designated in accordance with the requirements to conduct training, testing, or checking in flight training equipment, may allow its instructor or evaluator to give endorsements required by Part 2 of these Regulations of these Regulations if that instructor or evaluator is authorised by the Authority to instruct or evaluate in a curriculum that requires such endorsements.
- (c) An ATO shall not allow an instructor to—
 - (1) excluding briefings and debriefings, conduct more than 8 hours of instruction in any 24-consecutivehour period, or more than 6 days or 40 hours in any 7 day period;
 - (2) provide flight training equipment instruction unless that instructor meets the requirements of paragraphs 3.2.3.4(a)(1) through 3.2.3.4(a)(4), and 3.2.3.4(b), as applicable; or
 - (3) provide flight instruction in an aircraft unless that instructor—
 - (i) meets the requirements of paragraphs 3.2.3.4(a)(1), 3.2.3.4(a)(2), and 3.2.3.4(a)(5);
 - (ii) holds a flight instructor certificate;
 - (iii) holds pilot licenses and ratings applicable to the category, class, and type aircraft in which instructing;

- (iv) if instructing or evaluating in an aircraft in flight while occupying a required crewmember seat, holds at least a valid second class medical certificate; and
- (v) meets the recency of experience requirements of Part 8, Subsections 8.10.1.33, 8.10.1.34, and 8.10.1.35.

3.2.3.4 INSTRUCTOR TRAINING AND TESTING REQUIREMENTS

- (a) Except as provided in Paragraph 3.2.3.4(c), prior to designation and every 12 calendar months beginning the first day of the month following an instructor's initial designation, a certificate holder shall ensure that each of its instructors meets the following requirements—
 - (1) each flight instructor or simulator flight instructor shall satisfactorily demonstrate to an authorised evaluator knowledge of, and proficiency in, instructing in a representative segment of each curriculum for which that instructor is designated to instruct under Subpart 3.4;
 - (2) each instructor shall satisfactorily complete an approved course of ground instruction in at least—
 - (i) the fundamental principles of the learning process;
 - (ii) elements of effective teaching, instruction methods, and techniques;
 - (iii) instructor duties, privileges, responsibilities, and limitations;
 - (iv) training policies and procedures;
 - (v) cockpit resource management and crew co-ordination; and
 - (vi) evaluation.
 - (3) Each instructor who instructs in a flight simulator or flight training device shall satisfactorily complete an approved course of training in the operation of the flight simulator, and an approved course of ground instruction, applicable to the training courses the instructor is designated to instruct, which shall include—

- (i) proper operation of flight simulator and flight training device controls and systems;
 - (ii) proper operation of environmental and fault panels; limitations of simulation; and
 - (iii) minimum equipment requirements for each curriculum.
- (4) Each flight instructor who provides training in an aircraft shall satisfactorily complete an approved course of ground instruction and flight training in an aircraft, flight simulator, or flight training device, which shall include—
 - (i) performance and analysis of flight training procedures and manoeuvres applicable to the training courses that the instructor is designated to instruct;
 - (ii) technical subjects covering aircraft subsystems and operating rules applicable to the training courses that the instructor is designated to instruct;
 - (iii) emergency operations;
 - (iv) emergency situations likely to develop during training; and
 - (v) appropriate safety measures.
- (5) Each instructor who instructs in flight training equipment shall pass a knowledge test and annual proficiency check—
 - (i) in the flight training equipment in which the instructor will be instructing; and
 - (ii) on the subject matter and manoeuvres of a representative segment of each curriculum for which the instructor will be instructing.
- (b) In addition to the requirements of Paragraphs 3.2.3.4(a)(1) through 3.2.3.4(a)(5), each certificate holder shall ensure that each instructor who instructs in a flight simulator that the Authority has approved for all training and all testing for the airline transport pilot licensing test, aircraft type rating test, or both, has met at least one of the requirements of IS: 3.2.3.2 (b).

- (c) The Authority will consider completion of a curriculum required by Paragraph 3.2.3.4(a) or (b) taken in the calendar month before or after the month in which it is due as taken in the month in which it was due for the purpose of computing when the next training is due.
- (d) The Authority may give credit for the requirements of Paragraph 3.2.3.4(a) or (b) to an instructor who has satisfactorily completed an instructor training course for a Part 9 certificate holder if the Authority finds such a course equivalent to the requirements of Paragraph 3.2.3.4(a) or (b).

Implementing Standard: See IS: 3.2.3.2 specific testing and training requirements for an ATO instructor.

3.2.3.5 EVALUATOR REQUIREMENTS

- (a) Except as provided by Paragraph 3.2.3.5(d), an ATO shall ensure that each person authorised as an evaluator—
 - (1) is approved by the Authority;
 - (2) is in compliance with Subsections 3.2.3.2, 3.2.3.3, and 3.2.3.4;
- (b) prior to designation, satisfactorily completes a curriculum within 12 calendar months that includes the following—
 - (1) evaluator duties, functions and responsibilities;
 - (2) methods, procedures and techniques for conducting required tests and checks;
 - (3) evaluation of pilot performance; and
 - (4) management of unsatisfactory tests and subsequent corrective action; and
 - (5) if evaluating in-flight training equipment, satisfactorily pass a knowledge test and annual proficiency check in a flight simulator or aircraft in which the evaluator will be evaluating.
- (c) For the purpose of computing when evaluator training is due, the Authority will consider that an evaluator who satisfactorily completes a curriculum required by Paragraph 3.2.3.5(a)(3) in the

calendar month before or the calendar month after the month in which it was due, to have taken it in the month it was due.

- (d) The Authority may give credit for the requirements of Paragraph 3.2.3.5(a)(3) to an evaluator who has satisfactorily completed an evaluator training course for an AOC holder if the Authority finds such a course equivalent to the requirements of Paragraph 3.2.3.5(a)(3).

3.2.3.6 ATO PERSONNEL

- (a) An ATO shall have adequate personnel, including certificated flight instructors, licensed ground instructors, and holders of a commercial pilot license with a lighter-than-air rating, if applicable, and a chief instructor who are qualified and competent to perform the duties assigned in each approved training course.
- (b) An instructor for ground or flight training shall hold a flight instructor certificate, ground instructor license, or commercial pilot license with a lighter-than-air rating, as appropriate, with ratings for the approved training course and any aircraft used in that course.

3.2.3.7 CHIEF INSTRUCTOR QUALIFICATIONS

- (a) To be designated as a chief instructor for an ATO course, a person shall meet one or more of the requirements of IS:3.2.3.7 as applicable.

Implementing Standard: See IS: 3.2.3.7. for chief instructor qualification requirements.

3.2.3.8 ASSISTANT CHIEF INSTRUCTOR QUALIFICATIONS

- (a) To be designated as an assistant chief instructor for an ATO course, a person shall meet the requirements of IS: 3.2.4.8.

Implementing Standard: See IS: 3.2.3.8 for assistant chief instructor qualification requirements.

3.2.3.9 CHECK INSTRUCTOR QUALIFICATIONS

- (a) To be designated as a check instructor for an ATO conducting student stage checks, end-of-course tests, and instructor proficiency checks under this part, a person shall meet the applicable requirements of IS: 3.2.4.9.

Implementing Standard: See of IS: 3.2.3.9 for check instructor qualification requirements.

3.2.3.10 INSTRUCTOR FLIGHT TRAINING

- (a) A person shall not give a student flight training under an approved course of training, unless he or she is a licensed flight instructor or commercial pilot with a lighter-than-air rating and, has the ratings and the minimum qualifications specified in the approved training course outline.
- (b) An ATO shall not authorise a student pilot to start a solo flight until the flight has been approved by an authorised instructor who is present at the origination.
- (c) A chief instructor or assistant chief instructor assigned to a training course shall complete, at least once every 12 calendar months, an approved syllabus of training consisting of ground or flight training, or both, or an approved flight instructor refresher course.
- (d) A licensed flight instructor or commercial pilot with a lighter-than-air rating who is assigned to a flight training course shall satisfactorily complete the following tasks, which shall be administered by the school's chief instructor, assistant chief instructor, or check instructor—
 - (1) Prior to receiving authorisation to train students in a flight training course, accomplish—
 - (i) a review of and a briefing on the objectives and standards of that training course; and
 - (ii) an initial proficiency check in each make and model of aircraft used in that training course in which that person provides training.
 - (2) Every 12 calendar months after the month in which the person last complied with Paragraph 3.2.3.10(d)(1)(ii), accomplish a proficiency check in one of the aircraft the person trains students.

3.2.3.11 INSTRUCTOR GROUND TRAINING

- (a) Except as provided in Paragraph 3.2.3.11(b), an instructor who is assigned to a ground training course, shall hold a flight or ground instructor license, or a commercial pilot license with a lighter-than-air rating with the appropriate rating for that course of training.

- (b) A person who does not meet the requirements of Paragraph 3.2.3.11(a) may be assigned ground training duties in a ground training course, if—
 - (1) the chief instructor who is assigned to that ground training course finds the person qualified to give that training; and
 - (2) the instructor serves under the supervision of the chief instructor or the assistant chief instructor who is present at the facility when the training is given.
- (c) An instructor shall not be used in a ground training course until he or she has been briefed in regard to the objectives and standards of that course by the chief instructor, assistant chief instructor, or check instructor.

3.2.3.12 CHIEF INSTRUCTOR RESPONSIBILITIES

- (a) During training, an ATO shall ensure that the chief instructor or an assistant chief instructor is available—
 - (1) at the ATO, or
 - (2) by telephone, radio, or other electronic means.

3.2.4 Operating Rules

3.2.4.1 APPLICABILITY

- (a) This section prescribes the operating rules applicable to an ATO and operating a course or training program curriculum approved in accordance with this Part.

3.2.4.2 PRIVILEGES

- (a) A Level 2 ATO may allow flight simulator instructors and evaluators to meet recency of experience requirements through the use of a flight simulator or flight training device if that flight simulator or flight training device is used in a course approved in accordance with Section 3.2.5.

- (b) The ATO may advertise and conduct approved pilot training courses in accordance with the certificate and any ratings that it holds.
- (c) A Level 1 ATO may credit towards the curriculum requirements of a course, previous training and pilot experience and knowledge, provided the student meets the requirements of IS: 3.2.5.2.

Implementing Standard: See IS: 3.2.5.2 for specific transfer credit requirements.

3.2.4.3 LIMITATIONS: ATO

- (a) An ATO shall—
 - (1) ensure that a flight simulator or flight training device freeze, slow motion, or repositioning feature is not used during testing or checking; and
 - (2) ensure that a repositioning feature is used during line operational simulation for evaluation and lineoriented flight training only to advance along a flight route to the point where the descent and approach phase of the flight begins.
- (b) When practical testing, flight checking, or line operational simulation is being conducted, the Level 2 ATO shall ensure that one of the following occupies each supporting crewmember position—
 - (1) a crewmember qualified as SIC in the aircraft category and class, provided that no flight instructor who is giving instruction may occupy a crewmember position; and
 - (2) a student, provided that no student may be used in a crewmember position with any other student not in the same specific course.
- (c) Maintenance of Personnel, Facilities, and Equipment: An ATO shall not provide training to a student who is enrolled in an approved course of training unless each airport, all flight training equipment, and each authorised instructor and evaluator continuously meet the requirements and the standards specified in the certificate holder's training specifications.
- (d) A certified ATO shall not require any student to attend classes of instruction more than 8 hours in any day or more than 6 days or 40 hours in any consecutive 7-day period.

3.2.4.4 LIMITATIONS: ENROLLED STUDENTS IN ACTUAL FLIGHT CURRICULA

- (a) A student pilot shall carry the following items on each aircraft used for flight training and solo flights—
- (1) a pre-takeoff and pre-landing checklist; and
 - (2) the operator's handbook or AFM for the aircraft if one is furnished by the manufacturer or copies of the handbook to each student using the aircraft.

3.2.4.5 LEVEL 1 ATO ENROLMENT DOCUMENTS

- (a) The holder of a Level 1 ATO certificate shall furnish each student, upon enrolment, with a copy of the following.
- (1) a certificate of enrolment containing—
 - (i) the name of the course in which the student is enrolled; and
 - (ii) the date of that enrolment.
 - (2) a copy of the student's training syllabus.
 - (3) for pilot students, a copy of the safety procedures and practices that describe—
 - (i) the use of facilities and the operation of its aircraft;
 - (ii) the weather minimums required by the school for dual and solo flights;
 - (iii) the procedures for starting and taxiing aircraft on the ramp;
 - (iv) fire precautions and procedures;
 - (v) redispatch procedures after unprogrammed landings, on and off airports;
 - (vi) aircraft discrepancies and write-offs;

- (vii) Securing of aircraft when not in use;
 - (viii) fuel reserves necessary for local and cross-country flights;
 - (ix) avoidance of other aircraft in flight and on the ground;
 - (x) minimum altitude limitations and simulated emergency landing instructions; and
 - (xi) a description of and instructions regarding the use of assigned practice areas.
- (4) A Level 1 ATO shall maintain a monthly listing of persons enrolled in each training course offered by the school.
- (b) A Level 1 ATO shall ensure that each training course for which it seeks approval meets the minimum curriculum requirements.

Implementing Standard: See IS: 3.2.5.5 for Level 1 training course contents.

3.2.4.6 ECCAA INSPECTION OF AN ATO

- (a) Each ATO shall allow the Authority to inspect the ATO personnel, facilities, equipment, materials, and records at any reasonable time and in any reasonable place to determine the ATO's compliance with these regulations and with the ATO certificate and training specifications issued to the ATO.

3.3 OTHER CREWMEMBERS

3.3.1.1 SPECIAL CURRICULA

- (a) An ATO may apply for approval to conduct a special course of airman training for which a curriculum is not prescribed in the implementing standards, if the applicant shows that the training course contains features that could achieve a level of pilot proficiency equivalent to that achieved by a training course prescribed in the requirements of Part 2 of these Regulations, as applicable.

3.4 AIRMEN OTHER THAN FLIGHTCREW**3.4.1 Other Than AMT Courses****3.4.1.1 APPLICABILITY**

- (a) This Subpart provides an alternative means to accomplish flight training required by Parts 2 or 9.
- (b) Certification under this Subpart is not required for training that is—
 - (1) approved under the provisions of Part 9 of these Regulations; and
 - (2) conducted under Part 2 of these Regulations, unless that Part requires certification under this Part.

3.4.1.2 OTHER TRAINING COURSES

- (a) The Authority may approve the following courses of instruction to an applicant for, or holder of an ATO certificate, provided the applicant meets the applicable requirements of 3.1.2.2(d)—
 - (1) flight operations officer.
 - (2) flight engineer.
 - (3) cabin crew.
 - (4) material handlers.
 - (5) ground servicing personnel.
 - (6) security personnel.
 - (7) others approved by the Authority.
- (b) The Authority will approve a course for which the application is made if the ATO, or ATO applicant, shows that the course contains a curriculum that will achieve a level of competency equal to, or greater than, that required by the applicable Parts of these regulations.

3.4.1.3 APPLICATION, DURATION, AND RENEWAL

- (a) Application. An ATO proposing to train flight operations officers shall submit an application containing—
 - (1) instruction in the areas of knowledge and topics;
 - (2) a minimum of 200 total course hours; and
 - (3) an outline of the major topics and subtopics to be covered and the number of hours proposed for each.
- (b) Duration and renewal.
 - (1) the authority to operate an aircraft flight operations officer licensing course expires 24 months after the last day of the month of issuance of the authority;
 - (2) the holder of an approval for an aircraft flight operations officer licensing course shall apply to the Authority for renewal within 30 days prior to the expiration date.
- (c) Instruction.
 - (1) the holder of a course approval shall ensure that it maintains an adequate number of instructors who maintain a 24 calendar-month average of at least 80 percent of the graduates of that school passing the practical test on the first attempt.

Implementing Standard: See IS: 3.2.5.5 for course approval requirements.

3.4.2 AMT Training Courses**3.4.2.1 APPLICABILITY**

- (a) This Subpart prescribes the requirements for—
 - (1) issuing ATO certificates and ratings;
 - (2) conducting licensing courses and associated ratings for AMTs; and
 - (3) instructing the general operating rules for the holders of AMT licenses and ratings.

3.4.2.2 AMT TRAINING COURSES

- (a) The Authority may approve courses of instruction in accordance with the ratings defined in IS 2.5.4.3 of Part 2 of these Regulations, provided the ATO meets the requirements of 3.1.2.2.

3.4.2.3 GENERAL CURRICULUM REQUIREMENTS

- (a) An ATO shall have an approved curriculum that is designed to qualify its students to perform the duties of an AMT for a particular rating or ratings.
- (b) The curriculum shall cover the subjects and items prescribed in Appendix 2 of Part 2 of these Regulations.
- (c) An ATO shall teach each subject to at least the indicated level of proficiency defined in Appendix 2 of Part 2 of these Regulations
- (d) The certificate holder shall maintain a curriculum that shows—
 - (1) the required practical projects to be completed;
 - (2) for each subject, the proportions of theory and other
 - (3) instruction to be given; and
 - (4) a list of the minimum required tests to be given.
- (e) An ATO may issue AMT licenses of competency to persons successfully completing speciality courses provided that all requirements are met and the licenses of competency specifies the aircraft make and model to which the license applies.

3.4.2.4 AMT TRAINING PROGRAM PROVIDERS

- (a) An ATO may apply to the Authority for approval for an AMT training program.
- (b) An AOC holder, an AMO, or an ATO may apply to the Authority for approval for an AMT training program that meets the requirements of this Subpart.

Implementing Standard: See Part 2, Appendix 2, for AMT training program curriculum requirements.

3.4.2.5 INSTRUCTOR REQUIREMENTS

- (a) An ATO shall provide the number of instructors holding appropriate licenses and ratings, issued under Part 2, Section 2.5.4 of these Regulations, regulations that the Authority determines is necessary to provide adequate instruction and supervision of the students, including at least one such instructor for each 25 students in each class held in a shop where students are performing actual tasks appropriate to the curriculum.
- (b) An ATO may provide specialised instructors, who are not licensed in accordance with Part 2 of these Regulations, to teach mathematics, physics, basic electricity, basic hydraulics, drawing, and similar subjects.
- (c) An ATO shall maintain a list of the names and qualifications of such specialised instructors, and upon request, provide a copy of the list, with a summary of the qualifications of each specialised instructor to the Authority.

3.4.2.6 ATTENDANCE AND CREDIT FOR PRIOR INSTRUCTION OR EXPERIENCE

- (a) An ATO may credit a student with instruction or previous experience as follows—
 - (1) Instruction satisfactorily completed at—
 - (i) an accredited university, college, or junior college;
 - (ii) an accredited vocational, technical, trade or high school;
 - (iii) a military technical school; or (iv) an ATO.
 - (2) Previous aviation maintenance experience comparable to required curriculum subjects—
 - (i) by determining the amount of credit to be allowed by documents verifying previous experience; and
 - (ii) by giving the student a test equal to the one given to students who complete the comparable required curriculum subject at the ATO.

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- (3) Credit to be allowed for previous instruction —
 - (i) by an entrance test equal to one given to the students who complete a comparable required;
 - (ii) by an evaluation of an authenticated transcript from the student's former school; or
 - (iii) in the case of an applicant from a military school, only on the basis of an entrance test.
 - (b) An ATO may credit a student seeking an additional rating with previous satisfactory completion of the common portions of an AMT's curriculum.
 - (c) An ATO shall show hours of absence allowed and how it will make missed material available to the student.

PART 3: - IMPLEMENTING STANDARDS FOR AVIATION TRAINING ORGANISATIONS

For ease of reference, the number assigned to each implementing standard corresponds to its associated regulation. For example, IS: 3.1.2.3 would reflect a standard required in subsection 3.1.2.3.

IS: 3.1.2.3 APPLICATION FOR ISSUANCE OR AMENDMENT OF ATO CERTIFICATE

- (a) An ATO shall provide to the Authority the following information:
 - (1) A statement showing that the minimum qualification requirements for each management position are met or exceeded;
 - (2) A statement acknowledging that the applicant shall notify the Authority within 10 working days of any change made in the assignment of persons in the required management positions;
 - (3) The proposed training specifications requested by the applicant;
 - (4) The proposed evaluation authorisation;
 - (5) A description of the flight training equipment that the applicant proposes to use;

- (6) A description of the applicant's training facilities, equipment, and qualifications of personnel to be used, and proposed evaluation plans;
- (7) A training program curriculum, including syllabi, outlines, courseware, procedures, and documentation to support the items required in 3.1.2.3, upon request by the Authority;
- (8) A description of a recordkeeping system that will identify and document the details of training, qualification, and licensing of students, instructors, and evaluators;
- (9) A description of the quality control measures proposed;
- (10) A method of demonstrating the applicant's qualification and ability to provide training for a license or rating in fewer than the minimum hours prescribed in Part 2 of these Regulations if the applicant proposes to do so.

IS: 3.1.3.1 FACILITIES FOR AMT COURSES

- (a) An ATO shall have facilities the Authority determines are appropriate for the maximum number of students expected to be taught at any time, as follows:
 - (1) An enclosed classroom;
 - (2) Suitable facilities arranged to assure proper separation from the working space, for parts, tools, materials, and similar articles;
 - (3) Suitable area for application of finishing materials, including paint spraying;
 - (4) Suitable areas equipped with wash-tank and degreasing equipment with air pressure or other adequate cleaning equipment;
 - (5) Suitable facilities for running engines;
 - (6) Suitable area with adequate equipment, including benches, tables, and test equipment, to disassemble, service, and inspect—

- (i) Ignition systems, electrical equipment, and appliances;
 - (ii) Carburettors and fuel systems; and
 - (iii) Hydraulic and vacuum systems for aircraft, aircraft engines, and their appliances.
- (7) Suitable space with adequate equipment, including tables, benches, stands, and jacks, for disassembling, inspecting, and rigging aircraft;
- (8) Suitable space with adequate equipment for disassembling, inspecting, assembling, troubleshooting, and timing engines.

IS: 3.1.3.3 QUALITY SYSTEM AND QUALITY ASSURANCE PROGRAMME

- (a) In order to show compliance with 3.1.3.3 of this part, an ATO shall establish its quality system and quality assurance programme in accordance with the instruction and information contained in the following paragraphs.
 - (1) Quality Policy and Strategy
 - (i) The ATO shall describe how it performs the organisation and management of its training operations in order to ensure it operates in conformity with the ATO Procedures Manual as approved by the Authority. A formal, written quality policy statement shall be prepared that establishes a commitment by the accountable manager of the ATO to achieving and maintaining the highest possible standards in quality. The quality policy shall reflect the achievement of continued compliance with all applicable Grenada regulations and any additional standards specified by the ATO.
 - (ii) The accountable manager of the training organisation shall have the overall responsibility for the standard of quality, including the frequency, format, and structure of the internal management review and analysis activities, and may delegate to a quality manager the responsibility for the tasks defined under paragraph 2 of this IS. Depending on the size and scope of the ATO and the requirements of the Authority, the accountable manager and quality manager may interact in different ways.

(2) Quality Manager

- (i) The primary role of the quality manager is to verify, by monitoring activities in the field of training, that the standards as established by the ATO and any additional requirements of the Authority are being carried out properly.
- (ii) The quality manager shall be responsible for ensuring that the quality system is properly documented, implemented, maintained, and continuously reviewed and improved.
- (iii) The quality manager shall:
 - (A) Report directly to the Director of Training (see Note); and
 - (B) Have unencumbered access to all parts of the ATO.

Note: When the Director of Training is not the accountable manager, reporting mechanisms shall be instituted to ensure that the accountable manager is aware of all issues impacting the quality of the training services being provided by the affected.

- (iv) The quality manager shall be responsible for ensuring that personnel training related to the quality system is conducted.
- (3) Quality Assurance

- (i) The term “quality assurance” is frequently misunderstood to mean the testing and checking of products and services. ATOs that do only checking and testing activities are merely applying quality control measures, which are designed to catch product and service defects but not necessarily prevent them. For example, an ATO that administers exams at the end of the training syllabus, only to discover that a large proportion of the students failed to meet the required standard, has only identified a deficiency in expected results. The implication may be that there is a problem

with the training programme, or the instructor, or even the student selection criteria. In this instance, the ATO has no idea what the real problem is or what to do about it. Quality control by itself provides limited value without the suite of complementary activities that comprise quality assurance.

- (ii) Quality assurance, on the other hand, attempts to improve and stabilise the training process and to identify and avoid, or at least minimise, issues that lead to problems in the first place. It continuously verifies that standards are adhered to throughout the training process by introducing various checkpoints and controls. It further introduces a system of audits to ensure that documented policies, processes, and procedures are consistently followed. It is the “assurance” part of quality management.
- (iii) A quality assurance plan for an ATO shall encompass well-designed and documented policies, processes, and procedures for at least the following activities:
 - (A) Monitoring training services and process controls;
 - (B) Monitoring assessment and testing methods;
 - (C) Monitoring personnel qualifications and training;
 - (D) Monitoring training devices and equipment qualification, calibration, and functionality, as applicable;
 - (E) Conducting internal and external audits;
 - (F) Developing, implementing, and monitoring corrective and preventive actions and associated reporting systems; and
 - (G) Utilising appropriate statistical analysis to identify and respond appropriately to trends.
- (iv) An effective quality assurance plan will aid significantly in the ATO’s compliance with requirements, its conformity with the standards, and the adequacy of its training activities. Taking the ATO’s performance to a higher level requires a structure that ensures that the

combined quality assurance effort of the employees reaches its full potential.

- (v) Quality assurance plans by themselves are subject to breakdowns in human performance and therefore require robust organisational structures that underpin the quality assurance efforts of individuals. It is for this reason that ATOs and States shall embrace the quality system governance model described in this IS.
- (4) Quality System for the ATO
- (i) A quality system is the aggregate of all the ATO's activities, plans, policies, processes, procedures, resources, incentives, and infrastructure working in unison towards a total quality management approach. It requires an organisational construct, complete with policies, processes, procedures, and resources, that underpins a commitment to achieving excellence in product and service delivery through the implementation of best practices in quality management.
 - (ii) An ATO that supports its quality assurance plan with a well-designed, -implemented, and -maintained quality system structure shall be able to easily and repeatedly achieve results that exceed both the requirements of the applicable national regulations and the expectations of the ATO's clients.
 - (iii) The basic attributes of an effective quality system shall include, but are not necessarily limited to:
 - (A) A managerial structure that facilitates and encourages clear and unencumbered access to the decision makers;
 - (B) An overarching company commitment to achieving excellence in training service delivery rather than to meeting minimum requirements;
 - (C) Quality policies, processes, and procedures that are well-designed, consistently applied, and subject to formalised review and refinement processes;

- (D) An employee training plan that instils and promotes best practices in quality management efforts;
 - (E) An organisational risk profile and corresponding risk management plan, which together provide a comprehensive list of hazards that are tied to the ATO's activities and establish mitigating measures to effectively manage those risks that threaten the achievement of desired standards of performance; and
 - (F) A strategic review of policies and procedures that measures the organisation's current assumptions, objectives, and plans by applying a relevance test matched to evolving trends in the industry or changes occurring within the ATO.
- (5) Organisational Risk Profile
- (i) An organisational risk profile is an inventory of identified hazards and threats that present risks that are likely to prevent conformity with the required standards of performance. This "threat to quality" list is normally derived by first establishing a directory of those activities that routinely take place in order to deliver and administer a training programme. Once complete, the activity directory is then expanded to identify the hazards and threats associated with each individual activity. Some examples of routine activities that shall be examined during this process are:
 - (A) Selection and training of personnel;
 - (B) Training programme development, validation, and review;
 - (C) Development and maintenance of training courseware;
 - (D) Administrative personnel duties in support of the training programme, the instructors and evaluators, and the students;

- (E) Delivery of training;
 - (F) Record keeping;
 - (G) Assessment and examination processes; and
 - (H) Client and Authority feedback.
- (ii) The risks identified through this exercise shall not be limited to just those that currently exist but shall also include those potential risks that may arise from a change to existing circumstances or conditions.
- (6) Risk Management Plan
- (i) A risk management plan is designed to mitigate the identified risks, real or potential, that were derived from the organisational risk profile exercise. The plan's objective is not to eliminate risk so much as it is to effectively manage risk by putting in place riskcontrolling measures.
 - (ii) A well-developed and -implemented risk management plan will substantially aid in accurately scoping out the depth and frequency of planned quality-assurance-related activities.
 - (iii) The plan shall be subject to the management review process outlined in paragraph 4(III)(F) of this IS.
 - (iv) The current risk management plan shall be readily accessible to all employees so that it can be accurately followed and open to comment for improvement.
- (7) Coherence Matrix
- (i) A coherence matrix, sometimes known as a correspondence matrix, is a very powerful addition to the ATO's compliance efforts. It is a detailed, tabulated document that lists all the applicable regulatory requirements imposed on the ATO. Beside each listed provision there shall be at least two descriptive elements that identify:
 - (A) The existing process(es) that is (are) designed to ensure continuous compliance with that specific regulation or standard; and

- (B) The individual managerial position responsible for the effective implementation of each process.
- (ii) The coherence matrix shall indicate the next intended and most recently completed audits designed to validate the functionality of each of the identified processes. Any recent audit findings shall be listed in the matrix or referred to as being documented in a separate register of findings.
 - (iii) The coherence matrix is developed and managed by the quality manager and is subject to the management review process.
 - (iv) The current coherence matrix shall be readily accessible to all employees so it can be accurately followed and open to comment for improvement.
- (8) Corrective and Preventive Action Reports
 - (i) Quality assurance plans shall include a well-structured reporting system to ensure that suggestions by ATO personnel for both corrective and preventive actions are recorded and promptly addressed. Paragraph 3(III)(F) of this IS identifies this as a necessary component of quality assurance.
 - (ii) After an analysis of the reports submitted, the reporting system shall specify who is required to rectify a discrepancy and/or nonconformity in each particular case and the procedure to be followed if corrective action is not completed within an appropriate timescale. Just as important, the reporting system shall identify who is required to investigate and act upon any report identifying measures that may prevent a nonconformity from occurring.
 - (iii) Corrective and preventive action reports shall be able to be submitted anonymously, if individuals so choose, to maximise the opportunity for open and effective reporting.
 - (iv) Since corrective and preventive action reports, in this instance, represent suggestions for improvement in

conformity levels and deal with quality issues, this reporting system and its processes shall be managed by the quality manager.

- (9) Quality-Related Documentation
 - (i) Relevant documentation includes part(s) of the ATO Procedures Manual that may be included in a separate Quality Manual.
 - (ii) In addition, the relevant documentation shall include the following:
 - (A) Description of the ATO;
 - (B) Quality policy and strategy;
 - (C) Glossary;
 - (D) Organisational risk profile;
 - (E) Risk management plan;
 - (F) Coherence matrix;
 - (G) Corrective and preventive action procedures and reporting system;
 - (H) Specified training standards;
 - (I) Assignment of duties and responsibilities related to quality assurance and the quality system; and
 - (J) Training procedures related to the quality system to ensure regulatory compliance.
- (10) Quality Assurance Programme
 - (i) The quality assurance programme shall include all planned and systematic actions necessary to provide confidence that every training activity is conducted in accordance with all applicable requirements, standards, and procedures.

- (ii) The quality assurance programme documentation shall reflect:
 - (A) The schedule of the monitoring process;
 - (B) Audit procedures;
 - (C) Reporting procedures;
 - (D) Follow-up and corrective action procedures;
 - (E) The record keeping system; and
 - (F) Document control.
- (11) Quality Inspection
 - (i) The primary purpose of a quality inspection is to review a document or observe a particular event, action, etc., in order to verify whether established training procedures and requirements are followed during the conduct of the inspection and whether the required standard is achieved.
 - (ii) Examples of typical subject areas for quality inspections are:
 - (A) Actual training sessions;
 - (B) Maintenance, if applicable;
 - (C) Technical standards; and
 - (D) Training standards.
- (12) Quality Audits
 - (i) An audit is a systematic and independent comparison between the way in which training is being conducted and the way in which it should be conducted according to the published training procedures.
 - (ii) Audits shall include at least the following quality procedures and processes:

- (A) A description of the scope of the audit, which shall be explained to the personnel to be audited;
 - (B) Planning and preparation;
 - (C) The gathering and recording of evidence; and
 - (D) Analysis of the evidence.
- (iii) The various techniques that make up an effective audit are:
 - (A) A review of published documents;
 - (B) Interviews or discussions with personnel;
 - (C) The examination of an adequate sample of records;
 - (D) The witnessing of the activities that make up the training; and
 - (E) The preservation of documents and the recording of observations.
- (13) Auditors
 - (i) The ATO shall decide, depending on the complexity of the organisation and the training being conducted, whether to make use of a dedicated audit team or a single auditor. In any event, the auditor or audit team shall have relevant training and/or operational experience.
 - (ii) The responsibilities of the auditors shall be clearly defined in the relevant documentation.
- (14) Auditor's Independence
 - (i) Auditors shall not have any day-to-day involvement in the area of the operation or maintenance activity that is to be audited.
 - (ii) An ATO may, in addition to using the services of full-time dedicated personnel belonging to a separate quality department, undertake the monitoring of specific areas

or activities through the use of part-time auditors. An ATO whose structure and size does not justify the establishment of full-time auditors may undertake the audit function using part-time personnel from within its own organisation or from an external source under the terms of an agreement acceptable to the Authority.

- (iii) In all cases, the ATO shall develop suitable procedures to ensure that persons directly responsible for the activities to be audited are not selected as part of the auditing team. Where external auditors are used, it is essential that any external specialist has some familiarity with the type of activity conducted by the ATO.
- (iv) The quality assurance audit programme of the ATO shall identify the persons within the organisation who have the experience, responsibility, and authority to:
 - (A) Perform quality inspections and audits as part of ongoing quality assurance;
 - (B) Identify and record concerns or findings and the evidence necessary to substantiate such concerns or findings;
 - (C) Initiate or recommend solutions to concerns or findings through designated reporting channels;
 - (D) Verify the implementation of solutions within specific and reasonable timescales; and
 - (E) Report directly to the quality manager.
- (15) Audit Scheduling
 - (i) A quality assurance audit programme shall include a defined audit schedule and a periodic review cycle. The schedule shall be flexible and shall allow unscheduled audits when negative trends are identified. The quality manager shall schedule followup audits when necessary to verify that a corrective action resulting from a finding was carried out and that it is effective.

- (ii) An ATO shall establish a schedule of audits to be completed during a specific calendar period. This schedule shall be influenced by the organisational risk profile and shall be reflected in both the risk management plan and the coherence matrix documents. At a minimum, all aspects of the training shall be reviewed within a period of 12 months in accordance with the audit programme.
 - (iii) When an ATO defines the audit schedule, it shall take into account significant changes to management, the organisation, training, or technologies, as well as changes to standards and requirements.
- (16) Monitoring and Corrective Action
 - (i) The aim of monitoring within the quality system is primarily to investigate and judge its effectiveness and thereby ensure that defined policy and training standards are continuously complied with. Monitoring and corrective action functions fall under the responsibilities of the quality manager. Monitoring activity is based upon:
 - (A) Quality inspections;
 - (B) Quality audits; and
 - (C) Corrective and preventive action reports and subsequent follow-up.
 - (ii) Any nonconformity identified as a result of monitoring shall be communicated by the quality manager to the manager responsible for taking corrective action or, if appropriate, to the Director of Training or, when circumstances warrant, to the accountable manager. Such nonconformity shall be recorded for the purpose of further investigation in order to determine the cause and enable the recommendation of an appropriate corrective action.
 - (iii) The quality assurance audit programme shall include procedures to ensure that corrective and preventive actions are developed in response to findings. Personnel implementing these procedures shall monitor such

actions to ensure that they have been completed and to verify their effectiveness. Organisational responsibility and accountability for the implementation of a corrective action resides with the department in which the finding was identified. The accountable manager will have the ultimate responsibility for ensuring, through the quality manager, that the corrective action has reestablished conformity with the standard required by the ATO and any additional requirements established by the Authority or the ATO.

- (iv) As part of its quality system, the ATO shall identify internal and external customers and shall monitor customer satisfaction by measurement and analysis of feedback.

(17) Continuous Improvement Process

- (i) The quality manager shall be responsible for the review and continuous improvement of the established quality system's policies, processes, and procedures. The following tools, on which the quality manager shall rely, are essential to the ongoing continuous improvement process:
 - (A) Organisational risk profile;
 - (B) Risk management plan;
 - (C) Coherence matrix;
 - (D) Corrective and preventive action reports; and
 - (E) Inspection and audit reports.
- (ii) These tools and processes are interrelated and help define the continuous improvement efforts of the organisation. For example, any corrective or preventive action report may identify a deficiency or an opportunity for improvement. As outlined in paragraph p)2 of this IS, the quality manager shall ensure the identified issue is addressed and effectively implemented. The same shall be true if the discovery of an issue was identified during an inspection or audit.

- (iii) The effective implementation of change and the subsequent validation that the change did indeed result in the desired outcome are critical to the continuous improvement process. Simply introducing a well-meaning suggestion for improvement into the organisation without carefully managing that change may have undesirable consequences. It is therefore incumbent upon the quality manager to responsibly introduce, monitor, and validate improvement efforts.
- (iv) A simplistic but effective process to use in managing continuous improvement is known as the PDCA approach. Figure 1 depicts this continuous improvement process cycle:



Figure 1- The PDCA Approach

- (A) Plan. Map out the implementation of the recommended change, identifying at least:
 - (B) The people who will be affected by the change;
 - (C) The required quality control measures necessary to mitigate risk; and (D) The desired outcome and its intended consequences.
- (E) Do. Execute the implementation plan once all affected groups have accepted the proposal and understand their role in ensuring its success.

- (F) Check. Apply sufficient quality control “stage” checks throughout the implementation phase to ensure any unintended deviations in the execution are identified and addressed without delay; and
- (G) Act. Analyse the results and take appropriate action as necessary.

(18) Management Review and Analysis

- (i) Management shall accomplish a comprehensive, systematic, and documented review and analysis of the quality system, training policies, and procedures and shall consider:
 - (A) The results of quality inspections, audits, and any other indicators;
 - (B) The overall effectiveness of the management organisation in achieving stated objectives; and
 - (C) The correction of trends and, where applicable, the prevention of future nonconformities.
- (ii) Conclusions and recommendations made as a result of the review and analysis shall be submitted, in writing, to the responsible manager for action. The responsible manager shall be a person who has the authority to resolve relevant issues and take action. The Director of Training shall decide upon the frequency, format, and structure of meetings for internal review and analysis, in coordination with the accountable manager, if different, as the accountable manager has the overall responsibility for the quality system, including the frequency, format, and structure of the internal management review and analysis activities.

(19) Recording

- (i) Accurate, complete, and readily accessible records documenting the result of the quality assurance audit programme shall be maintained by the ATO. Records are essential data to enable an ATO to analyse and determine the root causes of nonconformity so that

areas of non-compliance can be identified and subsequently addressed.

- (ii) Records shall be retained at least for the period mandated by national requirements. In the absence of such requirements, a period of 3 years is recommended. The relevant records include:

- (A) Audit schedules;
- (B) Quality inspection and audit reports;
- (C) Responses to findings;
- (D) Corrective and preventive action reports;
- (E) Follow up and closure reports; and
- (F) Management review and analysis reports.

(20) Quality Assurance Responsibility for Satellite ATOs

- (i) An ATO may decide to subcontract certain activities to external organisations subject to the approval of the Authority.
- (ii) The ultimate responsibility for the training provided by the satellite ATO always remains with the ATO. A written agreement shall exist between the ATO and the satellite ATO clearly defining the training services to be provided and the level of quality to be assured. The satellite ATO's activities relevant to the agreement shall be included in the ATO's quality assurance audit programme.
- (iii) The ATO shall ensure that the satellite ATO has the necessary authorisation/approval when required and that it commands the resources and competence to undertake the task.

(21) Quality Assurance Training

- (i) Appropriate and thorough training is essential to optimise quality in every organisation. In order to achieve the appropriate outcomes of such training, the ATO shall ensure that all personnel understand the

objectives as laid out in the Quality Manual to a level relevant to their duties, including:

- (A) The concept of quality assurance and associated systems;
 - (B) Quality management;
 - (C) The Quality Manual;
 - (D) Inspections and audit techniques; and
 - (E) Reporting and recording.
- (ii) Time and resources shall be allocated to provide appropriate levels of quality assurance training to every employee.
 - (iii) Quality assurance courses are available from the various national or international standards institutions, and an ATO may consider whether to offer such courses to those likely to be involved in the management or supervision of quality assurance processes. ATOs with sufficient appropriately qualified personnel may consider the possibility of providing in-house training.

IS: 3.1.3.4 ATO PROCEDURES MANUAL

- (a) An ATO include the following in its ATO Procedures Manual or a separate training and procedures manual:
 - (1) General
 - (i) Preamble relating to the use and applicability of the manual.
 - (ii) Table of contents.
 - (iii) Amendment, revision, and distribution of the manual:
 - (A) Procedures for amendment;
 - (B) Record of amendments page;
 - (C) Distribution list; and

- (D) List of effective pages.
- (iv) Glossary of definitions and significant terms, including a list of abbreviations.
- (v) Description of the structure and layout of the manual, including:
 - (A) The various parts and sections, as well as their contents and use; and
 - (B) The numbering system for headings and paragraphs.
- (vi) Description of the scope of training authorised under the ATO's training specifications.
- (vii) A chart of the ATO's management organisation and the names of the post holders.
- (viii) Qualifications, responsibilities, and succession of command of management and key operational personnel including:
 - (A) Accountable manager;
 - (B) Director of Training;
 - (C) Instructional services manager;
 - (D) Quality manager;
 - (E) Director of Maintenance, if applicable;
 - (F) Safety manager, if applicable;
 - (G) Instructors; and
 - (H) Examiners, evaluators, and auditors.
- (ix) Policies dealing with the:
 - (A) ATO's objectives, including ethics and values;
 - (B) Selection of ATO personnel and the maintenance of their qualifications;

- (C) Training programme design and development, including the need for programme validation and review, as well as the outsourcing of training programme development to third-party providers;
 - (D) Evaluation, selection, and maintenance of training material and devices;
 - (E) Maintenance of the training facilities and equipment;
 - (F) Development and maintenance of a quality system governance model; and
 - (G) Development and maintenance of a culture focused on safety in the workplace, including, when applicable, implementing an SMS governance model.
- (x) Description of the facilities and equipment available, including:
 - (A) General use facilities, including offices, stores and archives, and library or reference areas;
 - (B) The number and size of classrooms, including installed equipment; and
 - (C) The type and number of training devices, including their location if other than at the main training site.
- (2) Personnel Training
 - (i) Identification of persons or positions responsible for the maintenance of performance standards and for ensuring the competency of personnel.
 - (ii) Details of the procedures to validate the qualifications and determine the competency of instructional personnel, as required by 3.1.3.2 of this part.
 - (iii) Details of the initial and recurrent training programmes for all personnel, as required by 3.1.3.2 of this part.

- (iv) Procedures for proficiency checks and upgrade training.
- (3) Client Training Programmes. Client training programmes cover each individual training programme conducted by the ATO for its customers. The training programmes consist of a training plan, a practical training syllabus, and a theoretical knowledge syllabus, if applicable, as described in paragraphs 1, 2 and 3 of this IS.
 - (i) Training plan.
 - (A) The aim of the course in the form of a statement specifying what the student is expected to be able to do as a result of the training; the level of performance; and the training constraints to be observed.
 - (B) Pre-entry requirements, including:
 - (I) Minimum age;
 - (II) Education or qualification requirements;
 - (III) Medical requirements; and
 - (IV) Linguistic requirements.
 - (C) Credits for previous knowledge, experience, or other qualifications, proof of which may be obtained from the Authority before the training commences.
 - (D) Training curricula, including:
 - (I) Theoretical training (knowledge);
 - (II) Practical training (skills);
 - (III) Training in the domain of human factors (attitudes);
 - (IV) Assessment and examinations; and

- (V) Monitoring of the training process, including the assessment and examination activities.
- (E) Training policies in terms of:
 - (I) Restrictions regarding the duration of training periods for students and instructors; and
 - (II) If applicable, minimum rest periods.
- (F) Policy for the conduct of student evaluation, including:
 - (I) Procedures for authorisation for tests;
 - (II) Procedures for remediation training before retest and for rewriting knowledge tests;
 - (III) Test reports and records;
 - (IV) Procedures for skill progress checks and skill tests;
 - (V) Procedures for knowledge progress tests and knowledge tests, including procedures for knowledge test preparation, types of questions and assessments, and standards required for a pass; and
 - (VI) Procedures for question analysis and review and for issuing replacement exams (applicable to knowledge tests).
- (G) Policy regarding training effectiveness, including:
 - (I) Liaison procedures between training departments;
 - (II) Requirements for reporting and documentation;
 - (III) Internal feedback system for detecting training deficiencies;

- (IV) Interim performance or competency standards at various stages of training to ensure standardisation;
 - (V) Individual student responsibilities;
 - (VI) Procedures for correcting unsatisfactory progress;
 - (VII) Procedures for changing instructors;
 - (VIII) Maximum number of instructor changes per student; and
 - (IX) Procedures for suspending a student from training.
- (ii) Syllabi for non-competency-based training programmes.
 - (A) Practical training syllabus, including:
 - (I) A statement of how the course will be divided into phases, indicating how the phases will be arranged to ensure completion in the most suitable learning sequence and that exercises are repeated at the proper frequency;
 - (II) The syllabus hours for each phase and for groups of lessons within each phase and when progress tests are to be conducted;
 - (III) A statement of the standard of proficiency required before progressing from one phase of training to the next, including minimum experience requirements and satisfactory exercise completion before undertaking the next phase;
 - (IV) Requirements for instructional methods, particularly with respect to adherence to syllabi and training specifications;

- (V) Instruction for the conduct and documentation of all progress checks; and
 - (VI) Instruction, where applicable, given to all examining personnel regarding the conduct of examinations and tests.
 - (B) Theoretical knowledge syllabus.
 - (I) The syllabus for theoretical knowledge instruction shall be structured generally as outlined in paragraph 2. i. of this IS but with a training specification and objective for each subject.
- (iii) Syllabus for competency-based training programmes.
 - (A) Training programmes focused on achieving desired standards of performance for specific jobs or tasks shall be competency based.
 - (B) Competency-based training programmes are based upon a job and task analysis to define the knowledge, skills, and attitudes required to perform a job or a task. Such programmes use an integrated approach in which the training of the underlying knowledge to perform a task is followed by practice of the task so that the trainee acquires the underlying knowledge, skills, and attitudes related to the task in a more effective way.
 - (C) As a result, the syllabus is structured as a single document that is subdivided into modules containing a training objective and the same information outlined in paragraph 3.2(a) of this IS, but it is applied to both the theoretical knowledge and practical training delivered by the module.
- (4) Tests and Checks Conducted by the ATO for the Issuance of a Licence or Rating.
 - (a) When the Authority has authorised an ATO to conduct the testing required for the issuance of a

licence or rating in accordance with the ATO Procedures Manual, the manual shall include:

- (I) The name(s) of the personnel with testing authority and the scope of the authority;
 - (II) The role and duties of the authorised personnel;
 - (III) If the ATO has been given authority to appoint personnel to conduct the testing required for the issuance of a licence or rating, the minimum requirements for appointment as well as the selection and appointment procedure; and
 - (IV) The applicable requirements established by the Authority, such as:
 - (1) The procedures to be followed in the conduct of checks and tests; and
 - (2) The methods for completion and retention of testing records, as required by the Authority.
- (5) Records
- (i) Policy and procedures regarding:
 - (A) Attendance records;
 - (B) Student training records;
 - (C) Personnel training and qualification records;
 - (D) Persons responsible for checking records and student personal logs;
 - (E) The nature and frequency of record checks;
 - (F) Standardisation of record entries;
 - (G) Personal log entries; and
 - (H) Security of records and documents.

- (6) Safety Management System (if applicable)
 - (i) The requirement to adopt SMS practices is intended to be restricted to only those training entities whose activities directly impact the safe operation of aircraft. Should that requirement apply to the ATO, the ATO Procedures Manual, as stated in paragraph a) 9 of this IS, shall address the ATO's SMS with reference to a separate manual or shall include the SMS practices within the ATO Procedures Manual.
- (7) Quality Assurance
 - (i) Provide a brief description of the quality assurance practices, as required by IS 3.1.3.3, by reference to a separate Quality Manual, or include the quality assurance practices within the ATO Procedures Manual (refer to paragraph i) of IS 3.1.3.3).
- (8) Appendices (as required)
 - (i) Sample progress test forms;
 - (ii) Sample logs, test reports, and records; and
 - (iii) A copy of the ATO's approval document.
- (9) Flight Crew Training Only – General
 - (i) Qualifications, responsibilities, and succession of command of management and key operational personnel, in addition to those listed in paragraph 1.8 of this IS, including the:
 - (A) CFI; and
 - (B) CGI.
 - (ii) Policies and procedures, in addition to those listed in paragraph 1.9 of this IS, dealing with:
 - (A) Approval of flights;
 - (B) Responsibilities of the PIC;

- (C) Flight planning procedures – general;
 - (D) Carriage of passengers;
 - (E) Operational control system;
 - (F) Reporting of safety hazards, incidents, and accidents;
 - (G) Duty periods and flight time limitations for flight crew members and students; and
 - (H) Minimum rest periods for flight crew members and students.
- (iii) Description of the facilities and equipment available, in addition to those listed in paragraph 1.10 of this IS, including:
- (A) FSTDs, aircraft training, and, as of 03 November 2022, RPAS training;
 - (B) Maintenance facilities and ramp parking areas for training aircraft and, as of 03 November 2022, RPAS training;
 - (C) Computer-based classroom(s); and
 - (D) Dispatch control and briefing areas.
- (10) Aircraft Operating Information
- (i) Certification and operating limitations.
 - (ii) Aircraft handling, including:
 - (A) Performance limitations;
 - (B) Use of checklists;
 - (C) Standard operating procedures; and
 - (D) Aircraft maintenance procedures.
 - (iii) Instructions for aircraft loading and securing of load.

- (iv) Fuelling procedures.
 - (v) Emergency procedures.
- (11) Routes
 - (i) Performance criteria (e.g., take-off, en route, landing).
 - (ii) Flight planning procedures, including:
 - (A) Fuel and oil requirements;
 - (B) Minimum safe altitudes;
 - (C) Planning for contingencies (e.g., emergency or diversion scenarios); and
 - (D) Navigation equipment.
 - (iii) Weather minima for all instructional training flights during day, night, visual flight rules, and IFR operations.
 - (iv) Weather minima for all student training flights at various stages of training.
 - (v) Training routes and practice areas.
- (12) Flight Training Plan
 - (i) Training curricula, in addition to curricula listed in paragraph 3.1(d) of this IS, including, as applicable:
 - (A) Flight crew curriculum (single engine);
 - (B) Flight crew curriculum (multi-engine);
 - (C) Theoretical knowledge curriculum;
 - (D) Flight simulation training curriculum; and
 - (E) As of 03 November 2022, flight crew curriculum (RPAS).

- (ii) The general arrangements of daily and weekly programmes for flight crew training, ground training, flight simulation training, and, as of 03 November 2022, RPAS training.
- (iii) Training policies, in addition to paragraph 3.1(e) of this IS, in terms of:
 - (A) Weather constraints;
 - (B) Maximum student training times for flight, theoretical knowledge, and flight simulation training, per day/week/month;
 - (C) Restrictions with respect to training periods for students;
 - (D) Duration of training flights at various stages;
 - (E) Maximum individual student flight hours in any day or night period;
 - (F) Maximum number of individual student training flights in any day or night period; and
 - (G) Minimum rest periods between training periods.

IS: 3.2.1.1 APPENDIX A: PRIVATE PILOT LICENSING COURSE

- (a) Applicability. Appendix A prescribes the minimum curriculum for a private pilot licensing course with the following ratings—
 - (1) Aeroplane single engine;
 - (2) Aeroplane multiengine;
 - (3) Rotorcraft helicopter;
 - (4) Rotorcraft gyroplane;
 - (5) Powered lift;
 - (6) Glider;
 - (7) Lighter than air airship; and

- (8) Lighter than air balloon.
- (b) Eligibility for enrolment. A person shall hold a student pilot license prior to enrolling in the flight portion of the private pilot licensing course.
- (c) Aeronautical knowledge training.
 - (1) A Level 1 ATO shall ensure that each approved course includes at least the following hours of ground training on the following aeronautical knowledge areas, appropriate to the aircraft category and class rating—
 - (i) 35 hours for an aeroplane, rotorcraft, or powered lift category rating;
 - (ii) 15 hours for a glider category rating;
 - (iii) hours for a lighter than air category with a balloon class rating; and
 - (iv) 35 hours for a lighter than air category with an airship class rating.
 - (2) Ground training shall include the following aeronautical knowledge areas—
 - (i) Applicable Grenada regulations for private pilot privileges, limitations, and flight operations;
 - (ii) Accident reporting requirements of Grenada;
 - (iii) Applicable subjects of the Authority provided aeronautical information publications;
 - (iv) Aeronautical charts for VFR navigation using pilotage, dead reckoning, and navigation systems;
 - (v) Radio communication procedures;
 - (vi) Recognition of critical weather situations from the ground and in flight, windshear avoidance, and the procurement and use of aeronautical weather reports and forecasts;

- (vii) Safe and efficient operation of aircraft, including collision avoidance, and recognition and avoidance of wake turbulence;
 - (viii) Effects of density altitude on takeoff and climb performance;
 - (ix) Weight and balance computations;
 - (x) Principles of aerodynamics, powerplants, and aircraft systems;
 - (xi) If the training course is for an aeroplane category or glider category rating, stall awareness, spin entry, spins, and spin recovery techniques;
 - (xii) Aeronautical decision making and judgement; and Pre-flight action that includes—
 - (A) Obtaining information on runway lengths, data on takeoff and landing distances, weather reports and forecasts, and fuel requirements; and
 - (B) Planning for alternatives if a planned flight cannot be completed or delays are encountered.
- (d) Flight training.
 - (1) An ATO with this rating shall include at least the following hours of flight training on the areas of operation listed in paragraph (d), appropriate to the aircraft category and class rating—
 - (i) 35 hours for an aeroplane, rotorcraft, powered lift, or airship rating;
 - (ii) 6 hours for a glider rating; and (iii) 8 hours for a balloon rating.
 - (2) An ATO with this rating shall include at least the following hours of flight training in each course—
 - (i) For each category and class, unless otherwise noted, 20 hours from a licensed flight instructor on the applicable areas of operation that includes at least—

- (A) 3 hours of cross-country flight training in the category and class involved;
 - (B) 3 hours of night flight training in the category and class involved that includes—
 - (I) One cross country flight of more than 100 nautical miles total distance; and
 - (II) 10 takeoffs and 10 landings to a full stop (with each landing involving a flight in the traffic pattern).
 - (C) 3 hours of instrument training in the category and class involved; and
 - (D) 3 hours in the category and class involved in preparation for the practical test within 60 days preceding the date of the test.
- (3) Specific training for other categories and classes as shown:
 - (i) For a rotorcraft helicopter and gyroplane course:
 - (A) 3 hours of night flight training in a helicopter that includes one cross country flight of more than 50-nautical-miles total distance.
 - (ii) For a glider course: 4 hours from a licensed flight instructor on the areas of operation in paragraph (d)(5) that includes at least—
 - (A) Five training flights in a glider on launch/tow procedures approved for the course and in the applicable areas of operation listed in paragraph (d)(5); and
 - (B) Three training flights in a glider in preparation for the practical test within 60 days preceding the date of the test.
 - (iii) For a lighter than air airship course: 20 hours from a commercial pilot with an airship rating on the areas of operation in paragraph (e)(7) that includes at least—

- (A) The training shown in paragraph (c)(1)(iv), taken in a lighter-than-air airship;
 - (B) 3 hours of night flight training in an airship that includes—
 - (I) One cross country flight over 25 nautical miles total distance; and
 - (II) Five takeoffs and five landings to a full stop (with each landing involving a flight in the traffic pattern).
- (iv) For a lighter than air balloon course: 8 hours, including at least five flights, from a commercial pilot with a balloon rating on the areas of operation in paragraph (e)(8), that includes—
 - (A) If the training is being performed in a gas balloon—
 - (I) Two flights of 1 hour each;
 - (II) One flight involving a controlled ascent to 3,000 feet above the launch site; and
 - (III) Two flights in preparation for the practical test within 60 days proceeding the date of the test.
 - (B) If the training is being performed in a balloon with an airborne heater—
 - (I) Two flights of 30 minutes each;
 - (II) One flight involving a controlled ascent to 2,000 feet above the launch site; and
 - (III) Two flights in preparation for the practical test within 60 days proceeding the date of the test.
- (4) An approved course shall include flight training in the following areas of operation that are applicable to the aircraft category and class rating—

- (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Airport and seaplane base operations;
 - (iv) Takeoffs, landings, and go arounds;
 - (v) Performance manoeuvres;
 - (vi) Ground reference manoeuvres;
 - (vii) Navigation;
 - (viii) Slow flight and stalls;
 - (ix) Basic instrument manoeuvres;
 - (x) Emergency operations;
 - (xi) Night operations; and
 - (xii) Postflight procedures.
- (5) In addition, for the specific category and class of aircraft shown, each approved course shall include the applicable flight training in the following areas of operation:
- (i) For a multiengine aeroplane course—
 - (A) Multiengine operations.
 - (ii) For a rotorcraft helicopter course—
 - (A) Hovering manoeuvres.
 - (iii) For a rotorcraft gyroplane course—
 - (A) Flight at slow airspeeds.
 - (iv) For a powered lift course—
 - (A) Hovering manoeuvres.
 - (v) For a glider course—

- (A) Launches/tows, as appropriate, and landings;
 - (B) Performance speeds; and
 - (C) Soaring techniques.
- (vi) For a lighter than air balloon course—
 - (A) Launches and landings.
- (e) Solo flight training. Each approved course shall include at least the following solo flight training—
 - (1) For an aeroplane single engine course: 5 hours of solo flight training in a single engine aeroplane on the applicable areas of operation in paragraph (d) that includes at least—
 - (i) One solo cross country flight of at least 100 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight line distance of at least 50 nautical miles between the takeoff and landing locations; and
 - (ii) Three takeoffs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.
 - (2) For an aeroplane multiengine course: 5 hours of flight training in a multiengine aeroplane performing the functions of a pilot in command while under the supervision of a licensed flight instructor. The training shall consist of the applicable areas of operation in paragraph (d) and include at least—
 - (i) One cross country flight of at least 100 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight line distance of at least 50 nautical miles between the takeoff and landing locations; and
 - (ii) Three takeoffs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.

- (3) For a rotorcraft helicopter course: 5 hours of solo flight training in a helicopter on the areas of operation in paragraph (d) that includes at least—
 - (i) One solo cross country flight of more than 50 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight line distance of at least 25 nautical miles between the takeoff and landing locations; and
 - (ii) Three takeoffs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.
- (4) For a rotorcraft gyroplane course: 5 hours of solo flight training in gyroplanes on the applicable areas of operation in paragraph (d) that includes at least—
 - (i) One solo cross country flight of more than 50 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight line distance of at least 25 nautical miles between the takeoff and landing locations; and
 - (ii) Three takeoffs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.
- (5) For a powered lift course: 5 hours of solo flight training in a powered lift on the applicable areas of operation in paragraph (d) that includes at least—
 - (i) One solo cross country flight of at least 100 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight line distance of at least 50 nautical miles between the takeoff and landing locations;
 - (ii) Three takeoffs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower; and
 - (iii) Transition from hover to forward flight using wing lift.

- (6) For a glider course: Two solo flights in a glider on the applicable areas of operation in paragraph (d) and the launch and tow procedures appropriate for the approved course.
- (7) For a lighter than air airship course: 5 hours of flight training in the applicable areas of operation shown in paragraph (d) in an airship performing the functions of pilot in command while under the supervision of a commercial pilot with an airship rating.
- (8) For a lighter than air balloon course: Training on the applicable areas of operation in paragraph (d), as applicable, and—
 - (i) Two solo flights in a balloon with an airborne heater; or
 - (ii) At least two flights in a gas balloon performing the functions of pilot in command while under the supervision of a commercial pilot with a balloon rating.
- (f) Stage checks and end of course tests.
 - (1) Each student, to graduate from a private pilot course shall satisfactorily accomplish the stage checks and end of course tests, consisting of the applicable areas of operation listed in paragraph (d) for the aircraft category and class rating.
 - (2) Each student shall demonstrate satisfactory proficiency prior to being endorsed to operate an aircraft in solo flight.

IS 3.2.1.1 : APPENDIX B: COMMERCIAL PILOT LICENSING COURSE

- (a) Applicability. This appendix prescribes the minimum curriculum for a commercial pilot licensing course required under this Part, for the following ratings:
 - (1) Aeroplane single engine.
 - (2) Aeroplane multiengine.
 - (3) Rotorcraft helicopter.
 - (4) Rotorcraft gyroplane.
 - (5) Powered-lift.

- (6) Glider.
 - (7) Lighter-than-air airship.
 - (8) Lighter-than-air balloon.
- (b) Eligibility for enrolment. A person shall hold the following prior to enrolling in the flight portion of the commercial pilot licensing course—
- (1) At least a private pilot license; and
 - (2) If the course is for a rating in an aeroplane or a powered lift category—
 - (i) Hold an instrument rating in the aircraft that is appropriate to the aircraft category rating for which the course applies; or
 - (ii) Be enrolled concurrently in an instrument rating course that is appropriate to the aircraft category rating for which the course applies, and pass the required instrument rating practical test prior to completing the commercial pilot licensing course.
- (c) Aeronautical knowledge training.
- (1) A Level 1 ATO shall ensure that each course includes at least the following ground training on the applicable aeronautical knowledge areas listed in paragraph (b):
 - (i) 65 hours for an aeroplane category rating, powered-lift category rating, or a lighter than air category with an airship class rating;
 - (ii) 30 hours for a rotorcraft category rating;
 - (iii) 20 hours for a glider category rating;
 - (iv) 20 hours for a lighter than air category with a balloon class rating;
 - (2) Ground training shall include the following aeronautical knowledge areas:

- (i) Grenada regulations that apply to commercial pilot privileges, limitations, and flight operations;
 - (ii) Accident reporting requirements of Grenada;
 - (iii) Basic aerodynamics and the principles of flight;
 - (iv) Meteorology, to include recognition of critical weather situations, windshear recognition and avoidance, and the use of aeronautical weather reports and forecasts;
 - (v) Safe and efficient operation of aircraft;
 - (vi) Weight and balance computations;
 - (vii) Use of performance charts;
 - (viii) Significance and effects of exceeding aircraft performance limitations;
 - (ix) Use of aeronautical charts and a magnetic compass for pilotage and dead reckoning;
 - (x) Use of air navigation facilities;
 - (xi) Aeronautical decision making and judgement;
 - (xii) Principles and functions of aircraft systems;
 - (xiii) Manoeuvres, procedures, and emergency operations appropriate to the aircraft;
 - (xiv) Night and high altitude operations;
 - (xv) Descriptions of and procedures for operating within the Grenada Airspace System;
 - (xvi) Procedures for flight and ground training for lighter than air ratings.
- (d) Flight training.
- (1) A Level 1 ATO shall ensure that each course includes at least the following flight training on the applicable areas of operation listed in paragraph (c):

- (i) 155 hours for an aeroplane, powered lift, or an airship rating.
 - (ii) 115 hours for a rotorcraft rating.
 - (iii) 6 hours for a glider rating.
 - (iv) hours and 8 training flights for a balloon rating.
- (2) A Level 1 ATO shall ensure that each course includes at least the following flight training—
 - (i) For an aeroplane single engine course: 55 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (c)(1) that includes at least—
 - (A) 5 hours of instrument training in a single engine aeroplane;
 - (B) 10 hours of training in a single engine aeroplane that has retractable landing gear, flaps, and a controllable pitch propeller, or is turbine powered;
 - (C) One cross country flight in a single engine aeroplane of at least a 2 hour duration, a total straight line distance of more than 100 nautical miles from the original point of departure, and occurring in day VFR conditions;
 - (D) One cross country flight in a single engine aeroplane of at least a 2 hour duration, a total straight line distance of more than 100 nautical miles from the original point of departure, and occurring in night VFR conditions; and
 - (E) 3 hours in a single engine aeroplane in preparation for the practical test within 60 days proceeding the date of the test.
 - (ii) For an aeroplane multiengine course: The flight training shown in paragraph (d)(1), accomplished in a multiengine aeroplane.

- (iii) For a rotorcraft helicopter and gyroplane course—
 - (A) The flight training shown in paragraph (d)(1), accomplished in a helicopter; except 30 hours of flight training from a licensed flight instructor on the areas of operation listed in paragraph (e)(3) that includes at least—
 - (I) 5 hours of instrument training;
 - (II) One cross country flight in a helicopter of at least a 2 hour duration, a total straight line distance of more than 50 nautical miles from the original point of departure, and occurring in day VFR conditions; and
 - (III) One cross country flight in a helicopter of at least a 2 hour duration, a total straight line distance of more than 50 nautical miles from the original point of departure, and occurring in night VFR conditions.
- (iv) For a powered lift course: The applicable flight training shown in paragraph (d)(1), flown in a powered-lift aircraft.
- (v) For a glider course: 4 hours of flight training from a licensed flight instructor on the areas of operation in paragraph (e)(6), that includes at least—
 - (A) Five training flights in a glider on launch/tow procedures approved for the course and on the appropriate areas of operation listed in paragraph (e)(6); and
 - (B) Three training flights in a glider in preparation for the practical test within the 60 days proceeding the date of the test.
- (vi) For a lighter-than-air airship course: 55 hours of training in airships from a commercial pilot with an airship rating on the areas of operation in paragraph (c)(7) that includes at least—
 - (A) 3 hours of instrument training in an airship;

- (B) One cross country flight in an airship of at least a 1 hour duration, a total straight line distance of more than 25 nautical miles from the original point of departure, and occurring in day VFR conditions;
 - (C) One cross country flight in an airship of at least a 1 hour duration, a total straight line distance of more than 25 nautical miles from the original point of departure, and occurring in night VFR conditions; and
 - (D) 3 hours in an airship, in preparation for the practical test within 60 days proceeding the date of the test.
- (vii) For a lighter than-air balloon course: Flight training from a commercial pilot with a balloon rating on the areas of operation in paragraph € (8) that includes at least—
 - (A) For a gas balloon—
 - (I) Two flights of 1 hour each;
 - (II) One flight involving a controlled ascent to at least 5,000 feet above the launch site; and
 - (III) Two flights in preparation for the practical test within 60 days proceeding the date of the test.
 - (B) For a balloon with an airborne heater—
 - (I) Two flights of 30 minutes each;
 - (II) One flight involving a controlled ascent to at least 3,000 feet above the launch site; and
 - (III) Two flights in preparation for the practical test within 60 days proceeding the date of the test.
- (3) A Level 1 ATO shall ensure that each course includes the flight training on the following areas of operation, as applicable—

- (i) For an aeroplane single engine course—
 - (A) Preflight preparation;
 - (B) Preflight procedures;
 - (C) Airport and seaplane base operations;
 - (D) Takeoffs, landings, and go arounds;
 - (E) Performance manoeuvres;
 - (F) Navigation;
 - (G) Slow flight and stalls;
 - (H) Emergency operations;
 - (I) High altitude operations; and
 - (J) Postflight procedures.
- (4) A Level 1 ATO shall ensure that each course for the following category and class ratings includes flight training on the applicable areas of operation:
 - (i) For an aeroplane multiengine course—
 - (A) Multiengine operations.
 - (ii) For a rotorcraft helicopter course—
 - (A) Hovering manoeuvres;
 - (B) Transition to wing-borne flight;
 - (C) Transition to hover; and
 - (D) Special operations.
 - (iii) For a rotorcraft gyroplane course—
 - (A) Flight at slow airspeeds.
 - (iv) For a powered lift course—

- (A) Hovering manoeuvres; and
 - (B) Special operations.
- (v) For a glider course—
 - (A) Launches/tows, as appropriate, and landings; and
 - (B) Soaring techniques.
- (vii) For a lighter than air airship course—
 - (A) Fundamentals of instructing;
 - (B) Technical subjects; and
 - (C) Preflight lessons on a manoeuvre to be performed in flight.
- (viii) For a lighter than air balloon course—
 - (A) Fundamentals of instructing;
 - (B) Technical subjects;
 - (C) Preflight lesson on a manoeuvre to be performed in flight; and
 - (D) Launches and landings.
- (e) Solo training. A Level 1 ATO, shall ensure that each approved course includes at least the following solo flight training—
 - (1) For an aeroplane single engine course: 10 hours of solo flight training in a single engine aeroplane on the areas of operation in paragraph (d)(3)(i) that include at least—
 - (i) One cross country flight, if the training is being performed on a small island, with landings at a minimum of three points, and one of the segments consisting of a straight line distance of at least 150 nautical miles;

- (ii) One cross country flight, if the training is being performed on other than a small island, with landings at a minimum of three points, and one segment of the flight consisting of a straight line distance of at least 250 nautical miles; and
 - (iii) hours in night VFR conditions with 10 takeoffs and 10 landings with each landing involving a flight with a traffic pattern at an airport with an operating control tower.
- (2) For an aeroplane multiengine course: 10 hours of flight training in a multiengine aeroplane performing the functions of pilot in command while under the supervision of a licensed flight instructor, consisting of the areas of operation in paragraph (d)(4)(i) that include at least—
 - (i) One cross country flight, if the training is being performed on a small island, with landings at a minimum of three points, and one of the segments consisting of a straight line distance of at least 150 nautical miles;
 - (ii) One cross country flight, if the training is being performed on a small island, with landings at a minimum of three points and one segment of the flight consisting of straight line distance of at least 250 nautical miles; and
 - (iii) hours in night VFR conditions with 10 takeoffs and 10 landings with each landing involving a flight with a traffic pattern at an airport with an operating control tower.
- (3) For a rotorcraft helicopter course: 10 hours of solo flight training in a helicopter on the areas of operation in paragraph (d)(4)(ii) that include at least—
 - (i) One cross country flight with landings at a minimum of three points and one segment of the flight consisting of a straight line distance of at least 50 nautical miles from the original point of departure; and
 - (ii) hours in night VFR conditions with 10 takeoffs and 10 landings with each landing involving a flight with a traffic pattern at an airport with an operating control tower.

- (4) For a rotorcraft gyroplane course: 10 hours of solo flight training in a gyroplane on the areas of operation in paragraph (d)(4)(iii) that include at least—
 - (i) One cross country flight with landings at a minimum
 - (ii) of three points, and one segment of the flight consisting of a straight line distance of at least 50 nautical miles from the original point of departure; and
 - (iii) hours in night VFR conditions with 10 takeoffs and 10 landings with each landing involving a flight with a traffic pattern at an airport with an operating control tower.
- (5) For a powered lift course: 10 hours of solo flight training in a powered lift on the areas of operation in paragraph (d)(4)(iv) that include at least—
 - (i) One cross country flight, if the training is being performed on a small island, with landings at a minimum of three points, and one segment of the flight consisting of a straight line distance of at least 150 nautical miles;
 - (ii) One cross country flight, if the training is being performed on a small island, with landings at a minimum of three points, and one segment of the flight consisting of a straight line distance of at least 250 nautical miles; and
 - (iii) hours in night VFR conditions with 10 takeoffs and 10 landings with each landing involving a flight with a traffic pattern at an airport with an operating control tower.
- (6) For a glider course: 5 solo flights in a glider the areas of operation in paragraph (d)(4)(v).
- (7) For a lighter than air airship course: 10 hours of flight training in an airship, while performing the functions of pilot in command under the supervision of a commercial pilot with an

airship rating consisting of the areas of operation in paragraph (d)(4)(vi) that include at least—

- (i) One cross country flight with landings at a minimum of three points, and one segment of the flight consisting of a straight line distance of at least 25 nautical miles from the original point of departure; and
 - (ii) hours in night VFR conditions with 10 takeoffs and 10 landings with each landing involving a flight with a traffic pattern.
- (8) For a lighter than air balloon course:
 - (i) Training on the applicable areas of operation in paragraph (d)(4)(vii), while performing the duties of pilot in command under the supervision of a commercial pilot with a balloon rating.
 - (ii) Two solo flights is for a hot air balloon rating.
 - (iii) At least two flights in a gas balloon for a gas balloon rating.
- (f) Stage checks and end of course tests.
 - (1) A student shall, to graduate from a commercial pilot course, satisfactorily accomplish the stage checks and end of course tests consisting of the applicable areas of operation listed in paragraph (d)(4).
 - (2) A student shall demonstrate satisfactory proficiency prior to being endorsed to operate an aircraft in solo flight.

IS 3.2.1.1 APPENDIX C: INSTRUMENT RATING COURSE

- (a) Applicability. This appendix prescribes the minimum curriculum for an instrument rating course and additional instrument rating course, required under this Part, for the following ratings:
 - (1) Instrument: aeroplane.
 - (2) Instrument: helicopter.
 - (3) Instrument: powered lift.

- (b) Eligibility for enrolment. A person shall hold at least a private pilot license with an aircraft category and class rating appropriate to the instrument rating for which the course applies, prior to enrolling in the flight portion of the instrument rating course.
- (c) Aeronautical knowledge training.
 - (1) A Level 1 ATO shall ensure that each approved course includes at least the following hours of ground training on the aeronautical knowledge areas appropriate to the instrument rating sought—
 - (i) 30 hours for an initial instrument rating.
 - (ii) 20 hours for an additional instrument rating.
 - (2) Ground training shall include the following aeronautical knowledge areas—
 - (i) Applicable Grenada regulations for IFR flight operations;
 - (ii) Appropriate information in aeronautical information publications provided by the Authority;
 - (iii) Air traffic control system and procedures for instrument flight operations;
 - (iv) IFR navigation and instrument approaches to an airport by use of navigation systems;
 - (v) Use of IFR enroute and instrument approach procedure charts;
 - (vi) Procurement and use of aviation weather reports and forecasts, and the elements of forecasting weather trends on the basis of that information and personal observation of weather conditions;
 - (vii) Safe and efficient operation of aircraft under IFR conditions;
 - (viii) Recognition of critical weather situations and windshear avoidance;
 - (ix) Aeronautical decision making and judgement; and

- (x) Crew resource management, to include crew communication and co-ordination.
- (d) Flight training.
 - (1) A Level 1 ATO shall ensure that each course includes at least the following hours of flight training on the applicable areas of operation listed in paragraph (c)—
 - (i) 35 hours for an initial instrument rating;
 - (ii) 15 hours for an additional instrument rating.
 - (2) A Level 1 ATO shall ensure that each course includes the following flight training—
 - (i) For an instrument aeroplane course: Instrument training from a licensed flight instructor with an instrument rating on the applicable areas of operation in paragraph (c) including at least one cross country flight that—
 - (A) Is in the category and class of aeroplane that the course is approved for, and is performed under IFR;
 - (B) Is a distance of at least 250 nautical miles with one segment of the flight consisting of at least a straight line distance of 100 nautical miles between airports;
 - (C) Involves an instrument approach at each airport; and
 - (D) Involves three approaches with the using different kinds of navigation systems.
 - (ii) For an instrument helicopter course: Instrument training from a licensed flight instructor with an instrument rating on the applicable areas of operation in paragraph (c) including at least one cross country flight that—
 - (A) Is performed in a helicopter under IFR;

- (B) Is a distance of at least 100 nautical miles with one segment of the flight consisting of at least a straight line distance of 50 nautical miles between airports;
 - (C) Involves an instrument approach at each airport; and
 - (D) Involves three approaches with the using different kinds of navigation systems.
- (iii) For an instrument powered lift course: Instrument training from a licensed flight instructor with an instrument rating on the areas of operation in paragraph (c) including at least one cross country flight that—
 - (A) Is in a powered lift and is performed under IFR;
 - (B) Involves transition from wing-borne to rotor-borne flight under IFR;
 - (C) Is a distance of at least 250 nautical miles with one segment of the flight consisting of at least a straight line distance of 100 nautical miles between airports;
 - (D) Involves an instrument approach at each airport; and
 - (E) Involves three different kinds of approaches with the use of navigation systems.
- (3) A Level 1 ATO shall ensure that each course includes the flight training on the applicable areas of operation listed in this paragraph appropriate to the instrument aircraft category and class rating—
 - (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Air traffic control clearances and procedures;
 - (iv) Flight by reference to instruments;

- (v) Navigation systems;
 - (vi) Instrument approach procedures;
 - (vii) Emergency operations; and
 - (viii) Postflight procedures.
- (f) Stage checks and end of course tests.
 - (1) A student shall, to graduate from an instrument rating course, satisfactorily accomplish the stage checks and end of course tests, consisting of the areas of operation listed in paragraph (c) that are appropriate to the aircraft category and class rating.

IS 3.2.1.1 APPENDIX D: AIRLINE TRANSPORT PILOT LICENSING COURSE

- (a) Applicability. This appendix prescribes the minimum curriculum for an airline transport pilot licensing course under this Part, for the following ratings—
 - (1) Aeroplane single engine.
 - (2) Aeroplane multiengine.
 - (3) Rotorcraft helicopter.
 - (4) Powered lift.
- (b) Eligibility for enrolment. Prior to enrolling in the flight portion of the airline transport pilot licensing course, a person shall—
 - (1) Meet the aeronautical experience requirements prescribed in Part 2, Subpart 2.2.5 of these Regulations for an airline transport pilot license that is appropriate to the aircraft category and class rating for which the course applies;
 - (2) Hold at least a commercial pilot license and an instrument rating; or
 - (3) If the person is a rated military pilot or former rated military pilot of an Armed Force of Grenada with flight status of at least 12 months; or

- (4) Hold a foreign airline transport pilot license or foreign commercial pilot license and an instrument rating, issued by a contracting State to the Convention on International Civil Aviation.
- (c) Aeronautical knowledge areas.
 - (1) A Level 1 ATO shall ensure that each course includes at least 40 hours of ground training on the applicable aeronautical knowledge areas listed in Paragraph (b).
 - (2) A Level 1 ATO shall ensure that ground training includes the following aeronautical knowledge areas—
 - (i) Applicable Grenada regulations that relate to airline transport pilot privileges, limitations, and flight operations;
 - (ii) Meteorology, including knowledge of and effects of fronts, frontal characteristics, cloud formations, icing, and upper air data;
 - (iii) General system of weather and NOTAM collection, dissemination, interpretation, and use;
 - (iv) Interpretation and use of weather charts, maps, forecasts, sequence reports, abbreviations, symbols;
 - (v) Grenada Meteorological Services functions as they pertain to operations in the Grenada Airspace System;
 - (vi) Windshear and microburst awareness, identification, and avoidance;
 - (vii) Principles of air navigation under instrument meteorological conditions in the Grenada Airspace System;
 - (viii) Air traffic control procedures and pilot responsibilities as they relate to en route operations, terminal area and radar operations, and instrument departure and approach procedures;

- (ix) Aircraft loading; weight and balance; use of charts, graphs, tables, formulas, and computations; and the effects on aircraft performance;
 - (x) Aerodynamics relating to an aircraft's flight characteristics and performance in normal and abnormal flight regimes;
 - (xi) Human factors;
 - (xii) Aeronautical decision making and judgement; and
 - (xiii) Crew resource management to include crew communication and co-ordination.
- (d) Flight training.
 - (1) A Level 1 ATO shall ensure that each course includes at least 25 hours of flight training on the applicable areas of operation listed in paragraph 3(b), including at least 15 hours of be instrument flight training; and
 - (2) A Level 1 ATO shall ensure that each course includes flight training on the following areas of operation, as applicable—
 - (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Takeoff and departure phase;
 - (iv) In flight manoeuvres;
 - (v) Instrument procedures;
 - (vi) Landings and approaches to landings;
 - (vii) Normal and abnormal procedures;
 - (viii) Emergency procedures; and
 - (ix) Postflight procedures.
- (e) Stage checks and end of course tests.

- (1) A student shall, to graduate from an airline transport pilot course, satisfactorily accomplish the stage checks and end of course tests, consisting of the areas of operation listed in paragraph 3(b) that are appropriate to the aircraft category and class rating for which the course applies.

IS 3.2.1.1 APPENDIX E: FLIGHT INSTRUCTOR LICENSING COURSE

- (a) Applicability. This appendix prescribes the minimum curriculum for a flight instructor licensing course and an additional flight instructor rating course required under this Part, for the following ratings—
 - (1) Aeroplane single engine.
 - (2) Aeroplane multiengine.
 - (3) Rotorcraft helicopter.
 - (4) Rotorcraft gyroplane.
 - (5) Powered lift.
 - (6) Glider category.
- (b) Eligibility for enrolment. A person shall hold the following prior to enrolling in the flight portion of the flight instructor or additional flight instructor rating course—
 - (1) A commercial pilot license or an airline transport pilot license with an aircraft category and class rating appropriate to the flight instructor rating for which the course applies; and
 - (2) An instrument rating or privilege in an aircraft that is appropriate to the aircraft category and class rating for which the course applies, if the course is for a flight instructor aeroplane or powered lift instrument rating.
- (c) Aeronautical knowledge training.
 - (1) A Level 1 ATO shall ensure that each course includes at least the following ground training in the aeronautical knowledge areas listed in paragraph (d)—
 - (i) 40 hours of training if the course is for an initial issuance of a flight instructor certificate; or

- (ii) 20 hours of training if the course is for an additional flight instructor rating.
- (2) A Level 1 ATO shall ensure that ground training includes the following aeronautical knowledge areas—
 - (i) The fundamentals of instructing, including—
 - (A) The learning process;
 - (B) Elements of effective teaching;
 - (C) Student evaluation and testing;
 - (D) Course development; (E) Lesson planning; and
 - (F) Classroom training techniques.
 - (ii) The aeronautical knowledge areas required for—
 - (A) A private and commercial pilot license that is appropriate to the category and class rating sought; and
 - (B) An instrument rating that is appropriate to the aircraft category and class rating for which the course applies, if the course is for an aeroplane or powered lift aircraft rating.
- (3) A Level 1 ATO may credit a student who satisfactorily completes 2 years of study on the principles of education at a college or university with no more than 20 hours of the training required in paragraph (c)(1).
- (d) Flight training.
 - (1) A Level 1 ATO shall ensure that each course includes at least the following flight training on the applicable areas of operation of paragraphs (d)(2) and (d)(3)—
 - (i) 25 hours for an aeroplane, rotorcraft, or powered lift rating; and
 - (ii) hours and 10 flights for a glider category rating.

- (2) A Level 1 ATO shall ensure that each course includes flight training on the following areas of operation, as applicable for each category and class—
- (i) Fundamentals of instructing;
 - (ii) Technical subject areas;
 - (iii) Preflight preparation;
 - (iv) Preflight lesson on a manoeuvre to be performed in flight;
 - (v) Preflight procedures;
 - (vi) Airport and seaplane base operations;
 - (vii) Takeoffs, landings, and go arounds;
 - (viii) Fundamentals of flight;
 - (ix) Performance manoeuvres;
 - (x) Ground reference manoeuvres;
 - (xi) Slow flight, stalls, and spins;
 - (xii) Basic instrument manoeuvres;
 - (xiii) Emergency operations; and
 - (xiv) Postflight procedures.
- (3) For the category and class of aircraft shown below, A Level 1 ATO shall ensure that each course includes flight training in the following areas of operation, as applicable:
- (i) For an aeroplane: multiengine course—
 - (A) Multiengine operations.
 - (ii) For a rotorcraft: helicopter course—
 - (A) Hovering manoeuvres; and (B) Special operations.
 - (iii) For a rotorcraft: gyroplane course—

- (A) Flight at slow airspeeds.
- (iv) For a powered lift course—
 - (A) Hovering manoeuvres;
 - (B) Transition to wing-borne flight;
 - (C) Transition to hover; and
 - (D) Special operations.
- (v) For a glider course—
 - (A) Launches, landings, and go arounds;
 - (B) Performance speeds; and
 - (C) Soaring techniques.
- (e) Stage checks and end of course tests.
 - (1) A student shall, to graduate from a flight instructor course, satisfactorily accomplish the stage checks and end of course tests, consisting of the applicable areas of operation listed in paragraph 4 of this appendix.
 - (2) A student enrolled in a flight instructor aeroplane rating or flight instructor glider rating course shall have—
 - (i) Received a logbook endorsement from a licensed flight instructor certifying the student received ground and flight training on stall awareness, spin entry, spins, and spin recovery procedures in an aircraft that is certified for spins and that is appropriate to the rating sought; and
 - (ii) Demonstrated instructional proficiency in stall awareness, spin entry, spins, and spin recovery procedures.

IS 3.2.1.1 APPENDIX F: FLIGHT INSTRUCTOR INSTRUMENT LICENSING COURSE

- (a) Applicability. This appendix prescribes the minimum curriculum for a flight instructor instrument licensing course required under this Part, for the following ratings—
 - (1) Flight Instructor Instrument: Aeroplane.
 - (2) Flight Instructor Instrument: Helicopter.
 - (3) Flight Instructor Instrument: Powered lift aircraft.
- (b) Eligibility for enrolment. A pilot shall hold, prior to enrolling in the flight portion of the course—
 - (1) A commercial pilot license or airline transport pilot license with a category and class rating appropriate to the rating sought; and
 - (2) For commercial pilot license holders, an instrument rating that is appropriate to the rating sought.
- (c) Aeronautical knowledge training.
 - (1) A Level 1 ATO shall ensure that each course includes at least 15 hours of ground training on the applicable aeronautical knowledge areas listed in paragraph (c)(2).
 - (2) A Level 1 ATO shall ensure that each course includes ground training on the following aeronautical knowledge areas—
 - (i) The fundamentals of instructing including—
 - (A) Learning process;
 - (B) Elements of effective teaching;
 - (C) Student evaluation and testing;
 - (D) Course development;
 - (E) Lesson planning; and
 - (F) Classroom training techniques.

- (ii) The aeronautical knowledge areas required for the instrument rating that is appropriate to the category and class of aircraft.
- (d) Flight training.
 - (1) A Level 1 ATO shall ensure that each course includes at least 15 hours of flight training in the applicable areas of operation of paragraph (b).
 - (2) A Level 1 ATO shall ensure that each course for the flight instructor instrument rating includes flight training on the following areas of operation in paragraph (d)(2)—
 - (i) Fundamentals of instructing;
 - (ii) Technical subject areas;
 - (iii) Preflight preparation;
 - (iv) Preflight lesson on a manoeuvre to be performed in flight;
 - (v) Air traffic control clearances and procedures;
 - (vi) Flight by reference to instruments;
 - (vii) Navigation systems;
 - (viii) Instrument approach procedures;
 - (ix) Emergency operations; and
 - (x) Postflight procedures.
- (e) Stage checks and end of course tests.
 - (1) A student shall, to graduate from a flight instructor instrument course, satisfactorily accomplish the stage checks and end of course tests, consisting of the applicable areas of operation listed in paragraph (d).

IS 3.2.1.1 APPENDIX G: GROUND INSTRUCTOR LICENSING COURSE

- (a) Applicability. This appendix prescribes the minimum curriculum for a ground instructor licensing course and an additional ground instructor rating course, issued under Part 2 of these Regulations for the following ratings—

- (1) Ground Instructor: Basic.
- (2) Ground Instructor: Advanced.
- (3) Ground Instructor: Instrument.
- (b) Aeronautical knowledge training.
 - (1) A Level 1 ATO shall ensure that each course includes at least the following ground training on the applicable knowledge areas listed in paragraphs (b), (c), (d), and (e)—
 - (i) 20 hours of training for an initial issuance of a ground instructor certificate; or
 - (ii) hours of training for an additional ground instructor rating.
 - (2) A Level 1 ATO shall ensure that ground training includes the following aeronautical knowledge areas—
 - (i) Learning process;
 - (ii) Elements of effective teaching;
 - (iii) Student evaluation and testing;
 - (iv) Course development;
 - (v) Lesson planning; and
 - (vi) Classroom training techniques.
 - (3) A Level 1 ATO shall ensure that ground training for a basic ground instructor license includes the aeronautical knowledge areas applicable to a private pilot.
 - (4) A Level 1 ATO shall ensure that ground training for an advanced ground instructor rating includes the aeronautical knowledge areas applicable to a private, commercial, and airline transport pilot.
 - (5) A Level 1 ATO shall ensure that ground training for an instrument ground instructor rating includes the aeronautical knowledge areas applicable to an instrument rating.

- (6) A Level 1 ATO may credit a student who satisfactorily completed 2 years of study on the principles of education at a college or university with 10 hours of the training required in paragraph (a)(1).
- (c) Stage checks and end of course tests.
 - (1) A student shall, to graduate from a ground instructor course, satisfactorily accomplish the stage checks and end of course tests, consisting of the applicable knowledge areas of this appendix.

IS 3.2.1.1 APPENDIX H: ADDITIONAL AIRCRAFT CATEGORY OR CLASS RATING COURSE

- (a) Applicability. This appendix prescribes the minimum curriculum for an additional aircraft category rating course or an additional aircraft class rating course required under this Part, for the following ratings:
 - (1) Aeroplane single engine.
 - (2) Aeroplane multiengine.
 - (3) Rotorcraft helicopter.
 - (4) Rotorcraft gyroplane.
 - (5) Powered lift.
 - (6) Glider.
 - (7) Lighter than air airship.
 - (8) Lighter than air balloon.
- (b) Eligibility for enrolment. A person shall hold the level of pilot license for the additional aircraft category and class rating for which the course applies prior to enrolling in the flight portion of an additional aircraft category or additional aircraft class rating course.
- (c) Aeronautical knowledge training. A Level 1 ATO shall ensure that each course for an additional category rating and additional class rating includes the total number of hours of training in all the aeronautical knowledge areas appropriate to the aircraft rating and pilot license level sought.

- (d) Flight training. A Level 1 ATO shall ensure that each course for an additional aircraft category rating or additional aircraft class includes the total number of hours of flight training on all of the areas of operation of this paragraph appropriate to the aircraft rating and pilot license level for which the course applies.
- (e) Stage checks and end of course tests.
 - (1) Each student, to graduate from an additional aircraft category rating course or an additional aircraft class rating course shall satisfactorily accomplish the stage checks and end of course tests, consisting of the applicable areas of operation in this appendix.
 - (2) Each student shall demonstrate satisfactory proficiency prior to being endorsed to operate an aircraft in solo flight.

IS 3.2.1.1 APPENDIX I: AIRCRAFT TYPE RATING COURSE

- (a) Applicability. This appendix prescribes the minimum Level 1 ATO curriculum for an aircraft type rating course for:
 - (1) A type rating in an aeroplane category: single engine class.
 - (2) A type rating in an aeroplane category: multiengine class.
 - (3) A type rating in a rotorcraft category: helicopter class.
 - (4) A type rating in a powered lift category.
 - (5) Other aircraft type ratings specified by the Authority through the aircraft type certificate procedures.
- (b) Eligibility for enrolment.
 - (1) Prior to enrolling in the flight portion of an aircraft type rating course, a person shall hold at least a private pilot license and—
 - (i) An instrument rating in the category and class of aircraft that is appropriate to the aircraft type rating for which the course applies, provided the aircraft's type certificate does not have a VFR limitation; or

- (ii) Be concurrently enrolled in an instrument rating course in an aircraft of the type rating sought, and pass the required instrument rating practical test concurrently with the type rating practical test.
- (c) Aeronautical knowledge training.
 - (1) A Level 1 ATO shall ensure that each course includes at least 10 hours of ground training on the applicable aeronautical knowledge areas listed in paragraph (b).
 - (2) A Level 1 ATO shall ensure that ground training includes the following aeronautical areas—
 - (i) Subjects requiring a practical knowledge of the aircraft type and its powerplant, systems, components, operational, and performance factors;
 - (ii) The aircraft's normal, abnormal, and emergency procedures, and the operations and limitations relating thereto;
 - (iii) Appropriate provisions of the approved aircraft's flight manual;
 - (iv) Location of and purpose of inspecting each item on the aircraft's checklist that relate to the exterior and interior preflight; and
 - (v) Use of the aircraft's prestart checklist, appropriate control system checks, starting procedures, radio and electronic equipment checks, and the selection of proper navigation and communication radio facilities and frequencies.
- (d) Flight training.
 - (1) A Level 1 ATO shall ensure that each course includes at least—
 - (i) Flight training on the applicable areas of operation of paragraph (b) in the aircraft type for which the course applies; and

- (ii) At least 5 hours shall be instrument training in the aircraft for which the course applies.
- (2) A Level 1 ATO shall ensure that each type rating course includes the flight training on the following areas of operation—
 - (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Takeoff and departure phase;
 - (iv) In flight manoeuvres;
 - (v) Instrument procedures;
 - (vi) Landings and approaches to landings;
 - (vii) Normal and abnormal procedures;
 - (viii) Emergency procedures; and
 - (ix) Postflight procedures.
- (e) Stage checks and end of course tests. A student shall, to graduate from an aircraft type rating course, satisfactorily accomplish the stage checks and end of course tests, consisting of the applicable areas of operation for the airline transport pilot license.

IS 3.2.1.1 APPENDIX J: SPECIAL PREPARATION COURSES

- (a) Applicability. This appendix prescribes the minimum curriculum for the special preparation courses that are listed in 3.1.2.2.
- (b) Eligibility for enrolment. Prior to enrolling in the flight portion of a special preparation course, a person shall hold a pilot license, flight instructor certificate, or ground instructor license that is appropriate for the exercise of the operating privileges or authorisations sought.
- (c) General requirements.
 - (1) To be approved, an applicant for a special preparation course shall present to the Authority a proposal that:

- (i) Meets the appropriate requirements of this Appendix.
 - (ii) Prepares the graduate with the necessary skills, competency, and proficiency to exercise safely the privileges of the certificate, rating, or authorisation for which the course is established.
 - (iii) Includes ground and flight training on the operating privileges or authorisation sought.
- (d) Stage check and end of course tests.
 - (1) A person shall, to graduate from a special preparation course, satisfactorily accomplish the stage checks and end of course tests, consisting of the areas of operation that are appropriate to the operating privileges or authorisation sought, and for which the course applies.
- (e) Agricultural aircraft operations course.
 - (1) A special preparation course for pilots in agricultural aircraft operations shall include at least the following—
 - (i) 25 hours of training on—
 - (A) Agricultural aircraft operations;
 - (B) Safe piloting operating practices and procedures for handling, dispensing, and disposing agricultural and industrial chemicals, including operating in and around congested areas; and
 - (C) Applicable provisions of Part 11, Subpart 11.2.
 - (ii) 15 hours of flight training on agricultural aircraft operations.
- (f) Rotorcraft external load operations course.
 - (1) A special preparation course for pilots of external load operations shall include at least the following:
 - (i) hours of training on—
 - (A) Rotorcraft external load operations;

- (B) Safe piloting operating practices and procedures for external load operations, including operating in and around congested areas; and
 - (C) Applicable provisions of Part 11, Subpart 11.3.
 - (ii) 15 hours of flight training on external load operations.
- (g) Test pilot course.
 - (1) A special preparation course for test pilot duties shall include at least the following:
 - (i) Aeronautical knowledge training on—
 - (A) Performing aircraft maintenance, quality assurance, and certification test flight operations; and
 - (B) Applicable parts of these regulations that pertain to aircraft maintenance, quality assurance, and certification tests.
 - (ii) 15 hours of flight training.
- (h) Special operations course.
 - (1) A special preparation course for pilots in special operations that are mission specific for certain aircraft shall include at least the following:
 - (i) Aeronautical knowledge training on—
 - (A) Performing that special flight operation;
 - (B) Safe piloting operating practices and procedures for performing that special flight operation;
 - (C) Applicable parts of these regulations that pertain to that special flight operation; and
 - (D) Pilot in command duties and responsibilities for performing that special flight operation.

- (E) Flight training on that special flight operation.
- (i) Pilot refresher course.
 - (1) A special preparation pilot refresher course for a pilot license, aircraft category and class rating, or an instrument rating shall include at least the following:
 - (i) hours of aeronautical knowledge training on—
 - (A) The aeronautical knowledge areas that are applicable to the level of pilot license, category rating, class rating, or instrument rating sought;
 - (B) Safe piloting operating practices and procedures; and (C) Applicable provisions of Parts 2 and 9.
 - (ii) 6 hours of flight training on the areas of operation that are applicable to the level of pilot license, aircraft category and class rating, or instrument rating, as appropriate, for performing pilot in command duties and responsibilities.
- (j) Flight instructor refresher course.
 - (1) A special preparation flight instructor refresher course shall include at least a combined total of 16 hours of aeronautical knowledge training, flight training, or any combination of ground and flight training on the following:
 - (i) Aeronautical knowledge training on—
 - (A) The aeronautical knowledge areas that apply to student, private, and commercial pilot licenses and instrument ratings;
 - (B) The aeronautical knowledge areas that apply to flight instructor certificates;
 - (C) Safe piloting operating practices and procedures, including airport operations and operating in the Grenada Airspace System; and
 - (D) Applicable provisions of Parts 2 and 9.
 - (ii) Flight training, to review—

- (A) The areas of operations applicable to student, private, and commercial pilot licenses and instrument ratings; and
 - (B) The skills, competency, and proficiency for performing flight instructor duties and responsibilities.
- (k) Ground instructor refresher course.
 - (1) A special preparation ground instructor refresher course shall include at least 16 hours of aeronautical knowledge training on—
 - (i) The aeronautical knowledge areas that apply to student, private, and commercial pilots and instrument rated pilots and ground instructors;
 - (ii) Safe piloting operating practices and procedures, including airport operations and operating in the Grenada Airspace System; and
 - (iii) Applicable provisions of Parts 2 and 9.

IS 3.2.1.1 APPENDIX K: PILOT GROUND SCHOOL COURSE

- (a) Applicability. This appendix prescribes the minimum curriculum for a pilot ground school course.
- (b) General requirements. An approved training course for a pilot ground school shall include training on the aeronautical knowledge areas that are—
 - (1) Needed to safely exercise the privileges of the certificate, rating, or authority for which the course is established; and
 - (2) Conducted to develop competency, proficiency, resourcefulness, self confidence, and self reliance in each student.
- (c) Aeronautical knowledge training requirements. An approved pilot ground school course shall include—

- (1) The aeronautical knowledge training that is appropriate to the aircraft rating and pilot license level for which the course applies; and
 - (2) An adequate number of total aeronautical knowledge training hours appropriate to the aircraft rating and pilot license level for which the course applies.
- (d) Stage checks and end of course tests. A person shall, to graduate from a pilot ground school course, satisfactorily accomplish the stage checks and end of course tests, consisting of the areas of operation that are appropriate to the operating privileges or authorisation that graduation from the course will permit.

IS 3.2.1.2 LEVEL 1 ATO CHIEF FLIGHT INSTRUCTOR QUALIFICATIONS

- (a) An ATO shall designate a supervisory instructor for a flight training course who shall meet one or more of the following requirements, as applicable:
- (1) Hold a commercial pilot license or an airline transport pilot license, and, except for a chief instructor for a training course solely for a lighter than air rating, a current flight instructor certificate with appropriate aircraft category, class, and instrument ratings for the category and class of aircraft used in the course.
 - (2) Meet the pilot in command recent flight experience requirements of 8.4.1.9 through 8.4.1.11, as applicable.
 - (3) Pass a knowledge test on —
 - (i) Teaching methods;
 - (ii) Applicable provisions of Authority provided aeronautical information publications;
 - (iii) Applicable provisions of Parts 2, 3, and 8; and
 - (iv) The objectives and approved course completion standards of the course for which the person seeks to obtain designation.

- (4) Pass a proficiency test on instructional skills and ability to train students on the flight procedures and manoeuvres appropriate to the course.
- (b) Except for a training course for gliders, balloons, or airships, the chief instructor shall meet the applicable requirements in paragraphs (c), (d), and (e).
- (c) For a training course for a private pilot license or rating, a chief instructor shall have—
 - (1) At least 1,000 hours as pilot in command; and
 - (2) Primary flight training experience as a licensed flight instructor or an instructor in a military pilot flight training program, or a combination thereof, consisting of at least 2 years and a total of 500 flight hours.
- (d) For a training course for an instrument rating or a rating with instrument privileges, a chief instructor shall have—
 - (1) At least 100 hours of flight time under actual or simulated instrument conditions;
 - (2) At least 1,000 hours as pilot in command; and
 - (3) Instrument flight instructor experience as a licensed flight instructor-instrument or an instructor in a military pilot flight training program, or a combination thereof, consisting of at least—
 - (i) 2 years and a total of 250 flight hours; or
 - (ii) 400 flight hours of instrument flight instruction.
- (e) For a training course for other than a private pilot license or rating, or an instrument rating or a rating with instrument privileges, a chief instructor shall have—
 - (1) At least 2,000 hours as pilot in command; and
 - (2) Flight training experience as a licensed flight instructor or an instructor in a military pilot flight training program, or a combination thereof, consisting of at least 3 years and a total of 1,000 flight hours.

- (f) A chief instructor for a training course for gliders or balloons is required to have only 40 percent of the hours required in paragraphs (c) and (e).
- (g) A chief instructor for a training course for airships is required to have only 40 percent of the hours required in paragraphs (c), (d), and (e).
- (h) To be eligible as chief instructor for a ground school course, a person shall have one year of experience as a ground school instructor at a certified Level 1 ATO.

IS 3.2.2.2 AIRPORT REQUIREMENTS

- (a) A Level 1 ATO shall show that the airport at which training flights originate has the following.
 - (1) At least one runway or takeoff area that allows training aircraft to make a normal takeoff and landing at the aircraft's maximum certified takeoff gross weight under the following conditions—
 - (i) Wind not more than 5 knots;
 - (ii) Temperatures equal to the mean high temperature for the hottest month of the year in the operating area;
 - (iii) If applicable, with the powerplant operation, and landing gear and flap operation recommended by the manufacturer; and
 - (iv) In the case of a takeoff—
 - (A) With smooth transition from liftoff to the best rate of climb speed without exceptional piloting skills or techniques; and
 - (B) Clearing all obstacles in the takeoff flight path by at least 50 feet.
 - (2) A wind direction indicator that is visible from the end of each runway at ground level.
 - (3) A traffic direction indicator when—

- (i) The airport does not have an operating control tower; and
 - (ii) Traffic and wind advisories are not available.
- (4) Except as provided in paragraph (a) (5), permanent runway lights if that airport is to be used for night training flights.
- (5) Adequate non-permanent lighting or shoreline lighting for an airport or seaplane base for night training flights in seaplanes, if approved by the Authority.

IS: 3.2.3.2 ATO INSTRUCTOR TRAINING AND TESTING REQUIREMENTS

- (a) Prior to initial designation, a flight and simulator flight instructor shall complete the following requirements—
 - (1) Complete at least 8 hours of ground training on the following subject matter:
 - (i) Instruction methods and techniques.
 - (ii) Training policies and procedures.
 - (iii) The fundamental principles of the learning process.
 - (iv) Instructor duties, privileges, responsibilities, and limitations.
 - (v) Proper operation of simulation controls and systems.
 - (vi) Proper operation of environmental control and warning or caution panels.
 - (vii) Limitations of simulation.
 - (viii) Minimum equipment requirements for each curriculum.
 - (ix) Revisions to the training courses.
 - (x) Cockpit resource management and crew co-ordination.
 - (2) Satisfactorily complete a knowledge test—
 - (i) On the subjects specified in paragraph (a)(1); and

- (ii) That is accepted by the Authority as being of equivalent difficulty, complexity, and scope as the tests provided by the Authority for the flight instructor aeroplane and instrument flight instructor knowledge tests.
- (b) A level 2 ATO shall ensure that each instructor who instructs in a flight simulator that the Authority has approved for all training and all testing for the airline transport pilot licensing test, aircraft type rating test, or both, has met at least one of the following requirements:
 - (1) An instructor shall have performed 2 hours in flight, including three takeoffs and three landings as the sole manipulator of the controls of an aircraft of the same category and class, and, if a type rating is required, of the same type replicated by the approved flight simulator in which that instructor is designated to instruct;
 - (2) An instructor shall have participated in an approved line-observation program as specified in Section 8.10.1.43 of these Regulations, and that—
 - (i) Was accomplished in the same aeroplane type as the aeroplane represented by the flight simulator in which that instructor is designated to instruct; and
 - (ii) Included line-oriented flight training of at least 1 hour of flight during which the instructor was the sole manipulator of the controls in a flight simulator that replicated the same type aircraft for which that instructor is designated to instruct.

IS: 3.2.3.7 ATO CHIEF INSTRUCTOR QUALIFICATIONS

- (a) An ATO shall designate a supervisory instructor for a flight training course who shall meet one or more of the following requirements, as applicable:
 - (1) Hold a commercial pilot license or an airline transport pilot license, and, except for a chief instructor for a training course solely for a lighter than air rating, a current flight instructor certificate with appropriate aircraft category, class, and instrument ratings for the category and class of aircraft used in the course.

- (2) Meet the pilot in command recent flight experience requirements of Sections 8.4.1.9 through 8.4.1.11, as applicable.
 - (3) Pass a knowledge test on —
 - (i) Teaching methods;
 - (ii) Applicable provisions of Authority provided aeronautical information publications;
 - (iii) Applicable provisions of Parts 2, 3, and 8; and
 - (iv) The objectives and approved course completion standards of the course for which the person seeks to obtain designation.
 - (4) Pass a proficiency test on instructional skills and ability to train students on the flight procedures and manoeuvres appropriate to the course.
- (b) Except for a training course for gliders, balloons, or airships, a chief instructor shall meet the applicable requirements in paragraphs (c), (d), and (e).
- (c) For a training course for a private pilot license or rating, a chief instructor shall have—
 - (1) At least 1,000 hours as pilot in command; and
 - (2) Primary flight training experience as a licensed flight instructor or an instructor in a military pilot flight training program, or a combination thereof, consisting of at least 2 years and a total of 500 flight hours.
- (d) For a training course for an instrument rating or a rating with instrument privileges, a chief instructor shall have—
 - (1) At least 100 hours of flight time under actual or simulated instrument conditions;
 - (2) At least 1,000 hours as pilot in command; and
 - (3) Instrument flight instructor experience as a licensed flight instructor-instrument or an instructor in a military pilot flight

training program, or a combination thereof, consisting of at least—

- (i) 2 years and a total of 250 flight hours; or
 - (ii) 400 flight hours of instrument flight instruction.
- (e) For a training course for other than a private pilot license or rating, or an instrument rating or a rating with instrument privileges, a chief instructor shall have—
 - (1) At least 2,000 hours as pilot in command; and
 - (2) Flight training experience as a licensed flight instructor or an instructor in a military pilot flight training program, or a combination thereof, consisting of at least 3 years and a total of 1,000 flight hours.
- (f) A chief instructor for a training course for gliders or balloons is required to have only 40 percent of the hours required in paragraphs (c) and (e).
- (g) A chief instructor for a training course for airships is required to have only 40 percent of the hours required in paragraphs (c), (d), and (e).
- (h) To be eligible as chief instructor for a ground school course, a person shall have one year of experience as a ground school instructor at a certified Level 1 ATO.

IS: 3.2.3.8 ATO ASSISTANT CHIEF INSTRUCTOR QUALIFICATIONS

- (a) To be eligible for designation as an assistant chief instructor, a person shall meet the following requirements.
 - (1) Hold a commercial pilot or an airline transport pilot license and, except for the assistant chief instructor for a training course for a lighter than air rating, a current flight instructor certificate with appropriate aircraft category, class, and instrument ratings for the category and class of aircraft used in the course.
 - (2) Meet the pilot in command recent flight experience requirements of Sections 8.4.1.9 through 8.4.1.11, as applicable.

- (3) Pass a knowledge test on—
 - (i) Teaching methods;
 - (ii) Applicable provisions of the Grenada-provided aeronautical information publications;
 - (iii) Applicable provisions of Parts 2, 3, and 8; and
 - (iv) The objectives and approved course completion standards of the course for which the person seeks to obtain designation.
- (4) Pass a proficiency test on the flight procedures and manoeuvres appropriate to that course.
- (5) Meet the applicable requirements in IS 3.2.3.8(b), (c), and (d), except that an assistant chief instructor for a training course for gliders, balloons, or airships is required to have only 40 percent of the hours required in IS 3.2.3.8(b) and (c).
- (b) For a training course for a private pilot license or rating, an assistant chief instructor shall have—
 - (1) At least 500 hours as pilot in command; and
 - (2) Flight training experience as a licensed flight instructor or an instructor in a military pilot flight training program, or a combination thereof, consisting of at least 1 year and a total of 250 flight hours.
- (c) For a training course for an instrument rating or a rating with instrument privileges, an assistant chief flight instructor shall have—
 - (1) At least 50 hours of flight time under actual or simulated instrument conditions;
 - (2) At least 500 hours as pilot in command; and
 - (3) Instrument flight instructor experience as a licensed flight instructor instrument or an instructor in a military pilot flight training program, or a combination thereof, consisting of at least 1 year and a total of 125 flight hours.

- (d) For a training course other than for a private pilot license or rating, or an instrument rating or a rating with instrument privileges, an assistant chief instructor shall have—
- (e) At least 1,000 hours as pilot in command; and
- (f) Flight training experience as a licensed flight instructor or an instructor in a military pilot flight training program, or a combination thereof, consisting of at least 1 1/2 years and a total of 500 flight hours.
- (g) To be eligible for designation as an assistant chief instructor for a ground school course, a person shall have 6 months of experience as a ground school instructor at a certified Level 1 ATO.

IS: 3.2.3.9 ATO CHECK INSTRUCTOR QUALIFICATIONS

- (a) To be designated as a check instructor for conducting student stage checks, end-of-course tests, and instructor proficiency checks under this part, a person shall meet the following requirements, as applicable.
 - (1) Pass a test, given by the chief instructor, on—
 - (i) Teaching methods;
 - (ii) Applicable provisions of the Grenada-provided aeronautical information publications;
 - (iii) Applicable provisions of Parts 2, 8, and this part; and
 - (iv) The objectives and course completion standards of the approved training course for the designation sought.
 - (2) For flight checks and tests—
 - (i) Meet the requirements in paragraph (a)(1);
 - (ii) Hold a commercial pilot license or an airline transport pilot license and, except for a check instructor for a training course for a lighter-than-air rating, a current flight instructor certificate, with appropriate aircraft category, class, and instrument ratings for the category and class of aircraft used in the course;

- (iii) Meet the pilot in command recent flight experience requirements of Sections 8.4.1.9 through 8.4.1.11, as applicable; and
 - (iv) Pass a proficiency test, given by the chief instructor or assistant chief instructor, on the flight procedures and manoeuvres of the approved training course.
 - (3) For checks and tests that relate to ground training—
 - (i) Meet the requirements in paragraph (a)(1);
 - (ii) Except for a training course for a lighter-than-air rating, hold a current flight instructor certificate or ground instructor license with ratings appropriate to the category and class of aircraft used in the course; and
 - (iii) For a training course for a lighter-than-air rating, hold a commercial pilot license with a lighter-than-air category rating and the appropriate class rating.
- (b) Before functioning as a check instructor, a person who meets the eligibility requirements in paragraph (a) shall—
 - (1) Be designated in writing by the chief instructor to conduct student stage checks, end-ofcourse tests, and instructor proficiency checks; and
 - (2) Be approved by the Authority.
- (c) A check instructor may not conduct a stage check or an end-of-course test of any student for whom the check instructor has—
 - (1) Served as the principal instructor; or
 - (2) Recommended for a stage check or end-of-course test.

IS: 3.2.5.2 TRANSFER PRIVILEGES

- (a) A Level 1 ATO receiving a student from another Level 1 ATO may credit that pilot's previous experience towards the curriculum requirements of a course subject to the following conditions:

- (1) If the credit is based upon Section 3.2.5.2 or 3.4.2.6, the gaining ATO may credit that student not more than 50 percent of the curriculum requirements;
- (2) If the credit is not based upon Section 3.2.5.2 or 3.4.2.6, the gaining ATO may credit that student not more than 25 percent of the curriculum requirements;

Note: The receiving ATO shall determine the amount of course credit to be credited under paragraph (1) or paragraph (2), based on a proficiency test or knowledge test, or both, of the student; and

- (b) The receiving ATO may grant credit for training specified in paragraph (a) only if the previous provider of the training has certified the kind and amount of training provided, and the result of each stage check and end of course test, if applicable, given to the student.
- (c) An AMT training course holder may evaluate and grant credit for an entrant's previous training provided—
 - (1) The AMT training course holder determines that the training is verifiable and comparable to portions of the training program.
 - (2) The individual requesting credit passes an examination given by the AMT training course holder, which is equivalent to those examinations given by the AMT training course holder for the same subject in the training program.

IS 3.2.5.5 TRAINING COURSE: CONTENTS

- (a) A Level 1 ATO shall ensure that each training course contains—
 - (1) A description of each flight simulator or flight training device used for training;
 - (2) A listing of the airports at which training flights originate and a description of the facilities, including pilot briefing areas that are available for use by the school's students and personnel at each of those airports;
 - (3) A description of the type of aircraft including any special equipment used for each phase of training.

- (4) The minimum qualifications and ratings for each instructor assigned to ground or flight training; and
- (5) A training syllabus that includes—
 - (i) The prerequisites for enrolling in the ground and flight portion of the course that include the pilot license and rating (if required by this Part), training, pilot experience, and pilot knowledge;
 - (ii) A detailed description of each lesson, including the lesson's objectives, standards, and planned time for completion;
 - (iii) Course learning objectives;
 - (iv) Stage learning objectives and standards; and
 - (v) A description of the checks and tests to be used to measure learning after each stage of training.
- (b) A Level 1 ATO may—
 - (1) Include training in a flight simulator or flight training device, provided it is representative of the aircraft for which the course is approved, meets the requirements of this paragraph, and the training is given by an authorised instructor; and
 - (2) Permit a student to credit training in a flight simulator that meets the requirements of Section 3.2.2.4 for a maximum of 25 percent of the total flight training hour requirements of the approved course.

PART 4

AIRCRAFT REGISTRATION AND MARKING

4.1 GENERAL

4.1.1.1 APPLICABILITY

- (a) Part 4 prescribes the requirements for registration and marking of Civil Aircraft under the provisions of the Civil Aviation Act for the time being in force.

4.1.1.2 DEFINITIONS

- (a) For the purpose of this Part, the applicable definitions are contained in Part 1 of these regulations – “General Policies, Procedures and Definitions.”

4.1.1.3 ABBREVIATIONS

- (a) The following acronyms are used in Part 4:
 - (1) ADIZ - Air Defence Identification Zone
 - (2) DEWIZ - Distant Early Warning Identification Zone

4.2 REGISTRATION REQUIREMENTS**4.2.1.1 GENERAL**

- (a) A person shall not operate a civil aircraft that is eligible for registration under the laws of Grenada, unless it has been registered pursuant to the provisions of Chapter 4 of the Regulations and the Authority has issued a Certificate of Registration for that aircraft which shall be carried aboard that aircraft for all operations.

4.2.1.2 TRANSFER OF FUNCTIONS AND DUTIES

- (a) When an aircraft registered in Grenada is operated by an operator who has an AOC from another contracting State. Grenada may, by agreement with such other State, transfer to it, all or part of its functions and duties as the State of registry in respect of that aircraft. Under such an agreement, Grenada shall be relieved of responsibility in respect of the functions and duties transferred;
- (b) When an aircraft registered in another contracting State is operated by an operator who has an AOC from Grenada, the contracting State may, by agreement with Grenada, transfer all or part of its functions and duties as the State of registry in respect of that aircraft to Grenada. Under such an agreement, the contracting State shall be relieved of responsibility in respect of the functions and duties transferred;
- (c) The above transfer shall not have effect before the agreement between States, in which it is embodied, has been registered with the ICAO Council.

4.2.1.3 APPLICATION

- (a) A person who wishes to register an aircraft in Grenada must submit an application for aircraft registration to the Authority in a form and manner acceptable to the Authority. Each application shall:
 - (1) certify eligibility as required by Chapter 4 of the Regulations;
 - (2) be signed in ink.
- (b) The fee provided for by law will be submitted with the application for aircraft registration to the Authority.
- (c) Upon an applicant meeting all requirements for registration, a certificate of Registration will be issued by the Authority.

4.3 NATIONALITY AND REGISTRATION MARKS**4.3.1.1 APPLICABILITY**

- (a) This Subpart prescribes the requirements for the identification and marking of civil aircraft registered in Grenada.

4.3.1.2 GENERAL

- (a) A person shall operate a civil aircraft registered in Grenada only if it displays nationality and registration marks in accordance with the requirements of this section. The letter or letters used to identify the nationality of Grenada shall conform to the requirements outlined in ICAO Annex 7. This is to be followed by a series of numbers or letters assigned by the Authority.
- (b) Unless otherwise authorized by the Authority, a person shall not place on any aircraft a design, mark, or symbol that modifies or confuses the nationality and registration marks. Marks shall not be used which might be confused with the five-letter combinations used in the International Code of Signals, Part II; the three-letter combinations beginning with Q used in the Q Code; and the distress signal SOS or other similar urgent signals, such as XXX, PAN, and TTT.

Note: For reference to these codes, see the currently effective International Telecommunication Regulations.

- (c) Permanent marking of aircraft nationality and registration shall:
 - (1) be painted on the aircraft or affixed by other means insuring a similar degree of permanence;
 - (2) have no ornamentation;
 - (3) contrast in colour with the background;
 - (4) be legible; and
 - (5) have a hyphen placed between the nationality mark and the registration mark.

4.3.1.3 DISPLAY OF MARKS: GENERAL

- (a) The nationality mark of the aircraft shall consist of the Roman capital letter denoting the nationality of Grenada followed by the registration number of the aircraft in Arabic numerals. Each suffix letter used in the marks displayed must also be a Roman capital letter.
- (b) If, because of the aircraft configuration, it is not possible to mark the aircraft in accordance with this Part, the owner may apply to the Authority for a different procedure.

4.3.1.4 SIZE OF MARKS

- (a) The operator of an aircraft shall display marks on the aircraft meeting the size requirements of this section.
- (b) *Height.* The character marks in each separate group shall be of equal height and on—
 - (1) Fixed-wing aircraft:
 - (i) Wings- shall be at least 50 centimeters
 - (ii) Fuselage and vertical tail surfaces:- shall be at least 30 centimeters high;
 - (2) Rotorcraft shall be at least 30 centimeters high; and
 - (3) Lighter-than-air aircraft at least 50 centimeters high.

- (c) *Width.* Characters must be two-thirds as wide as they are high, except the number "1", which must be one-sixth as wide as it is high, and the letters "M" and "W" which may be as wide as they are high.
- (d) *Thickness.* Characters shall be formed by solid lines one-sixth as thick as the character is high.
- (e) *Spacing.* The space between each character may not be less than one-fourth of the character width.
- (f) *Uniformity.* The marks required by this Part for fixed-wing aircraft must have the same height, width, thickness, and spacing on both sides of the aircraft.
- (g) The operator of an aircraft penetrating an ADIZ or DEWIZ shall display on that aircraft temporary or permanent nationality and registration marks at least 30 centimeters high.

4.3.1.5 DEVIATIONS FOR SIZE AND LOCATION OF MARKS

- (a) If either one of the surfaces authorized for displaying required marks is large enough for display of marks meeting the size requirements of this section and the other is not, the operator shall place full-size marks on the larger surface.
- (b) If neither surface is large enough for full-size marks, the Authority may approve marks as large as practicable for display on the larger of the two surfaces.

4.3.1.6 LOCATION OF MARKS ON FIXED-WING AIRCRAFT

- (a) The operator of a fixed-wing aircraft shall display the required marks once on the lower surface of the wing structure. They shall be located on the left half of the lower surface of the wing structure unless they extend across the whole of the lower surface of both wings and, either the vertical tail surfaces or the sides of the fuselage
- (b) The marks required by paragraph (a) of this section shall be displayed as follows:
 - (1) if displayed on the vertical tail surfaces, horizontally on the upper half of both surfaces of a single vertical tail or horizontally on the upper halves of the outer surfaces of a multi-vertical tail;

- (2) if displayed on the fuselage surfaces, horizontally on both sides of the fuselage between the trailing edge of the wing and the leading edge of the horizontal stabilizer;
- (3) if engine pods or other appurtenances are located in the area described in paragraph (b)(2) and are an integral part of the aircraft, the operator may place the marks on those pods or appurtenances;
- (4) on aircraft having no fixed wing surface the marks shall also appear on the lower surface of the fuselage on the line of symmetry and shall be placed with the tops of the letters towards the nose.

4.3.1.7 LOCATION OF MARKS ON ROTORCRAFT

- (a) The operator of a rotorcraft shall display marks horizontally on both surfaces of the cabin, fuselage, boom, or tail, such that the rotorcraft can be readily identified.

4.3.1.8 LOCATION OF MARKS ON LIGHTER-THAN-AIR AIRCRAFT

- (a) *Airships.* The operator shall place marks on an airship to appear on:
 - (1) the hull, located lengthwise on each side of the hull and on its upper surface on the line of symmetry; or
 - (2) the horizontal and vertical stabilizers surfaces:
 - (i) for the horizontal stabilizer, located on the right half of the upper surface and on the left half of the lower surface, with the tops of the letters and numbers toward the leading edge; and
 - (ii) for the vertical stabilizer, located on each side of the bottom half stabilizer, with the letters and numbers placed horizontally.
- (b) *Spherical balloons (other than unmanned free balloons).* The operator shall apply marks to appear in two places diametrically opposite each other and located near the maximum horizontal circumference of the balloon.
- (c) *Non-spherical balloons (other than unmanned free balloons).* The operator shall apply marks to appear on each side, located near the

maximum cross-section of the balloon immediately above either the rigging band or the points of attachment of the basket suspension cables.

- (d) *Lighter-than-air aircraft (other than unmanned free balloons).* The operator shall apply side marks to be visible both from the sides and from the ground.
- (e) *Unmanned free balloons.* The operator shall apply marks to appear on the identification plate.

4.3.1.9 SALE AND DEREGISTRATION OF AIRCRAFT

- (a) When an aircraft that is registered in Grenada is sold, the holder of the certificate of registration shall remove, before its delivery to the purchaser, all nationality and registration marks of Grenada, unless the purchaser is a citizen or other legal entity as prescribed in Regulation 24(2) of Chapter 4.
- (b) The Authority shall issue the certificate of aircraft deregistration in the form and of a size determined by the Authority.
- (c) The certificate of aircraft deregistration shall be in the English language.

4.3.1.10 IDENTIFICATION PLATE REQUIRED

- (a) The operator of an aircraft registered pursuant to these Regulations shall affix to the aircraft, an identification plate:
 - (1) containing the aircraft type, model, serial number, marks of nationality and operator's name and location;
 - (2) made of fireproof metal or other fireproof material of suitable physical properties;
 - (3) secured to the aircraft in a prominent position, near the main entrance, or, in the case of a free balloon, affixed conspicuously to the exterior of the payload.

**PART 5
AIRWORTHINESS**

5.1 GENERAL

5.1.1.1 APPLICABILITY

- (a) This part contains the requirements for—
- (1) certification of aircraft and aeronautical products;
 - (2) issuance of Certificates of Airworthiness and other certifications for aeronautical products;
 - (3) continuing airworthiness of aircraft and aeronautical products;
 - (4) rebuilding and modifications of aircraft and aeronautical components;
 - (5) maintenance and preventive maintenance of aircraft and aeronautical components;
 - (6) aircraft inspection requirements; and
 - (7) air operator aircraft maintenance and inspection requirements.
 - (8) continuing airworthiness records

5.1.1.2 DEFINITIONS

- (a) For the purpose of this part, the applicable definitions are contained in Part 1 of these regulations – “General Policies, Procedures and Definitions.”

Implementing Standard: See IS: 5.1.1.2 for expanded definition of Major modifications, Major repairs, and Preventive maintenance.

5.1.1.3 ABBREVIATIONS

- (a) The following abbreviations are used in this part—
- (1) **AC** – Advisory Circular

- (2) **AD** – Airworthiness Directive
- (3) **AOC** – Air Operator Certificate
- (4) **AMO** – Approved Maintenance Organisation
- (5) **ICAO** – International Civil Aviation Organization
- (6) **IS** – Implementing Standards
- (7) **STC** – Supplemental Type Certificate
- (8) **TC** – Type Certificate
- (9) **TSO** – Technical Standard Order

5.2 CERTIFICATION OF AIRCRAFT AND AERONAUTICAL PRODUCTS

5.2.1.1 APPLICABILITY

- (a) This part applies to operators of aircraft within Grenada.
- (b) No person may operate an aircraft within Grenada or apply for registration of an aircraft in Grenada unless that aircraft and the aeronautical products therein have received type certification from the State of Design and production approval from the State of Manufacture by the appropriate regulatory agencies of those States in accordance with the Standards of ICAO Annex 8.

5.2.1.2 ORIGINAL CERTIFICATION OF AIRCRAFT AND AERONAUTICAL PRODUCTS

- (a) This section describes the procedures and designation of applicable rules for original certification of an aircraft and related aeronautical products.
- (b) The Authority shall hold this subpart reserved until such time as it has received an application for Type Certificates, Production Certificates or other related approvals.
- (c) An applicant for a production certificate for any aircraft or aeronautical product thereof for manufacture in Grenada shall comply with the type certificate as required by the State of Design for approval.

- (d) At such time as the application for production is presented the Authority shall make available suitable regulations or provisions for the issuance of a Certificate of Airworthiness, or airworthiness document as appropriate for the product concerned.

5.3 SUPPLEMENTAL TYPE CERTIFICATES

5.3.1.1 APPLICABILITY

- (a) This subpart prescribes procedural requirements for the issue of supplemental type certificates.

5.3.1.2 ISSUANCE OF A SUPPLEMENTAL TYPE CERTIFICATE

- (a) Any person who proposes to modify a product by introducing a major change in type design not great enough to require a new application for a TC shall apply for an STC to the regulatory agency of the State of Design that approved the TC for that product or to the State of Registry of the aircraft, provided that the State of Registry has the technical expertise to evaluate the proposed change in accordance with the type design. The applicant shall apply for the STC in accordance with the procedures prescribed by that State.
- (b) The Authority will, upon receiving a request for an STC for an aircraft registered in Grenada—
 - (1) Forward the request to the State of Design; or
 - (2) If applicable, issue an STC using the same regulatory and other guidance as the State of Design and State of Manufacture.

5.4 CERTIFICATES OF AIRWORTHINESS

5.4.1.1 APPLICABILITY

- (a) This subpart prescribes procedures required for the issue of certificates of airworthiness and other certifications for aeronautical products registered in Grenada.
- (b) The Authority will issue a certificate of airworthiness for aircraft registered in Grenada based on satisfactory evidence that the aircraft complies with the design aspects of the appropriate airworthiness requirements (TC).

- (c) The Authority will accept the Certificate of Airworthiness from the State of Registry of another Contracting State under an Article 83bis arrangement.

5.4.1.2 ELIGIBILITY

- (a) A registered owner, or the agent of the owner, of a Grenada-registered aircraft shall apply for a Certificate of Airworthiness for that aircraft.
- (b) An applicant for a Certificate of Airworthiness shall apply on a form and in a manner that is acceptable to the Authority.

5.4.1.3 CLASSIFICATIONS OF CERTIFICATES OF AIRWORTHINESS

- (a) The Authority will issue a Standard Certificate of Airworthiness for aircraft in the specific operating category. The types of standard certificates of airworthiness include—
 - (1) Transport Category (Passenger) – any purpose;
 - (2) Transport Category (Cargo) – any purpose, other than public transport of passengers;
 - (3) Aerial Work Category – any purpose, other than public transport;
 - (4) Private Category – any purpose other than public transport or aerial work; or
 - (5) Special Category – any purpose, other than public transport, specified in the certificate of airworthiness but not including the carriage of passengers unless expressly permitted;
- (b) The Authority may issue a Special Operational Permits;

Note: Aerial Work Category includes operations in agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

5.4.1.4 AMENDMENT OF CERTIFICATE OF AIRWORTHINESS

- (a) The Authority may amend or modify a Certificate of Airworthiness:

- (1) upon application from an operator; or
- (2) on its own initiative.

5.4.1.5 TRANSFER OR SURRENDER OF CERTIFICATE OF AIRWORTHINESS

- (a) An owner of an aircraft shall transfer a Certificate of Airworthiness—
 - (1) to the lessee upon lease of an aircraft within or outside of Grenada; or
 - (2) to the buyer upon sale of the aircraft within Grenada.
- (b) An owner shall surrender the Certificate of Airworthiness for the aircraft to the issuing Authority upon sale of that aircraft outside of Grenada.

5.4.1.6 EFFECTIVE DATES OF CERTIFICATE OF AIRWORTHINESS

- (a) Certificates of Airworthiness are effective as follows unless sooner surrendered, suspended or revoked, or a special termination date is otherwise established by the Authority—
 - (1) a Certificate of Airworthiness shall be renewed or shall remain valid, subject to the laws of the State of Registry,
 - (i) As long as the aircraft is maintained in accordance with the continuing airworthiness requirements of the State of Registry;
 - (ii) Until the aircraft is sold to a person outside of Grenada;
 - (ii) Until the aircraft is leased for operations, registered in another country, and removed from the registry of Grenada; or
 - (iv) Until revoked by the State of Registry.
 - (2) a Special Flight Permit is valid for the period of time specified in the permit.

- (3) the continuing airworthiness of the aircraft shall be determined by a periodical inspection at appropriate intervals having regard to lapse of time and type of service
 - (4) Failure to maintain an aircraft in an airworthy condition, as defined by the appropriate airworthiness requirements of the State of Registry, shall render the aircraft ineligible for operations until it is restored to an airworthy condition.
- (b) When an aircraft imported for registration in Grenada has a Certificate of Airworthiness issued by another Contracting State, Grenada may, as an alternative to issuance of its own Certificate of Airworthiness, establish validity by suitable authorisation to be carried with the former Certificate of Airworthiness accepting it as the equivalent of a Certificate of Airworthiness issued by Grenada. The validity of the authorisation issued shall not extend beyond the period of validity of the Certificate of Airworthiness issued by the Contracting State or as indicated in IS 5.4.1.6 whichever occurs first.

Implementing Standard: See IS: 5.4.1.6 for effective dates for a Certificate of Airworthiness

5.4.1.7 AIRCRAFT IDENTIFICATION

- (a) An applicant for a Certificate of Airworthiness shall show that the aircraft is properly registered and marked, and includes at least one fireproof identification plate in accordance with Part 4, Section 4.3.1.10 of these regulations.

5.4.1.8 ISSUE OF CERTIFICATE OF AIRWORTHINESS

- (a) The Authority shall issue a Certificate of Airworthiness if—
 - (1) the applicant presents evidence to the Authority that the aircraft conforms to a type design approved under a TC or a STC and to the applicable ADs of the State of Manufacture;
 - (2) the aircraft has been inspected in accordance with the performance rules of Subpart 5.6 of this part for inspections and found airworthy within the last 30 calendar days by persons authorised by the Authority to make such determinations; and

- (3) the Authority finds, after an inspection, that the aircraft conforms to type design and is in condition for safe operation.
- (b) The Authority may validate a certificate of airworthiness or aerial work certificate issued by another Contracting State upon registration of the aircraft in Grenada. The validity of the validation shall not extend beyond the period of validity of the Certificate of Airworthiness or one year, whichever is less.
- (c) The certificate of airworthiness will be issued in the language of Grenada and will include an English translation.
- (d) In the event that an aircraft is being exported from Grenada, and the importing state requires an export certificate of airworthiness, the Authority shall issue an export certificate of airworthiness.

Implementing Standard: See IS: 5.3.1.5 for information contained on a Certificate of Airworthiness

5.4.1.9 COOPERATION AMONG STATES FOR CONTINUING AIRWORTHINESS INFORMATION, INCLUDING AIRWORTHINESS DIRECTIVES

- (a) Upon registration of an aircraft in Grenada, the Authority shall notify the State of Design of the aircraft of the registration in Grenada, and will request that the Authority receive any and all ADs addressing that aircraft or aeronautical product and any requirements for the establishment of specific continuing airworthiness maintenance programmes
- (b) Whenever the State of Design or State of Manufacture considers that a condition in an aircraft or aeronautical product is unsafe as shown by the issuance of an AD by that State, the requirements of such directives shall apply to Grenada registered civil aircraft of the type identified in that AD.
- (c) The Authority shall identify manufacturers' service bulletins and other sources of data, prescribe inspections, procedures and limitations, for mandatory compliance pertaining to affected aircraft in Grenada.
- (d) A person shall not operate any civil aircraft registered in Grenada to which the measures of this subsection apply, except in accordance with the applicable mandatory continuing airworthiness information.

5.4.1.10 COMMERCIAL AIR TRANSPORT

- (a) The Authority shall consider a Certificate of Airworthiness valid for commercial air transport only when the aircraft is operated in accordance with a valid AOC issued by the State of the Operator that identify the specific types of commercial air transport authorised.

5.4.1.11 ISSUE OF SPECIAL FLIGHT PERMITS

- (a) The Authority may issue a Special Flight Permits to an aircraft that does not qualify for a Standard Certificate;
- (b) Aircraft holding a Special Flight Permit subjected to operating limitations within Grenada shall not make international flights;
- (c) The Authority may issue specific operating limitations for each Special Flight Permits.
- (d) The following Special Flight Permits may be issued

- (1) FERRY FLIGHT PERMITS

- (i) The Authority may issue a Ferry Flight Permit to an aircraft that is capable of safe flight, but unable to meet applicable airworthiness requirements, for the purpose of—
 - (A) flying to a base where maintenance, overhaul, modifications, repairs, or inspections are to be performed, or to a point of storage;
 - (B) delivering or exporting an aircraft;
 - (C) evacuating aircraft from areas of impending danger;
 - (D) operating at weights in excess of the aircraft's maximum Certified Take-off Weight for flight beyond normal range over water or land areas, where adequate landing facilities or appropriate fuel is not available and the excess weight is limited to additional fuel, fuel carrying facilities and navigation equipment necessary for the flight; and

- (ii) the Authority shall require a properly executed approval for return to service in the aircraft's permanent record by a person or AMO, authorised in accordance with this part, stating that the subject aircraft has been inspected and found to be safe for the intended flight.
- (iii) The Authority may issue specific operating limitations for each Ferry Flight Permit.
- (iv) The operator shall obtain all required overflight authorisations from countries to be overflown on flights outside of Grenada.

Note: Foreign Authorities may refuse flight from, into or through their airspace.

(2) PERMITS TO FLY

- (i) The Authority may issue a Permit to Fly to an aircraft for testing after maintenance, overhaul, modifications, repairs, or inspections;
- (ii) the Authority shall require a properly executed approval for return to service in the aircraft's permanent record by a person or AMO, authorised in accordance with this part, stating that the subject aircraft has been inspected and found to be safe for the intended flight;
- (iii) The Authority may issue specific operating limitations for each Permit to Fly;

5.4.1.12 AIRCRAFT NOISE CERTIFICATION

- (a) Noise certification of an aircraft shall be granted by the Authority on the basis of satisfactory evidence that the aircraft complies with requirements of this part
- (b) When an aircraft imported for registration in Grenada has a Noise Certificate issued by another Contracting State, Grenada may, as an alternative to issuance of its own Noise Certificate, establish validity by suitable authorisation to be carried with the former Noise Certificate, accepting it as the equivalent of a Noise Certificate issued by Grenada.

Implementing Standard: See IS: 5.4.1.12 for noise certification requirements

5.5 CONTINUING AIRWORTHINESS OF AIRCRAFT AND AERONAUTICAL PRODUCTS

5.5.1.1 APPLICABILITY

- (a) This subpart prescribes rules governing the continued airworthiness of civil aircraft registered in Grenada, whether operating inside or outside the borders of Grenada.

5.5.1.2 RESPONSIBILITY

- (a) The owner or operator of an aircraft, or in the case of a leased aircraft, the lessee, shall be responsible for maintaining the aircraft in an airworthy condition by ensuring that—
 - (1) all maintenance, overhaul, modifications, repairs, or inspections that affect airworthiness are performed as prescribed by the State of Registry;
 - (2) maintenance personnel make appropriate entries in the aircraft continuing airworthiness records certifying that the aircraft is airworthy;
 - (3) the approval for return to service (maintenance release) is completed to the effect that the maintenance work performed has been completed satisfactorily and in accordance with the prescribed methods; and
 - (4) In the event there are open discrepancies, the approval for return to service includes a list of the uncorrected maintenance items for which temporary relief is provided in the minimum equipment list, and these items are made a part of the aircraft permanent record.
- (b) The owner or operator of an aeroplane over 5 700 kg maximum certificated take-off mass shall obtain and assess continuing airworthiness information and recommendations available from the organisation responsible for the type design and shall implement resulting actions considered necessary in accordance with a procedure acceptable to the Authority.

5.5.1.3 GENERAL

- (a) A person shall not perform any maintenance, overhaul, modifications, repairs, or inspections on an aircraft or aeronautical product other than as prescribed in this regulation
- (b) A person shall not operate an aircraft for which a manufacturer's Aircraft Maintenance Manual or instructions for continuing airworthiness has been issued that contain an airworthiness limitation section unless the;
 - (1) mandatory replacement times;
 - (2) inspection intervals; and
 - (3) related procedures specified in that section or alternative inspection intervals and related procedures set forth in the operations specifications approved under Part 9 of the Schedule, or in accordance with the inspection programme approved under Part 8 of these Schedule, have been complied with.
- (c) A person shall not operate an aircraft or aeronautical product to which an AD, issued by either the State of Design or State of Manufacture and adopted for Grenada-registered aircraft by the Authority or by the State of Registry for aircraft operated within Grenada, applies, except in accordance with the requirements of that AD.
- (d) When the Authority determines that an aeronautical product has exhibited an unsafe condition and that condition is likely to exist or to develop in other products of the same type design, the Authority shall issue an AD prescribing inspections and the conditions and limitations, if any, under which those products may continue to be operated.
- (e) The Authority will report any ADs or additional continuing airworthiness requirements that it issues, or any malfunction or defect reports, to the State of Design.

5.5.1.4 REPORTING OF FAILURES, MALFUNCTIONS, AND DEFECTS

- (a) An owner or an operator of an aircraft shall report to the Authority any failure, malfunction, or defect concerning at least the following—

- (1) Fires during flight and whether or not a fire-warning system was installed and functioned properly;
- (2) false fire warning during flight;
- (3) an engine exhaust system that causes damage during flight to the engine, adjacent structure, equipment, or components;
- (4) an aircraft component that causes accumulation or circulation of smoke, vapour, or toxic or noxious fumes in the crew compartment or passenger cabin during flight;
- (5) engine shutdown during flight because of flameout;
- (6) engine shutdown during flight when external damage to the engine or aircraft structure occurs;
- (7) engine shutdown during flight due to foreign object ingestion or icing;
- (8) shutdown during flight of more than one engine;
- (9) a propeller feathering system or the ability of the system to control overspeed during flight;
- (10) a fuel or fuel-dumping system that affects fuel flow or causes hazardous leakage during flight;
- (11) an unintended landing gear extension or retraction, or opening or closing of landing gear doors during flight;
- (12) brake system component that result in loss of brake actuating force when the aircraft is in motion on the ground;
- (13) aircraft structure that requires major repair;
- (14) cracks, permanent deformation, or corrosion of aircraft structure, if more than the maximum acceptable to the manufacturer or the Authority;
- (15) aeronautical products or systems that require emergency actions during flight (except action to shut down an engine);
- (16) an interruption to a flight, an unscheduled change of aircraft en route, or an unscheduled stop or diversion from a route, caused by known or suspected technical difficulties or malfunctions;

- (17) any abnormal vibration or buffeting caused by a structural or system malfunction, defect, or failure;
 - (18) a failure or malfunction of more than one attitude, airspeed, or altitude instrument during a given operation of the aircraft.
 - (19) the number of engines removed prematurely because of malfunction, failure or defect, listed by make and model and the aircraft type in which it was installed; or
 - (20) the number of propeller featherings in flight, listed by type of propeller and engine and aircraft on which it was installed.
- (b) A report required by this subsection shall—
- (1) be made within 3 days after determining that the failure, malfunction, or defect required to be reported has occurred; and
 - (2) include as much of the following information as is available and applicable—
 - (i) aircraft serial number;
 - (ii) when the failure, malfunction, or defect is associated with an article approved under a TSO authorisation, the article serial number and model designation, as appropriate;
 - (iii) when the failure, malfunction or defect is associated with an engine or propeller, the engine or propeller serial number, as appropriate;
 - (iv) product model;
 - (v) identification of the part, component, or system involved, including the part number; and (vi) nature of the failure, malfunction, or defect.
- (c) The Authority, of the State of Registry of the aircraft, shall submit all such reports upon receipt to the State of Design.
- (d) The Authority, if not the State of Registry of the aircraft, will submit all such reports upon receipt to the State of Design.

5.5.1.5 MAINTENANCE AND OPERATIONAL EXPERIENCE

- (a) The owner or operator of an aircraft shall monitor and assess maintenance and operational experience with respect to continuing airworthiness and have a system whereby information on faults, malfunctions, defects, and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft is transmitted to the organisation responsible for the type design of the aircraft.
- (b) The owner or operator and AMO shall, report to the Authority the service information required by the Authority according to the procedure established by the Authority.
- (c) The owner or operator and AMO shall, transmit to the organisation responsible for the type design of the aircraft information on faults, malfunctions, defects, and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft.

5.6 AIRCRAFT MAINTENANCE AND INSPECTION REQUIREMENTS**5.6.1.1 APPLICABILITY**

- (a) This subpart prescribes rules governing the maintenance and inspection of any aircraft having a Grenada Certificate of Airworthiness or associated aeronautical products.

5.6.1.2 GENERAL REQUIREMENTS FOR MAINTENANCE AND INSPECTIONS

- (a) A person shall not operate an aircraft unless the aircraft and aeronautical products and operational and emergency equipment are maintained in accordance with a maintenance programme and the aircraft and aeronautical product is inspected according to an inspection programme approved by the Authority.
- (b) The maintenance programme shall include a description of the aircraft and aeronautical products and the recommended methods for the accomplishment of maintenance tasks. Such information shall include guidance on defect diagnosis.
- (c) The maintenance programme shall include the maintenance tasks and the recommended intervals at which these tasks are to be performed.

- (d) Maintenance tasks and frequencies that have been specified as mandatory by the State of Design in approval of the type design shall be identified in the maintenance programme.
- (e) The maintenance programme shall have an approval for return to service process, including signed documentation, in a manner satisfactory to the Authority, indicating that the maintenance performed has been completed satisfactorily. An approval for return to service shall contain a certification including—
 - (1) Basic details of the maintenance carried out;
 - (2) The date such maintenance was completed;
 - (3) When applicable, the identity of the AMO or aviation maintenance technician; and
 - (4) The identity of the person or persons signing the approval for return to service.
- (f) The owner or operator shall use one of the following inspection programmes, as appropriate for the aircraft and the type of operation—
 - (1) Annual inspection;
 - (2) Annual/100-hour inspection;
 - (3) Progressive inspection; or
 - (4) Continuing airworthiness maintenance programme.

Note: Mandatory requirements identified as part of the type design approval are often referred to as certification maintenance requirements and/or airworthiness limitations.

5.6.1.3 PERSONS AUTHORISED TO PERFORM MAINTENANCE, OVERHAUL, MODIFICATIONS, REPAIRS, AND INSPECTIONS

- (a) A person shall not perform on an aircraft or aeronautical product any task defined as maintenance except as provided in the following—
 - (1) a pilot licensed by the Authority may perform preventive maintenance on any aircraft owned or operated by that pilot so long as the aircraft is not listed for use by an AOC holder.

- (2) a person working under the supervision of a licensed aviation maintenance technician may perform the maintenance, overhaul, modifications, repairs, and inspections that the supervisory aviation maintenance technician is authorised to perform—
 - (i) if the supervisor personally observes the work being done to the extent necessary to ensure that it is being done properly, and
 - (ii) if the supervisor is readily available, in person, for consultation.
- (3) a licensed aviation maintenance technician may perform or supervise the maintenance or modification of an aircraft or aeronautical product for which he or she is rated subject to the limitations of Part 2, Section 2.4.4 of these regulations.
- (4) an AMO may perform aircraft maintenance, overhaul, modifications, repairs, and inspections within the limits specified by the Authority.
- (5) a manufacturer holding an AMO may—
 - (i) overhaul or modify any aeronautical product manufactured by that manufacturer under a type or production certificate;
 - (ii) overhaul or modify any aeronautical product manufactured by that manufacturer under a TSO Authorisation, a Parts Manufacturer Approval issued by the State of Design, or a Product and Process Specification issued by the State of Design; and
 - (iii) perform any inspection required by Part 8 of the Schedule on aircraft it manufactures, while currently operating under a production certificate or a currently approved production inspection system for such aircraft.

5.6.1.4 AUTHORISED PERSONNEL TO APPROVE FOR RETURN TO SERVICE

- (a) A person or an entity, other than the Authority, shall not approve an aircraft or aeronautical product for return to service after it has undergone maintenance, overhaul, modifications, repairs, or inspections,, except as provided in the following—

- (1) a pilot licensed by the Authority may return his or her aircraft to service after performing authorised preventive maintenance.
- (2) a licensed aviation maintenance technician may approve aircraft and aeronautical products for return to service after he or she has performed, supervised, or inspected its maintenance subject to the limitation of Part 2, Section 2.4.4 of the Schedule.
- (3) an AMO may approve aircraft and aeronautical products for return to service as provided in the operations specifications approved by the Authority.

5.6.1.5 PERSONS AUTHORISED TO PERFORM INSPECTIONS

- (a) A person, unless otherwise authorised by the Authority, shall not perform the inspections required by Part 8, Section 8.2.1.7 of the Schedule prior to or after an aircraft or aeronautical product has undergone maintenance, overhaul, modifications, repairs, or inspections,, except as provided in the following:
 - (1) an aviation maintenance technician may conduct the required inspections of aircraft and aeronautical products for which he or she is rated and current;
 - (2) an aviation maintenance technician may conduct the required duplicate inspections of aircraft and aeronautical products for which he or she is rated and current;
 - (3) an AMO may perform the required inspections of aircraft and aeronautical products as provided in the operations specifications approved by the Authority.

Implementing Standard: See IS: 5.6.1.5 for duplicate inspection requirements.

5.6.1.6 PERFORMANCE RULES: MAINTENANCE

- (a) A person performing maintenance, overhaul, modifications, repairs, or inspections on an aircraft or aeronautical product shall use the methods, techniques, and practices prescribed in—
 - (1) the current manufacturer's Aircraft Maintenance Manual or instructions for continuing airworthiness prepared by the manufacturer; and

- (2) additional methods, techniques and practices required by the Authority; or methods, techniques and practices designated by the Authority where the manufacturer's documentation was not available.
- (b) A person shall use the tools, equipment, and test apparatus necessary to assure completion of the work in accordance with accepted industry practices. If the manufacturer involved recommends special equipment or test apparatus, the person performing maintenance shall use that equipment or apparatus or its equivalent, that is acceptable to the Authority;
- (c) A person performing maintenance, overhaul, modifications, repairs, or inspections on an aircraft or aeronautical product shall do that work in such a manner, and shall use materials of such a quality, that the condition of that aeronautical product shall be at least equal to its original or properly modified condition with regard to aerodynamic function, structural strength, resistance to vibration and deterioration, and other qualities affecting airworthiness;
- (d) the methods, techniques, and practices contained in an AOC holder's maintenance control manual and continuing airworthiness maintenance program, as approved by the Authority, shall constitute an acceptable means of compliance with the requirements of this subsection;
- (e) A person performing a major modification or repair defined in this Part shall use data approved by the Authority—
 - (1) the approved data used must be referenced on the form or log entry used to approve the modification or repair for return to service.
 - (2) acceptable "approved data" is data specifically approved by the following for the modification or repair—
 - (i) the Authority;
 - (ii) the State of Manufacture;
 - (iii) a Designee authorized by the State of Manufacture for that type modification or repair;
 - (iv) the State of Design; or
 - (v) a Designee authorized by the State of Design for that type modification or repair.

Implementing Standard: See IS: 5.6.1.6 for performance rules on maintenance schedules

5.6.1.7 PERFORMANCE RULES: INSPECTIONS

- (a) GENERAL. A person performing an inspection required by the Authority shall—
 - (1) perform the inspection so as to determine whether the aircraft, or portion(s) thereof under inspection, meets all applicable airworthiness requirements; and
 - (2) if there is an inspection program required or accepted for the specific aircraft being inspected, perform the inspection in accordance with the instructions and procedures set forth in the inspection program.
- (b) ROTORCRAFT. A person performing an inspection required on a rotorcraft shall inspect the following systems in accordance with the manufacturer's Aircraft Maintenance Manual or instructions for continuing of the manufacturer concerned—
 - (1) the drive shafts or similar systems,
 - (2) the main rotor transmission gear box for obvious defects,
 - (3) the main rotor and centre section (or the equivalent area), and
 - (4) the auxiliary rotor on helicopters.
- (c) ANNUAL AND 100-HOUR INSPECTIONS.
 - (1) A person performing an annual or 100-hour inspection shall use a checklist while performing the inspection.
 - (2) The checklist referred to in Paragraph 5.6.1.7(c)(1) may be of the person's own design, one provided by the manufacturer of the equipment being inspected, or one obtained from another source. The checklist shall include the scope and detail of the items prescribed by the Authority.
 - (3) A person approving a reciprocating-engine-powered aircraft for return to service after an annual or 100-hour inspection shall, before that approval, run the aircraft engine or engines to determine satisfactory performance in accordance with the current manufacturer's recommendations of—

- (i) power output (static and idle rpm);
 - (ii) magnetos;
 - (iii) fuel and oil pressure; and
 - (iv) cylinder and oil temperature.
- (4) A person approving a turbine-engine-powered aircraft for return to service after an annual or 100-hour inspection shall, before that approval, run the aircraft engine or engines to determine satisfactory performance in accordance with the current manufacturer's recommendations.

Implementing Standard: See IS: 5.6.1.7 for components to be included in an annual or 100-hour inspection.

5.6.1.8 PERFORMANCE RULES: AIRWORTHINESS LIMITATIONS

- (a) A person performing an inspection or other maintenance specified in an airworthiness limitations section of a current manufacturer's Aircraft Maintenance Manual or in instructions for continuing airworthiness, shall perform the inspection or other maintenance in accordance with that section, or in accordance with specifications approved by the Authority.

5.7 CONTINUING AIRWORTHINESS AND INSPECTION RECORDS AND ENTRIES

5.7.1.1 CONTENT, FORM AND DISPOSITION OF RECORDS FOR MAINTENANCE, OVERHAUL, MODIFICATIONS, AND REPAIRS OF AIRCRAFT AND AERONAUTICAL PRODUCTS

- (a) A person who maintains, overhauls, modifies, or repairs an aircraft or aeronautical product shall, when the work is performed satisfactorily, make an entry in the continuing airworthiness record of that equipment as follows—
- (1) a description (or reference to data acceptable to the Authority) of work performed;
 - (i) Total time in service (hours, calendar time, and cycles as appropriate of the aircraft and all life-limited parts;
 - (ii) Current status of compliance with all mandatory continuing airworthiness information;

- (iii) Appropriate details of modifications and repairs;
 - (iv) Time in service (hours, calendar times and cycles as appropriate) since the last overhaul of the aircraft or its contents subject to mandatory overhaul life;
 - (v) Current status of aircraft compliance with the maintenance programme; and
 - (vi) Specific details to show that all requirements for the signing for an approval for return to service have been met.
- (2) completion date of the work performed;
 - (3) name, signature, certificate number and kind of license held by the person approving the work.

Note: The signature constitutes the approval for return to service only for the work performed.

- (b) A person performing the work under Paragraph 5.7.1.1(a) of this Subsection, shall enter records of major repairs and major modifications, and dispose of that form in the manner prescribed by the Authority.
- (c) A person working under supervision of an aviation maintenance technician shall not perform any inspection required in Part 8 of these regulations or any inspection performed after a major repair or modification.

Implementing Standard: See IS: 5.7.1.1 for the maintenance form requirements and a sample major repair and modification form.

5.7.1.2 CONTENT FORM AND DISPOSITION OF RECORDS FOR MAINTENANCE, OVERHAUL, MODIFICATIONS, AND REPAIRS OF AN AERONAUTICAL PRODUCT

- (a) A person shall not approve for return to service any aeronautical product that has undergone maintenance, modifications, or repairs unless—
 - (1) the appropriate continuing airworthiness record entry has been made;

- (2) the repair or modification form authorised by or furnished by the Authority has been executed in a manner prescribed by the Authority;
- (b) if a major repair or modification results in any change in the aircraft operating limitations or flight data contained in the approved aircraft flight manual, those operating limitations or flight data are appropriately revised and set forth as prescribed.
- (c) A person shall not describe, in any required maintenance entry or on any form, an aeronautical product as being overhauled unless that aeronautical product has been—
 - (1) disassembled, cleaned, inspected as permitted, repaired as necessary, and reassembled using methods, techniques, and practices acceptable to the Authority; and
 - (2) tested in accordance with approved standards and technical data, or in accordance with current standards and technical data acceptable to the Authority, which have been developed and documented by the holder of the TC, the STC, or a material, part, process, or appliance manufacturing approval by the Authority.
- (d) If the maintenance, overhaul, modification, or repair of an aeronautical product is performed by an AMO, the AMO shall complete an airworthiness approval tag, as prescribed in Part 6 of the Schedule.

Implementing Standard: See IS: 5.7.1.1 for the repair or modification form requirements.

5.7.1.3 CONTENT, FORM, AND DISPOSITION OF RECORDS OF INSPECTIONS FOR RETURN TO SERVICE

- (a) CONTINUING AIRWORTHINESS RECORD ENTRIES. A person approving or disapproving the return to service of an aeronautical product after any inspection performed in accordance with Part 8 of these regulations, shall make an entry in the continuing airworthiness record of that equipment containing the following information—

- (1) the type of inspection and a brief description of the extent of the inspection;
 - (2) the date of the inspection and aircraft or aeronautical product total time in service;
 - (3) the signature, the license number, and type of license held by the person approving or disapproving for return to service the aircraft or aeronautical product;
 - (4) if the aircraft or aeronautical product is found to be airworthy and approved for return to service, the following or a similarly worded statement— *“I certify that this aircraft or aeronautical product has been inspected in accordance with (insert type) inspection and was determined to be in an airworthy condition”*;
 - (5) if the aircraft or aeronautical product is not approved for return to service because of needed maintenance or non-compliance with the applicable specifications, AD, or other approved data, the following or a similarly worded statement— *“I certify that this aircraft or aeronautical product has been inspected in accordance with (insert type) inspection and a list of discrepancies and unairworthy items dated (date) has been provided for the aircraft owner or operator”*; and
 - (6) if an inspection is conducted under an inspection programme provided for in Part 8 of these regulations, the person performing the inspection shall make an entry identifying the inspection programme and that part of the inspection programme accomplished, and containing a statement that the inspection was performed in accordance with the inspections and procedures for that particular programme.
- (b) Listing of discrepancies. A person performing any inspection required in Part 8 of these regulations who finds that the aircraft is not airworthy or does not meet the applicable type certificate data sheet, ADs or other approved data upon which its airworthiness depends, shall give the owner or the operator of the aircraft a signed and dated list of those discrepancies.

PART 5 - IMPLEMENTING STANDARDS FOR AIRWORTHINESS

For ease of reference, the number assigned to each implementing standard corresponds to its associated regulation. For example, IS: 5.5.2.3 would reflect a standard required in subsection 5.5.2.3.

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IS: 5.1.1.2 EXTENDED DEFINITIONS MAJOR MODIFICATIONS

- (a) **Airframe Major Modifications.** Major modifications include modifications to the listed aircraft parts, or the listed types of modifications (when not included in the applicable aircraft specifications)—
- (1) Wings.
 - (2) Tail surfaces.
 - (3) Fuselage.
 - (4) Engine mounts. (5) Control system.
 - (5) Landing gear.
 - (6) Hull or floats
 - (7) Elements of an airframe including spars, ribs, fittings, shock absorbers, bracing, cowlings, fairings, and balance weights.
 - (8) Hydraulic and electrical actuating system of components.
 - (9) Rotor blades.
 - (10) Changes to the empty weight or empty balance which result in an increase in the maximum Certified weight or centre of gravity limits of the aircraft.
 - (11) Changes to the basic design of the fuel, oil, cooling, heating, cabin pressurisation, electrical, hydraulic, de-icing, or exhaust systems.
 - (12) Changes to the wing or to fixed or movable control surfaces which affect flutter and vibration characteristics.

- (b) **Powerplant Major Modifications.** Major powerplant modifications, even when not listed in the applicable engine specifications, include—
- (1) Conversion of an aircraft engine from one approved model to another, involving any changes in compression ratio, propeller reduction gear, impeller gear ratios or the substitution of major engine parts which requires extensive rework and testing of the engine.
 - (2) Changes to the engine by replacing aircraft engine structural parts with parts not supplied by the original manufacturer or parts not specifically approved by the Authority.
 - (3) Installation of an accessory which is not approved for the engine.
 - (4) Removal of accessories that are listed as required equipment on the aircraft or engine specification.
 - (5) Installation of structural parts other than the type of parts approved for the installation.
 - (6) Conversions of any sort for the purpose of using fuel of a rating or grade other than that listed in the engine specifications.
- (c) **Propeller Major Modifications.** Major propeller modifications, when not authorised in the applicable propeller specifications, include—
- (1) Changes in blade design.
 - (2) Changes in hub design.
 - (3) Changes in the governor or control design.
 - (4) Installation of a propeller governor or feathering system.
 - (5) Installation of propeller de-icing system.
 - (6) Installation of parts not approved for the propeller.

- (d) **Appliance Major Modifications.** Modifications of the basic design not made in accordance with recommendations of the appliance manufacturer or in accordance with applicable Airworthiness Directive are appliance major modifications. In addition, changes in the basic design of radio communication and navigation equipment approved under type certification or other authorisation that have an effect on frequency stability, noise level, sensitivity, selectivity, distortion, spurious radiation, AVC characteristics, or ability to meet environmental test conditions and other changes that have an effect on the performance of the equipment are also major modifications.

MAJOR REPAIRS

- (a) **Airframe Major Repairs.** Repairs to the following parts of an airframe and repairs of the following types, involving the strengthening, reinforcing, splicing, and manufacturing of primary structural members of their replacement, when replacement is by fabrication such as riveting or welding, are airframe major repairs.
- (1) Box beams.
 - (2) Monocoque or semi monocoque wings or control surfaces
 - (3) Wing stringers or chord members
 - (4) Spars.
 - (5) Spar flanges.
 - (6) Members of truss-type beams.
 - (7) Thin sheet webs of beams.
 - (8) Keel and chine members of hulls or floats.
 - (9) Corrugated sheet compression members which act as flange material of wings or tail surfaces.
 - (10) Wing main ribs and compression members.
 - (11) Wing or tail surface brace struts.
 - (12) Engine mounts.
 - (13) Fuselage longerons.

- (14) Members of the side truss, horizontal truss, or bulkheads.
 - (15) Main seat support braces and brackets.
 - (16) Landing gear brace struts.
 - (17) Axles.
 - (18) Wheels.
 - (19) Parts of the control system such as control columns, pedals, shafts, brackets, or horns.
 - (20) Repairs involving the substitution of material.
 - (21) The repair of damaged areas in metal or plywood stressed covering exceeding six inches in any direction.
 - (22) The repair of portions of skin sheets by making additional seams.
 - (23) The splicing of skin sheets
 - (24) The repair of three or more adjacent wing or control surface ribs or the leading edge of wings and control surfaces, between such adjacent ribs.
 - (25) Repair of fabric covering involving an area greater than that required to repair two adjacent ribs.
 - (26) Replacement of fabric on fabric covered parts such as wings, fuselages, stabilisers, and control surfaces.
 - (27) Repairing, including rebottoming, of removable or integral fuel tanks and oil tanks.
- (e) **Powerplant Major Repairs.** Repairs of the following parts of an engine and repairs of the following types, are powerplant major repairs—
- (1) Separation or disassembly of a crankcase or crankshaft of a reciprocating engine equipped with an integral supercharger;
 - (2) Separation or disassembly of a crankcase or crankshaft of a reciprocating engine equipped with other than spur-type propeller reduction gearing;

- (3) Special repairs to structural engine parts by welding, plating, metalising, or other methods.
- (f) **Propeller Major Repairs.** Repairs of the following types to a propeller are propeller major repairs—
 - (1) Any repairs to or straightening of steel blades;
 - (2) Repairing or machining of steel hubs;
 - (3) Shortening of blades;
 - (4) Retipping of wood propellers;
 - (5) Replacement of outer laminations on fixed pitch wood propellers;
 - (6) Repairing elongated bolt holes in the hub of fixed pitch wood propellers;
 - (7) Inlay work on wood blades;
 - (8) Repairs to composition blades;
 - (9) Replacement of tip fabric;
 - (10) Replacement of plastic covering;
 - (11) Repair of propeller governors;
 - (12) Overhaul of controllable pitch propellers;
 - (13) Repairs to deep dents, cuts, scars, nicks, etc., and straightening of aluminium blades;
 - (14) The repair or replacement of internal elements of blades.
- (g) **Appliance Major Repairs.** Repairs of the following types to appliances are appliance major repairs—
 - (1) Calibration and repair of instruments;
 - (2) Calibration of avionics or computer equipment;
 - (3) Rewinding the field coil of an electrical accessory;

- (4) Complete disassembly of complex hydraulic power valves;
- (5) Overhaul of pressure type carburettors, and pressure type fuel, oil, and hydraulic pumps.

PREVENTIVE MAINTENANCE

- (a) **Preventive Maintenance.** Preventive maintenance is limited to the following work, provided it does not involve complex assembly operations.
 - (1) Removal, installation and repair of landing gear tires;
 - (2) Replacing elastic shock absorber cords on landing gear;
 - (3) Servicing landing gear shock struts by adding oil, air, or both;
 - (4) Servicing landing gear wheel bearings, such as cleaning and greasing;
 - (5) Replacing defective safety wiring or cotter keys;
 - (6) Lubrication not requiring disassembly other than removal of non-structural items such as cover plates, cowlings, and fairings;
 - (7) Making simple fabric patches not requiring rib stitching or the removal of structural parts or control surfaces;
 - (8) Replenishing hydraulic fluid in the hydraulic reservoir;
 - (9) Refinishing decorative coating of fuselage, wings, tail group surfaces (excluding balanced control surfaces), fairings, cowling, landing gear, cabin, or cockpit interior when removal or disassembly of any primary structure or operating system is not required;
 - (10) Applying preservative or protective material to components where no disassembly of any primary structure or operating system is involved and where such coating is not prohibited or is not contrary to good practices;
 - (11) Repairing upholstery and decorative furnishings of the cabin or cockpit when the repairing does not require disassembly of any primary structure or operating system or interfere with an operating system or affect primary structure of the aircraft;

- (12) Making small simple repairs to fairings, non-structural cover plates, cowlings, and small patches and reinforcements not changing the contour so as to interfere with proper airflow;
- (13) Replacing side windows where that work does not interfere with the structure of any operating system such as controls, electrical equipment, etc;
- (14) Replacing safety belts;
- (15) Replacing seats or seat parts with replacement parts approved for the aircraft, not involving disassembly of any primary structure or operating system;
- (16) Troubleshooting and repairing broken circuits in landing light wiring circuits;
- (17) Replacing bulbs, reflectors, and lenses of position and landing lights;
- (18) Replacing wheels and skis where no weight and balance computation is involved;
- (19) Replacing any cowling not requiring removal of the propeller or disconnection of flight controls;
- (20) Replacing or cleaning spark plugs and setting of spark plug gap clearance;
- (21) Replacing any hose connection except hydraulic connections;
- (22) Replacing prefabricated fuel lines;
- (23) Cleaning fuel and oil strainers;
- (24) Replacing and servicing batteries;
- (25) Replacement or adjustment of non-structural fasteners incidental to operations;
- (26) The installation of anti-misfueling devices to reduce the diameter of fuel tank filler openings provided the specific device has been made a part of the aircraft type certificate data by the aircraft manufacturer, the manufacturer has provided appropriately approved instructions acceptable to

the Authority for the installation of the specific device, and installation does not involve the disassembly of the existing filler opening.

IS: 5.4.1.6 EFFECTIVE DATES OF AIRWORTHINESS CERTIFICATES

- (a) The validity of a Certificate of Airworthiness shall be for the period stated on the certificate.

IS: 5.4.1.12 REQUIREMENTS FOR NOISE CERTIFICATION

- (b) For aircraft engaged in international air navigation, the requirements for noise certification shall be those contained in the standards and recommended practices of ICAO Annex 16 and shall be applied as if issued by Grenada.

IS: 5.6.1.5 PERSONS AUTHORISED TO PERFORM INSPECTIONS

- (a) The procedures outlined in this paragraph shall be applied following initial assembly or any disturbance of a Vital Point or Control System.
 - (1) Procedures – General
 - (i) A duplicate inspection of all Vital Points/Control Systems in an aircraft shall be made after initial assembly and before a Certificate of Release to Service has been issued after overhaul, repair, replacement, modification or adjustment and, in any case, before the first flight.

Note: Depending on the extent of the work, it may be possible to limit the duplicate inspection of a Control System to that part of the system which has been disturbed.

- (2) The first and second inspections must take account of the full extent of the work undertaken and not simply the immediate area of disturbance. This is to ensure that distant or remote parts of the system that may have been affected by the disturbance are also subject to duplicate inspections. Where work has been carried out on other systems for safety precautions, or to enhance accessibility, the need to carry out a duplicate inspection on these systems shall be considered. Persons who carry out and certify duplicate inspections are therefore required to undertake an independent review of the complete task, as detailed in the

maintenance manual and by reference to worksheets used, including shift hand-over records, to assess the scope of the duplicate inspection(s) required.

- (3) It may not be possible to inspect the complete Vital Point/Control System when assembled in the aircraft, due to routing the controls through conduits or boxed-in sections and the pre-sealing of various units. In these cases the persons certifying the duplicate inspection shall be satisfied that a duplicate inspection has been made previously on the units and covered sections and that the sealed units are acceptable for the particular use. Such tests as are necessary shall be completed to determine that these particular units and sections have full, free and correct directional movement.
- (4) Vital Points/Control Systems subject to duplicate inspection must not be disturbed or re-adjusted after the first certified inspection and the second part of the duplicate inspection must, as nearly as possible, follow immediately after the first part.
- (5) If a Vital Point/Control System is disturbed after completion of the duplicate inspection, that part which has been disturbed shall again be inspected in duplicate and a Certificate of Release to Service issued before the aircraft flies.
- (6) The duplicate inspection shall be the final operation to establish the integrity of the Vital Point/Control System when all the work has been completed and shall take into account all the relevant instructions and information contained in the associated technical data.
- (7) The inspections prescribed for Control Systems in this Chapter shall include an inspection to ensure that full, free and correct movement of the controls is obtained throughout the systems relative to the movements of the crew controls. An additional inspection shall be made, when all covers and fairings are finally secured, to ensure that full, free and correct movement of the controls is obtained.
- (8) Persons qualified to make the first and/or second part of a duplicate inspection are as follows—

- (i) Aircraft engineers appropriately licensed in Categories A, C and X.
- (ii) Persons employed by Approved Organisations, who are appropriately authorised to make such inspections and to certify the task itself in accordance with company procedures.

Note 1: Certification responsibilities in relation to the Regulations affecting Licensed Aircraft Maintenance Engineers/Technicians and members of Approved Organisations are given in Personnel Licensing Advisory Circular No. 3.

Note 2: (1) In some circumstances, due to peculiarities of assembly or accessibility, it may be necessary for both parts of the inspection to be made simultaneously.

(2) It is desirable that the inspections of a Control System are made as near as is practicable to the time of the intended flight and that the full extent of the disturbance is understood by both persons who carry out the duplicate inspections.

- (9) Should a minor adjustment of the Vital Point/Control System be necessary when the aircraft is away from base, the second part of the duplicate inspection may be completed by a pilot or flight engineer licensed for the type of aircraft concerned, providing that Authorisation is granted by the responsible Approved Maintenance Organisation, if the aircraft is being used for the purpose of Commercial Air Transport.

(b) **Procedures – Control System Units or Components**

- (1) Where appropriate to the type of unit or component forming part of a Control System, a schedule of inspections and functioning tests shall be compiled at manufacture, overhaul and repair, and the following shall be certified—
 - (i) Duplicate inspection of the section/parts of the units or components which will be concealed during bench assembly and which cannot be proved during inspections and functioning tests when installed in the aircraft Control System.

Note: Where such work is a sub-contract order, instructions regarding all inspections/tests should be stated on the order,

the release documentation from the sub-contractor being certified appropriately.

- (ii) Duplicate inspection of the completed assembly of the unit or component, functioning and checking for correct relative movement.
- (2) Persons qualified to make the first and/or second part of the duplicate inspection are as follows—
 - (i) For Approved Manufacturing Organisations, persons employed who are appropriately authorised and qualified to make such inspections in accordance with company procedures. Persons employed by a sub-contracting firm, not directly Approved by ECCAA, who are appropriately authorised by the primary Approved Organisation with a Quality Control Surveillance System controlling the sub-contractor, qualified to make such inspections.
 - (ii) For Approved Maintenance Organisations who release Control System units and components, both inspections and the subsequent Certificates of Release to Service must be issued by persons authorised by the Maintenance Organisation.

IS: 5.6.1.6 PERFORMANCE RULES: MAINTENANCE

- (a) Maintenance, preventive maintenance, or modification of an aeronautical product shall be done in accordance with a maintenance programme approved by the Authority, taking into consideration the manufacturer's recommendations;
- (b) Upon approval, the Authority will hold a copy of the approved maintenance programme.

IS: 5.6.1.7 PERFORMANCE RULES: 100-HOUR INSPECTIONS

- (a) Each person performing an annual or 100-hour inspection shall, before that inspection, thoroughly clean the aircraft and aircraft engine and remove or open all necessary inspection plates, access doors, fairings, and cowlings.
- (b) Each person performing an annual or 100-hour inspection shall inspect, where applicable, the following components—

(1) Fuselage and hull group—

- (i) Fabric and skin - for deterioration, distortion, other evidence of failure, and defective or insecure attachment of fittings.
- (ii) Systems and components - for improper installation, apparent defects, and unsatisfactory operation.
- (iii) The cabin and cockpit group.
- (iv) Generally - for uncleanness and loose equipment that might foul the controls.
- (v) Seats and safety belts - for poor condition and apparent defects.
- (vi) Windows and windshields - for deterioration and breakage.
- (vii) Instruments - for poor condition, mounting, marking, and (where practicable) for improper operation.
- (viii) Flight and engine controls - for improper installation and improper operation.
- (ix) Batteries - for improper installation and improper charge.
- (x) All systems - for improper installation, poor general condition, apparent and obvious defects, and insecurity of attachment.

(2) Engine and nacelle group—

- (i) Engine section - for visual evidence of excessive oil, fuel, or hydraulic leaks, and sources of such leaks.
- (ii) Studs and nuts - for improper torquing and obvious defects.
- (iii) Internal engine - for cylinder compression and for metal particles or foreign matter on screens and sump drain plugs. If there is weak cylinder compression, for improper internal condition and improper internal tolerances.

- (iv) Engine mount - for cracks, looseness of mounting, and looseness of engine to mount.
 - (v) Flexible vibration dampeners - for poor condition and deterioration.
 - (vi) Engine controls - for defects, improper travel, and improper safetying.
 - (vii) Lines, hoses, and clamps - for leaks, improper condition, and looseness.
 - (vii) Exhaust stacks - for cracks, defects, and improper attachment.
 - (ix) Accessories - for apparent defects in security of mounting.
 - (x) All systems - for improper installation, poor general condition, defects, and insecure attachment.
 - (xi) Cowling - for cracks and defects.
- (3) Landing gear group—
- (i) All units - for poor condition and insecurity of attachment.
 - (ii) Shock absorbing devices - for improper oleo fluid level.
 - (iii) Linkage, trusses, and members - for undue or excessive wear, fatigue, and distortion.
 - (iv) Retracting and locking mechanism - for improper operation.
 - (v) Hydraulic lines - for leakage.
 - (vi) Electrical system - for chafing and improper operation of switches.
 - (vii) Wheels - for cracks, defects, and condition of bearings.
 - (viii) Tires - for wear and cuts.
 - (ix) Brakes - for improper adjustment.
 - (x) Floats and skis - for insecure attachment and obvious or apparent defects.

- (4) Wing and centre section assembly for—
 - (i) Poor general condition,
 - (ii) Fabric or skin deterioration,
 - (iii) Distortion,
 - (iv) Evidence of failure, and (v) Insecurity of attachment.
- (5) Complete empennage assembly for—
 - (i) Poor general condition,
 - (ii) Fabric or skin deterioration,
 - (iii) Distortion,
 - (iv) Evidence of failure,
 - (v) Insecure attachment,
 - (vi) Improper component installation, and
 - (vii) Improper component operation.
- (6) Propeller group—
 - (i) Propeller assembly - for cracks, nicks, binds, and oil leakage,
 - (ii) Bolts - for improper torquing and lack of safety,
 - (iii) Anti-icing devices - for improper operations and obvious defects, and
 - (iv) Control mechanisms - for improper operation, insecure mounting, and restricted travel.
- (7) Avionics/instrument group—
 - (i) Avionics/instruments equipment - for improper installation and insecure mounting.
 - (ii) Wiring and conduits - for improper routing, insecure mounting, and obvious defects.

- (iii) Bonding and shielding - for improper installation and poor condition.
 - (iv) Antenna including trailing antenna - for poor condition, insecure mounting, and improper operation.
- (8) Electronic/electrical group—
 - (i) Wiring and conduits - for improper routing, insecure mounting, and obvious defects.
 - (ii) Bonding and shielding - for improper installation and poor condition.
- (9) Each installed miscellaneous item that is not otherwise covered by this listing and/or has instructions for continued airworthiness - for improper installation and improper operation.

IS: 5.7.1.1 RECORDING OF MAJOR REPAIRS AND MAJOR MODIFICATIONS

- (a) For each person performing a major repair or major modification—
 - (1) He shall submit to the Authority, a package containing sufficient information for the repair or modification to be approved;
 - (2) The Authority will assess the information contained in the package and if acceptable, approve the repair or modification by completing STDFM 10B in duplicate;
 - (3) One copy of the approved STDFM 10B will be given to the applicant in order that the repair or modification may commence;
 - (4) The repair or modification will be given a unique number and the person certifying the task will refer to this number in his log book entry;
 - (5) The Authority may carry out oversight/surveillance during the task accomplishment.
- (b) Upon completion of the repair or modification—
 - (1) Each person shall submit STDFM 10A to the Authority in duplicate;

- (2) The Authority will consider whether a survey of the work is required;
- (3) The Authority will signify approval by completing block 7, returning one copy to the applicant for retention in their records.
- (c) All modifications not defined as major will be classified as minor and will be approved using STDFM 10B.

PART 6

APPROVED MAINTENANCE ORGANISATIONS

6.1 GENERAL

6.1.1.1 APPLICABILITY

- (a) This part prescribes the requirements for issuing approvals to organisations for the maintenance, overhaul, modification, repair, or inspection of aircraft and aeronautical products and prescribes the general operating rules for an AMO. The approval, when granted, shall apply to the whole organisation and shall be headed by the accountable manager.

6.1.1.2 DEFINITIONS

- (a) For the purpose of this part, the applicable definitions are contained in Part 1 of these regulations – “General Policies, Procedures and Definitions.”

6.1.1.3 ABBREVIATIONS

- (a) The following acronyms are used in this Part.
 - (1) **AD** – Airworthiness Directive
 - (2) **AAT** – Airworthiness Approval Tag
 - (3) **AMM** – Aircraft Maintenance Manual
 - (4) **AMO** – Approved Maintenance Organisation
 - (5) **AMT** – Aviation Maintenance Technician

- (6) **ARS** – Aviation Repairman Specialist
- (7) **ICAO** – International Civil Aviation Organization
- (8) **IS** – Implementing Standards
- (9) **MCM** – Maintenance Control Manual
- (10) **NDI** – Non-Destructive Inspection
- (11) **NDT** – Non-Destructive Testing
- (12) **SB** – Service Bulletin
- (13) **SMS** – Safety Management System
- (14) **TC** – Type Certificate
- (15) **TSO** – Technical Standard Order

6.1.1.4 CERTIFICATE AND SPECIFIC OPERATING PROVISIONS

- (a) A person shall not operate as an AMO without, or in violation of, an AMO certificate issued under this Subpart.
- (b) The certificate issued to an AMO issued by Grenada will consist of two documents—
 - (1) a one page certificate for public display signed by the Authority; and
 - (2) operating specifications signed by the Accountable Manager and the Authority;
- (c) The certificate will contain the following items and will be on a form and in a manner as prescribed by the Authority
 - (1) The certificate number specifically assigned to the AMO;
 - (2) The name and location of the principal place of business of the AMO;
 - (3) The certification Statement of Authority;
 - (4) The ratings issued to the AMO;

- (5) The period of validity;
 - (6) The date of issue; and
 - (7) The signature, printed name, and title of the appropriate Authority.
- (d) The operations specifications will contain the following items and will be on a form and in a manner as prescribed by the Authority:
 - (1) The certificate number specifically assigned to the AMO;
 - (2) The class or limited ratings issued in detail, including specific terms, conditions, and limitations;
 - (3) The date issued or revised; and
 - (4) Signature of the accountable manager and the Authority.
- (e) An AMO may perform maintenance, overhaul, modification, repair, or inspection on an aircraft or aeronautical product only for which it is rated and within the specific terms, conditions, and limitations contained in its operations specifications.
- (f) The certificate issued to an AMO shall be available on the premises for inspection by the public and the Authority.

6.1.1.5 ADVERTISING

- (a) A person shall not advertise as an AMO certificated under this part until the Authority of Grenada has issued an AMO certificate and associated operations specifications to that person.
- (b) An AMO shall not make, either orally or in writing, any statement about itself that is false or is designed to mislead any person.
- (c) Whenever the advertising of a person indicates that it is certificated under this Part, the advertisement shall clearly state the AMO's certificate number.

6.1.1.6 DEVIATION AUTHORITY

- (a) The Authority may, upon consideration of the circumstances of a particular maintenance organisation, issue a deviation providing relief from specified sections of this part, provided that the Authority finds that the circumstances presented warrant the deviation and

that a level of safety will be maintained equal to that provided by the rule from which the deviation is sought. This deviation authority will be issued as a Letter of Deviation Authority.

- (b) A Letter of Deviation Authority may be terminated or amended at any time by the Authority.
- (c) A request for deviation authority must be made in a form and manner acceptable to the Authority and submitted to the Authority at least 60 days before the date the deviation from specified sections in this part is necessary for the intended maintenance, preventive maintenance, or modification. A request for deviation authority must contain complete statement of the circumstances and justifications for the deviation requested and show that a level of safety will be maintained equal to that provided by the rule from which the deviation is sought.
- (d) An AMO that receives a Letter of Deviation Authority must have a means of notifying the appropriate management, certifying staff, and personnel of the deviation, including the extent of the deviation and when the deviation is terminated or amended.

6.2 CERTIFICATION OF AN AMO AND CONTINUED VALIDITY OF THE CERTIFICATE

6.2.1.1 APPLICATION FOR AN AMO CERTIFICATE

- (a) The Authority will require an applicant for an AMO certificate to submit the following—
 - (1) an application on a form and in a manner as prescribed by the Authority;
 - (2) its maintenance procedures manual;
 - (3) a list of the maintenance functions to be performed for it, under contract, by another AMO;
 - (4) a list of all AMO certificates and ratings pertinent to those certificates issued by any contracting State other than Grenada; and
 - (5) any additional information the Authority requires the applicant to submit.

Note 1: "On a form and in a manner" means that a form issued by the Authority shall be completed by the accountable manager, or the manager's designated nominee in accordance with paragraph 6.2.1.1(a) of this Part.

Note 2: Upon approval of its maintenance procedures manual by the Authority, the AMO will be required to submit a copy to the Authority.

- (b) An application for the amendment of an existing AMO certificate shall be made on a form and in a manner prescribed by the Authority. If applicable, the AMO shall submit the required amendment to the maintenance procedures manual to the Authority for approval.

6.2.1.2 ISSUANCE OF AN AMO CERTIFICATE

- (a) The issuance of an AMO certificate by Grenada shall be dependent upon the maintenance organisation demonstrating compliance with the requirements of this part and the relevant safety management requirements of Part 1 of these regulations.
- (b) An applicant may be issued an AMO certificate if, after investigation, the Authority finds that the applicant—
 - (1) meets the applicable regulations and standards for the holder of an AMO;
 - (2) is properly and adequately equipped for the performance of maintenance, overhaul, modification, repair, and inspection of an aircraft or aeronautical product for which it seeks approval; and
 - (3) is fit, having regard in particular to the applicant's previous conduct, or if there is no evidence of unlawful conduct in aviation or previous breaches of aviation regulations.

6.2.1.3 DURATION AND RENEWAL OF AN AMO CERTIFICATE

- (a) An AMO certificate or rating issued to an AMO located either inside or outside of Grenada is effective—
 - (1) for the period specified on the certificate, or
 - (2) until the AMO surrenders the certificate to the Authority, or

- (3) until the Authority cancels, suspends, revokes, or otherwise terminates the certificate.
- (b) An AMO that applies for a renewal of its certificate for aircraft registered in Grenada must—
 - (1) If located inside Grenada, submit its request for renewal to the Authority, no later than 21 days before the AMO's current certificate expires;
 - (2) If located outside Grenada, submit its request for renewal to the Authority, no later than 45 days before the AMO's current certificate expires;

Note: If a request for renewal is not made within the period, as stated in Paragraph 6.2.1.3 (b)1 or 2, the AMO must follow the application procedure prescribed by the Authority.

6.2.1.4 CONTINUED VALIDITY OF AN AMO CERTIFICATE

- (a) Unless the AMO Certificate has previously been cancelled, surrendered, superseded, suspended, revoked or has expired by virtue of exceeding any expiration date that may be specified in the certificate, the continued validity of the AMO certificate shall depend on—
 - (1) the AMO remaining in compliance with the requirements of this part and the relevant safety management requirements of Part 1 of these regulations;
 - (2) the Authority being granted access to the AMO's facilities to determine continued compliance with the requirements of this part; and
 - (3) the payment of any charges prescribed by the Authority.
- (b) The holder of an AMO certificate that has expired, has been surrendered by the AMO, or has been suspended or revoked by the Authority shall return the certificate and operations specifications to the Authority within 5 working days of expiration, surrender, or receipt from the Authority of notice of suspension or revocation.

6.2.1.5 CHANGES TO THE AMO AND CERTIFICATE AMENDMENTS

- (a) To enable the Authority to determine continued compliance with this Part, the AMO shall provide written notification to the Authority

either prior to, or within a time period determined by the Authority to be as soon as practicable after, changes to any of the following—

- (1) the name of the AMO;
- (2) the location of the AMO;
- (3) the housing, facilities, equipment, tools, material, procedures, scope of work and certifying staff that may affect the rating(s) issued;
- (4) the rating(s) held by the AMO, whether granted by the Authority or held through an AMO certification issued by another Contracting State;

Note: See Paragraph 6.2.1.1(a)(4).

- (5) additional locations of the AMO;
 - (6) AMO Procedures Manual;
 - (7) the accountable manager; or
 - (8) the list of management personnel as described in the AMO Procedures Manual.
- (b) The Authority will amend the AMO certificate if the AMO notifies the Authority of a change in—
- (1) location or housing and facilities;
 - (2) additional locations of the AMO;
 - (3) rating(s) issued, including deletions;
 - (4) AMO Procedures Manual;
 - (5) name of the AMO with same ownership; or
 - (6) ownership.
- (c) The Authority may amend the AMO certificate if the AMO notifies the Authority of a change in—
- (1) the accountable manager; or

- (2) the list of management personnel as described in the AMO Procedures Manual;
 - (3) other items in the AMO Procedures Manual.
- (d) When the Authority issues an amendment to an AMO certificate because of new ownership of the AMO, the Authority will assign a new certificate number to the amended certificate.
- (e) The Authority may—
 - (1) prescribe, in writing, the specific terms, conditions, and limitations under which the AMO shall continue to operate during any period of implementation of the changes noted in Paragraph 6.2.1.5(a); and
 - (2) hold the AMO certificate in abeyance if the Authority determines that approval of amendments to the AMO certificate may be delayed; the Authority will notify the AMO, in writing, of the reasons for any such delay.
- (f) If changes are made by the AMO to the items listed in Paragraph 6.2.1.5(a) without notification to the Authority or amendment of the AMO certificate by the Authority, the AMO certificate may be suspended or revoked by the Authority.

6.2.1.6 RATINGS OF THE AMO

- (a) The following ratings are issued under this Subpart—
 - (1) *airframe ratings*. An aircraft rating on an AMO certificate permits that AMO to perform maintenance, modification, repair, or inspection of an aircraft and aeronautical products, but not including overhaul as that term defined in Part 1 Paragraph 1.1.1.3(a)(451), under the following classes—
 - (i) Class 1: Aircraft (other than rotorcraft) of 5,700 kg maximum certificated takeoff weight or less.
 - (ii) Class 2: Aircraft (other than rotorcraft) over 5,700 kg maximum certificated takeoff weight and up to, and including, 34,200 kg maximum certificated takeoff weight.
 - (iii) Class 3: Aircraft (other than rotorcraft) over 34,200 kg maximum certificated takeoff weight.

- (iv) Class 4: Rotorcraft of 2,736 kg maximum certificated takeoff weight or less.
 - (v) Class 5: Rotorcraft over 2,736 kg maximum certificated takeoff weight.
- (2) Powerplant ratings. A powerplant rating on an AMO certificate permits that AMO to perform maintenance, overhaul, modification, repair, or inspection of powerplants under the following classes—
 - (i) Class 1: Reciprocating engines.
 - (ii) Class 2: Turbopropeller and turboshaft engines.
 - (iii) Class 3: Turbojet and turbofan engines.
- (3) Propeller ratings. A propeller rating on an AMO certificate permits that AMO to perform maintenance, overhaul, modification, repair, or inspection of propellers under the following classes—
 - (i) Class 1: Fixed-pitch and ground-adjustable propellers.
 - (ii) Class 2: Variable-pitch propellers.
- (4) Avionics ratings. An avionics rating on an AMO certificate permits that AMO to perform maintenance, modification, repair, or inspection of of avionics equipment under the following ratings:
 - (i) Class 1: Communication equipment: Any radio transmitting equipment or receiving equipment, or both, used in aircraft to send or receive communications, regardless of carrier frequency or type of modulation used; including auxiliary and related aircraft interphone systems, amplifier systems, electrical or electronic intercrew signalling devices, and similar equipment; but not including equipment used for navigation of the aircraft or as an aid to navigation, equipment for measuring altitude or terrain clearance, other measuring equipment operated on radio or radar principles, or mechanical, electrical, gyroscopic, or electronic instruments that are a part of communications avionics equipment.

- (ii) Class 2: Navigational equipment: Any avionics system used in aircraft for en-route or approach navigation, except equipment operated on radar or pulsed radio frequency principles, but not including equipment for measuring altitude or terrain clearance or other distance equipment operated on pulsed radio frequency principles.
 - (iii) Class 3: Pulsed equipment: Any aircraft electronic system operated on pulsed radio frequency principles.
- (5) Computer systems ratings. A computer systems rating on an AMO certificate permits that AMO to perform maintenance, modification, repair, or inspection of digital computer systems and components thereof, that have the function of receiving external data, processing such data, and transmitting and presenting the processed data under the following classes:
 - (i) Class 1: Aircraft computer systems.
 - (ii) Class 2: Powerplant computer systems.
 - (iii) Class 3: Avionics computer systems.
- (6) Instrument ratings. An instrument rating on an AMO certificate permits that AMO to perform maintenance, overhaul, modification, repair, or inspection of instruments under the following classes—
 - (i) Class 1: Mechanical: Any diaphragm, bourdon tube, aneroid, optical, or mechanically driven centrifugal instrument that is used on aircraft or to operate aircraft, including tachometers, airspeed indicators, pressure gauges, drift sights, magnetic compasses, altimeters, or similar mechanical instruments.
 - (ii) Class 2: Electrical: Any self-synchronous and electrical indicating instruments and systems, including remote indicating instruments, cylinder head temperature gauges, or similar electrical instruments.
 - (iii) Class 3: Gyroscopic: Any instrument or system using gyroscopic principles and motivated by air pressure or electrical energy, including automatic pilot control

units, turn and bank indicators, directional gyros, and their parts, and flux gate and gyrosyn compasses.

- (iv) Class 4: Electronic: Any instruments whose operation depends on electron tubes, transistors, or similar devices including capacitance type quantity gauges, system amplifiers, and engine analysers.
- (7) Accessory ratings. An accessory rating on an AMO certificate permits that AMO to perform maintenance, overhaul, modification, repair, or inspection of accessory equipment under the following classes:
 - (i) Class 1: Mechanical. The accessories that depend on friction, hydraulics, mechanical linkage, or pneumatic pressure for operation.
 - (ii) Class 2: Electrical. The accessories that depend on electrical energy.
 - (iii) Class 3: Electronic. The accessories that depend on the use of an electron tube transistors, lasers, fiber optics, solid-state, integrated circuits, vacuum tubes, or similar electronic controls.
 - (iv) Class 4: Auxiliary power units (APU's) that may be installed on aircraft as self-contained units to supplement the aircraft's engines as a source of hydraulic, pneumatic, or electrical power.

Implementing Standard: See IS: 6.2.1.6 for a detailed explanation of each rating.

6.2.1.7 AMO LIMITED RATINGS

- (a) Whenever the Authority finds it appropriate, it may issue a limited rating to an AMO that intends to maintain or modify only a particular type of aircraft or aeronautical product or intends to perform only specialised maintenance requiring equipment and skills not ordinarily found in an AMO. Such a rating may be limited to a specific model aircraft or aeronautical product or to any number of products made by a particular manufacturer.
- (b) The Authority may issue limited ratings for—
 - (1) aircraft;

- (2) airframe;
 - (3) powerplants;
 - (4) propellers;
 - (5) avionics equipment;
 - (6) computer systems;
 - (7) instruments;
 - (8) accessories; and
 - (9) any other purpose for which the Authority finds the applicant's request appropriate.
- (c) The Authority may issue a specialised service rating that approves an AMO to perform specific maintenance procedures or processes. The operations specifications of the AMO shall identify the specification used in performing that specialised service. The specification may be—
 - (1) a civil or military specification that is currently used by industry and approved by the Authority; or
 - (2) a specification developed by the AMO and approved by the Authority.

6.2.1.8 LOCATION OF THE AMO

- (a) **PRINCIPAL PLACE OF BUSINESS.** An applicant for, or the holder of, an AMO certificate issued under this part shall establish and maintain a principal place of business office that is physically located at the address shown on its certificate.
- (b) **ADDITIONAL FIXED LOCATIONS.** An AMO may have additional fixed locations that may be approved by the Authority without the Authority certifying each facility as a stand-alone AMO, provided that—
 - (1) All facilities are localised and within a defined area; and
 - (2) All locations operate under the approval of the AMO certificate and operations specifications.

- (c) FOREIGN LOCATIONS OF AMOs. An AMO may be located in a country outside of Grenada and shall be subject to all the applicable requirements of this part.

6.3 HOUSING, FACILITIES, EQUIPMENT, & MATERIALS

6.3.1.1 GENERAL

- (a) An AMO shall provide housing, facilities, equipment, tools, technical data and materials in a quantity and quality that meet the requirements for the issuance of the certificate and ratings that the AMO holds.

6.3.1.2 HOUSING AND FACILITIES

- (a) Housing for the facilities, equipment, materials, and personnel shall be provided, appropriate for all planned work, ensuring, in particular, protection from weather.
- (b) All work environments shall be appropriate for the task performed and shall not impair the effectiveness of personnel.
- (c) Office accommodations shall be appropriate for the management of planned work including, in particular, the management of quality, planning, and technical records.
- (d) Specialised workshops and bays shall be segregated, as appropriate, to ensure that environmental or work area contamination is unlikely to occur.
- (e) Storage facilities shall be provided for parts, equipment, test equipment, tools and material.
- (f) Storage conditions shall provide security for serviceable parts and segregation of serviceable from unserviceable parts, and shall prevent deterioration of and damage to stored items;
- (g) An AMO with an airframe rating shall provide suitable permanent housing to enclose the largest type and model of aircraft listed on its operations specifications.
- (h) An AMO may perform maintenance, overhaul, modification, repair, and inspection on aeronautical products outside of its housing if it provides suitable facilities that are acceptable to the Authority.

Implementing Standard: See IS: 6.3.1.2 for detailed requirements pertaining to housing and facilities.

6.3.1.3 EQUIPMENT, TOOLS, TECHNICAL DATA AND MATERIAL

- (a) The AMO shall have available the necessary equipment, tools, technical data and material to perform the approved scope of work and these items shall be under full control of the AMO. The availability of equipment and tools means permanent availability except in the case of any tool or equipment that is so rarely needed that its permanent availability is not necessary.
- (b) The Authority may exempt an AMO from possessing specific tools and equipment for maintenance or modifications of an aircraft or aeronautical product specified in the AMO's approval, if these items can be acquired temporarily, by prior arrangements and are under full control of the AMO when needed to perform required maintenance or modifications.
- (c) The AMO shall use the equipment, tools, and materials that are recommended by the manufacturer of the aircraft or aeronautical product or are at least equivalent to those recommended by the manufacturer and are acceptable to the Authority.
- (d) The AMO shall control all applicable tools, equipment and test equipment used for product acceptance and/or for making a finding of airworthiness.
- (e) The AMO shall ensure that all applicable tools, equipment and test equipment used for product acceptance and/or for making a finding of airworthiness are calibrated to a standard acceptable to the Authority and are traceable to the National Standards of Grenada, the United States, Canada, the United Kingdom, or other National Standard as individually accepted by the Authority.
- (f) The AMO shall keep all records of calibrations and the standards used for calibration.

Implementing Standard: See IS: 6.3.1.3 for detailed requirements pertaining to tools, equipment, and test equipment.

6.4 ADMINISTRATION**6.4.1.1 PERSONNEL AND TRAINING REQUIREMENTS**

- (a) An AMO shall nominate an accountable manager who, irrespective of other functions, is accountable on behalf of the organisation.
- (b) The accountable manager shall nominate a person or group of persons acceptable to the Authority, whose responsibilities shall include ensuring that the AMO is in compliance with the requirements of this part.
 - (1) The person or persons nominated shall represent the maintenance management structure of the AMO, and shall be responsible for all functions specified in this part.
 - (2) Nominated managers shall be directly responsible to the accountable manager who shall be acceptable to the Authority.
- (c) The AMO shall employ sufficient personnel to plan, perform, supervise and inspect and approve for return to service the maintenance work to be preformed.
- (d) The AMO shall establish the competence of maintenance personnel in accordance with procedures and to a level acceptable to the Authority.
- (e) A person signing a maintenance release or an approval for return to service shall be qualified in accordance with Part 2 of the Schedule, as appropriate to the work performed, and shall be acceptable to the Authority.
- (f) The maintenance personnel and the certifying staff shall meet the qualification requirements and shall receive initial, recurrent and specialised training appropriate to their assigned tasks and responsibilities in accordance with a training program approved by the Authority.
- (g) The training program established by the AMO shall include training in knowledge and skills related to human performance, including co-ordination with other maintenance personnel and certifying staff.

Implementing Standard: See IS: 6.4.1.1 for detailed personnel requirements.

6.4.1.2 INDOCTRINATION, INITIAL, RECURRENT, SPECIALISED, AND REMEDIAL TRAINING

- (a) the AMO shall have an employee training programme approved by the Authority that consists of indoctrination, initial, recurrent, specialised, and remedial training.
- (b) the AMO shall develop and update its training programme based on the maintenance tasks associated with its scope of work and capabilities.
- (c) the AMO shall ensure that each employee assigned to perform maintenance, overhaul, modification, repair, or inspections is capable of performing the assigned tasks.
- (d) the AMO shall submit revisions of its training programme to the Authority for approval.
- (e) the AMO shall document the individual employee training required under this subsection. These training records shall be retained for a minimum of 2 years.
- (f) the expiration date assigned to an initially approved training programme shall not exceed 24 months from the date of initial approval.

Implementing Standard: See IS: 6.4.1.2 for the AMO's training programme detailed requirements

6.4.1.3 REST AND DUTY LIMITATIONS FOR PERSONS PERFORMING MAINTENANCE FUNCTIONS IN AN AMO

- (a) A person shall not be assigned or perform maintenance, overhaul, modification, repair or inspection of an aircraft or aeronautical product, unless that person has had a minimum rest period of 8 hours prior to the beginning of duty.
- (b) A person shall not be scheduled to perform maintenance, overhaul, modification, repair or inspection of an aircraft or aeronautical product for more than 12 consecutive hours of duty.
- (c) In situations involving unscheduled aircraft or aeronautical product unserviceability, the AMO may allow persons performing maintenance, overhaul, modification, repair or inspection of an aircraft or aeronautical product to continue on duty for—

- (1) Up to 16 consecutive hours; or

- (2) 20 hours in 24 consecutive hours.
- (d) Following an unscheduled duty period, the AMO shall ensure that each person performing maintenance, overhaul, modification, repair or inspection of an aircraft or aeronautical product shall have a mandatory rest period of 10 hours.
- (e) The AMO shall relieve the person performing maintenance, overhaul, modification, repair or inspection from all duties for 24 consecutive hours during any 7 consecutive day period.

6.4.1.4 RECORD OF CERTIFYING STAFF

- (a) The AMO shall maintain a roster of all certifying staff, which shall include details of the scope of their authorisation.
- (b) An AMO shall notify certifying staff, in writing, of the scope of their authorisation.
 - (1) The authorisation document shall be in a style that makes its scope clear to certifying staff and any authorised person that may be required to examine the document. Where codes are used to define scope, an interpretation document shall be readily available.
 - (2) Certifying staff shall not be required to carry the authorisation document at all times but shall produce it within a reasonable time of a request from an authorised person.

Implementing Standard: See IS: 6.4.1.4 for detailed requirements pertaining to records of certifying staff.

6.4.1.5 SAFETY MANAGEMENT

- (a) The AMO shall implement an SMS acceptable to the Authority, as prescribed in Part 1 Section 1.4 of the Schedule.

6.5 AMO OPERATING RULES

6.5.1.1 AMO PROCEDURES MANUAL

Note 1: The definition of AMO Procedures Manual is the same as "maintenance organisation's procedures manual" as defined in Part 1 of these regulations.

Note 2: The purpose of the AMO Procedures Manual is to set forth the guidance, instructions, and procedures of the AMO. Compliance with the contents of the manual will assure compliance with the requirements of this part, which is a prerequisite to obtaining and retaining an AMO certificate.

- (a) The AMO shall have an AMO Procedures Manual, which may be issued in separate parts. The manual shall be amended as necessary to keep the information contained therein up-to-date.
- (b) The AMO Maintenance Procedures Manual shall specify the scope of work required of the AMO in order to satisfy the relevant requirements needed for an approval of an aircraft or aeronautical product for return to service.
- (c) The AMO Procedures Manual and any other manual(s) it identifies shall—
 - (1) Provide clear guidance to personnel on how the functions are to be performed under the approval issued by the Authority;
 - (2) Explain how personnel are managed and describe their duties and responsibilities and how compliance with the relevant continuing airworthiness requirements is achieved;
 - (3) Include a statement of the organisation's policies and objectives;
 - (4) Include instructions and information necessary to allow the personnel concerned to perform their duties and responsibilities with a high degree of safety;
 - (5) be in a form that is easy to revise and contains a system that allows personnel to determine current revision status;
 - (6) have the date of the last revision printed on each page containing the revision;
 - (7) not be contrary to any applicable Grenada regulation or the operating specifications issued to the organisation; and
 - (8) include references to appropriate civil aviation regulations.

- (d) If the AMO is also owned by an air operator certificated under Part 9 of the Schedule, the AMO Procedures Manual and the operator's MCM maintenance functions may be combined.
- (e) The AMO Procedures Manual and any subsequent amendments to the manual shall be approved by the Authority prior to use.
- (f) An AMO shall promptly furnish copies of all amendments to the AMO Procedures Manual to all organisations or persons to whom the manual has been issued.
- (g) The AMO Procedures Manual shall contain the following information—
 - (1) a statement signed by the accountable manager confirming that the AMO Procedures Manual and any associated manuals define the AMO's compliance with this regulation and will be complied with at all times;
 - (2) a procedure to establish and maintain a current list of the titles and names of the management personnel accepted by the Authority. The list of personnel may be separate from the Procedures Manual but must be kept current and available for review by the Authority when requested;
 - (3) a list which describes the duties and responsibility of the management personnel and which matters on which they may deal directly with the Authority on behalf of the AMO;
 - (4) an organisation chart showing associated chains of responsibility of the management personnel.
 - (5) a procedure to establish and maintain a current roster of certifying personnel;

Note: The list of certifying personnel may be separate from the procedures manual but must be kept current and available for review by the Authority when requested.

- (6) a description of the procedures used to establish the competence of maintenance personnel;
- (7) a general description of manpower resources;

Note: Subparagraphs (1) to (7) constitute the management part of the maintenance organisation Procedures Manual and therefore could be

produced as one document and made available to person(s) who should be reasonably familiar with its contents.

- (8) a description of the method used for the completion and retention of the maintenance records;
- (9) a description of the procedure for preparing the maintenance release and the circumstances under which the release is to be signed;
- (10) a description, when applicable, of additional procedures for complying with an AOC holder's maintenance procedures and requirements;
- (11) a description of the procedures for complying with the service information reporting requirement contained in Section 6.5.1.9;
- (12) a description of the procedure for receiving, amending and distributing within the AMO all necessary airworthiness data from the type certificate holder or the type design organisation;
- (13) a general description of the facilities located at each address specified in the AMO's approval certificate;
- (14) a general description of the AMO's scope of work relevant to the extent of approval;
- (15) the notification procedure for AMO to use when requesting the approval of changes to the organisation of the AMO from the Authority;
- (16) the amendment procedure for the AMO procedures manual, including the submission to the Authority. Copies of all amendments to the manual shall be furnished promptly to all organisations or persons to whom the manual has been issued;
- (17) the AMO's procedures, acceptable to the Authority, to ensure good maintenance practices and compliance with all relevant requirements in this subsection;
- (18) the AMO's procedures to establish and maintain an independent quality system to monitor compliance with the adequacy of the procedures to ensure good quality

maintenance practices and airworthy aircraft and aeronautical products. Compliance monitoring must include a feedback system to the person or group of persons specified in Section 6.4.1.1, and ultimately to the accountable manager to ensure, as necessary, corrective action. Such a system shall be acceptable to the Authority;

- (19) the AMO procedures for self-evaluations, including methods and frequency of such evaluations, and procedures for reporting results to the accountable manager for review and action;
- (20) a list of operators, if appropriate, to which the AMO provides an aircraft maintenance service;
- (21) a list of organisations performing maintenance on behalf of the AMO; and
- (22) a list of the AMO's line maintenance locations and procedures, if applicable.

Implementing Standard: See IS: 6.5.1.1 for detailed requirements concerning the Procedures Manual and a sample Maintenance Procedures Manual format.

6.5.1.2 MAINTENANCE PROCEDURES AND INDEPENDENT QUALITY ASSURANCE SYSTEM

- (a) The AMO shall establish procedures acceptable to the Authority that ensure safe maintenance practices and compliance with all relevant requirements to this part.
- (b) The AMO shall establish an independent quality assurance system, acceptable to the Authority, to monitor compliance with and adequacy of the procedures and by providing a system of inspection to ensure that all maintenance is properly performed.
- (c) The independent quality assurance system shall include a procedure to initially qualify and periodically perform audits on persons performing work on behalf of the AMO.
- (d) Compliance monitoring shall include a feedback system to the designated management person or group of persons directly responsible for the quality system and ultimately to the accountable manager to ensure, as necessary, corrective action.

- (e) The maintenance procedures shall cover all aspects of maintenance activity and describe standards to which the AMO intends to work. The aircraft or aeronautical product design, AMO standards and aircraft operator standards must be taken into account.
- (f) The maintenance procedures should address the provisions and limitations of this part.
- (g) The AMO's quality system shall be sufficient to review all maintenance procedures as described in the AMO's Procedures Manual in accordance with an approved program once a year for each aircraft type maintained.
- (h) The AMO's quality system shall indicate when audits are due, when completed, and establish a system of audit reports, which can be seen by visiting Authority staff on request. The audit system shall clearly establish a means by which audit reports containing observations about non-compliance or poor standards are communicated to the accountable manager.

Implementing Standard: See IS: 6.5.1.2 for a detailed list of inspection items evaluated by the quality system.

6.5.1.3 CAPABILITY LIST

- (a) The AMO shall prepare and retain a current capability list approved by the Authority. The AMO shall not perform maintenance, overhaul, modification, repair or inspection on an aeronautical product until the aeronautical product has been listed on the capability list in accordance with this part and its AMO Procedures Manual.
- (b) The capability list shall identify each aircraft and aeronautical product by make and model or other nomenclature designated by the manufacturer.
- (c) An aeronautical product may be listed on the capability list only if the aeronautical product is within the scope of the ratings and classes of the AMO's certificate, and only after the AMO has performed a selfevaluation in accordance with procedures in its AMO Procedures Manual.
- (d) The AMO shall perform the self-evaluation to determine that the organisation has all the housing, facilities, equipment, tools, material, technical data, processes, and trained personnel in place to perform the work on the aeronautical product as required by this

part. If the AMO makes that determination, it shall apply to the Authority for approval to amend the capability list.

- (e) The document of the evaluation described in paragraph 6.5.1.3(c) of this section must be signed by the accountable manager and must be retained on file by the AMO.
- (f) Upon amending its capability list, the maintenance organisation shall send a copy of the updated list to the Authority.
- (g) The capability list(s) must be available on the premises for inspection by the public and the Authority.
- (h) The documentation of the self-evaluations shall be available on the premises for inspection by the Authority.
- (i) The AMO shall retain the capability list(s) and self-evaluation(s) for two years from the date accepted by the accountable manager.

6.5.1.4 CONTRACT MAINTENANCE

- (a) An AMO shall be approved for the work that is to be contracted and shall have the capability to assess the competence of the contractor.
- (b) An AMO may contract a maintenance function pertaining to an aeronautical product to an outside source provided—
 - (1) The Authority has approved the maintenance function to be contracted to the outside source; and
 - (2) The AMO maintains and makes available to the Authority, in a form and manner acceptable to the Authority, the following information:
 - (i) The maintenance functions contracted to each outside source; and
 - (ii) The name of each outside source to whom the AMO contracts maintenance functions and the type of certificate and ratings, if any, held by each source.
- (c) An AMO shall not contract out the maintenance, overhaul, modification, repair or inspection of an aircraft unless the subcontractor has been approved by the Authority for the scope of work to be performed in accordance with this Part and, the AMO

shall not provide only approval for return to service of an aircraft following contract maintenance.

- (d) An AMO shall not contract out the maintenance, overhaul, modification, repair or inspection of an aeronautical product unless the subcontractor has been approved by the Authority.
- (e) Before approving an aeronautical product for return to service following contract maintenance, overhaul, modification, or repair, the AMO shall verify by test and/or inspection that the work has been performed satisfactorily and in accordance with approved methods.

Note 1: An AMO that performs maintenance functions for another AMO within its own approval scope is not considered to be subcontracting for the purpose of this subsection.

Note 2: A list of contractors used by the AMO may be included in the AMO Procedures Manual or in a separate document.

Implementing Standard: See IS: 6.5.1.4 for privileges of the Approved Maintenance Organisation.

6.5.1.5 PRIVILEGES OF THE AMO

- (a) The AMO shall perform the following tasks as permitted by these regulations and in accordance with the AMO Procedures Manual—
 - (1) maintain or modify any aircraft or aeronautical product for which it is rated, at the location identified in the AMO's approval;
 - (2) maintain any aircraft or aeronautical product for which it is rated, at any location subject to the need for such maintenance arising from unserviceability of the aircraft or aeronautical product;
 - (3) perform the activities in support of a specific AOC holder where that AOC holder has requested the services of the AMO at locations other than the location identified on the AMO certificate and the AMO is rated to maintain the aircraft of that specific AOC holder at the requested location in the AMO operations specifications approved by the Authority; and
 - (4) issue an approval for return to service or a maintenance release in respect of paragraphs 6.5.1.4(a) (1), (2), and (3) of

this subsection upon completion of maintenance in accordance with limitations applicable to the AMO.

- (b) The AMO may maintain or modify any aircraft or aeronautical product for which it is rated at a place other than the AMO, if—
 - (1) The task will be performed in the same manner as when performed at the AMO and in accordance with this Subpart;
 - (2) All necessary housing, facility, equipment, tools, material, and technical data and/or approved standards and certifying staff are available at the place where the work is to be performed; and
 - (3) The AMO Procedures Manual sets forth approved procedures governing work to be performed at a place other than the AMO.

6.5.1.6 LIMITATIONS ON THE AMO

- (a) The AMO shall maintain or modify an aircraft or aeronautical product for which it is approved only when all necessary housing, facilities, equipment, tools, material, approved technical data and certifying staff are available.
- (b) An AMO shall not contract out the maintenance, overhaul, modification, repair, or inspection of a complete type certificated product.
- (c) An AMO shall not provide an approval for return to service of an aircraft or aeronautical product following contract maintenance, overhaul, modification, repair, or inspection without verifying by test or inspection that the work has been performed satisfactorily and in accordance with approved methods.

6.5.1.7 CERTIFICATE OF RELEASE TO SERVICE OF AN AIRCRAFT OR AERONAUTICAL PRODUCT

- (a) A certificate of release to service shall be issued by appropriately authorised certifying staff when they are satisfied that all required maintenance of the aircraft or aeronautical product has been properly performed by the AMO in accordance with the maintenance procedure manual.

- (b) A certificate of release to service shall be required at the completion of any maintenance on an aeronautical product or assembly when off the aircraft.
- (c) A certificate of release to service shall contain—
 - (1) Basic details of the maintenance carried out;
 - (2) The date such maintenance was completed; and
 - (3) The identity, including the authorisation reference, of the AMO and certifying staff issuing the certificate.

Implementing Standard: See IS: 6.5.1.7 for detailed requirements concerning a certificate of release to service.

6.5.1.8 CONTINUING AIRWORTHINESS RECORDS

- (a) The AMO shall record, on a form and in a manner acceptable to the Authority, all details of maintenance work performed.
- (b) The AMO shall provide a copy of each certificate of release to service to the aircraft operator, together with a copy of any specific airworthiness data used for repairs or modifications performed.
- (c) The AMO shall retain a copy of all detailed continuing airworthiness records and any associated airworthiness data for two years from the date the aircraft or aeronautical product to which the work relates was issued a maintenance release by the AMO.

Note: Where an AOC holder contracts an AMO to keep the aircraft operator's certificates of release to service and any associated airworthiness data, the retention period will be that required by Part 5 of these regulations.

- (d) Each person who maintains, overhauls, modifies, repairs or inspects an aircraft or aeronautical product shall make an entry in the continuing airworthiness record of that equipment, including:
 - (1) A description and reference to data acceptable to the Authority of work performed.
 - (2) The date of completion of the work performed.
 - (3) The name of the person performing the work if other than the person specified in this subsection.

- (4) If the work performed on the aircraft or aeronautical product has been performed satisfactorily, the authorised signature, the AMO certificate number, and type of license or authorisation held by the person approving the work.
- (5) The authorised signature, the AMO certificate number, and type of license or authorisation held by the person approving or disapproving for return to service the aircraft, aeronautical product, or portions thereof.

Note: The signature constitutes the approval for return to service only for the work performed.

- (e) In addition to the entry required by Paragraph 6.5.1.8 (d) of this subsection each person performing a major repair or major modification shall record such work on a form, and shall disposed of the form in the manner prescribed by Implementing Standard IS 5.7.1.1 of the Schedule.
- (f) No person shall describe in any required continuing airworthiness entry or form an aircraft or aeronautical product as being overhauled unless:
 - (1) Using methods, techniques, and practices acceptable to the Authority, it has been disassembled, cleaned, inspected as permitted, repaired as necessary, and reassembled; and
 - (2) It has been tested in accordance with approved standards and technical data, or in accordance with current standards and technical data acceptable to the Authority, which have been developed and documented by the holder of the TC, STC, or a material, part, process, or appliance approval under a TSO.

Note: For definition of overhaul see Part 1 Paragraph 1.1.1.3(a)(451).

- (g) No person may describe in any required continuing airworthiness entry or form, an aircraft or other aeronautical product as being rebuild unless it has been—
 - (1) Disassembled, cleaned, and inspected as permitted;
 - (2) Repaired as necessary; and
 - (3) Reassembled and tested to the same tolerances and limits as a new item, using either new parts or used parts that either

conforms to new part tolerances and limits, or to approve oversized or undersized dimensions.

Note: For definition of rebuild see Part 1 Paragraph 1.1.1.3(a)(502).

- (h) No person may approve for return to service any aircraft or aeronautical product that has undergone repair or modification unless—
 - (1) The appropriate maintenance record entry has been made;
 - (2) The repair or modification form authorised by or furnished by the Authority has been executed in a manner prescribed by the Authority;
- (i) If a repair or modification results in any change in the aircraft operating limitations or flight data contained in the manufacturer's AFM, those operating limitations or flight data shall be appropriately revised and set forth as prescribed by the Authority.
- (j) CONTINUING AIRWORTHINESS RECORD ENTRIES FOR INSPECTIONS. The person approving or disapproving for return to service an aircraft or aeronautical product, after any inspection performed in accordance with this regulation, shall make, in the continuing airworthiness record of that equipment, an entry containing the following information—
 - (1) The type of inspection and a brief description of the extent of the inspection;
 - (2) The date of the inspection and aircraft total time in service; and
 - (3) The authorised signature, the AMO certificate number, and type of license or authorisation held by the person approving or disapproving for return to service the aircraft or aeronautical product, or portions thereof;
 - (4) If the aircraft is found to be airworthy and approved for return to service, the following or a similarly worded statement—"I certify that this aircraft has been inspected in accordance with [TYPE] inspection and was determined to be in an airworthy condition in accordance with the requirements of the Regulations";

- (5) If the aircraft is not approved for return to service because of needed maintenance, non-compliance with the applicable specifications, ADs, or other approved data, the following or a similarly worded statement—*“I certify that this aircraft has been inspected in accordance with [TYPE] inspection and a list of discrepancies and unairworthy items dated [DD/MM/YYYY] has been provided to the aircraft owner or operator in accordance with the Regulations; and*
- (6) If an inspection is conducted under an inspection programme provided for in this Part, the entry shall identify the inspection program accomplished, and shall contain a statement that the inspection was performed in accordance with the inspections and procedures for that particular programme.
- (k) LISTING OF DISCREPANCIES. If the person performing any inspection required by this Part finds that the aircraft is not airworthy or does not meet the applicable type certificate data sheet, ADs, or other approved data upon which its airworthiness depends, that person shall give the owner or lessee a signed and dated list of those discrepancies.

6.5.1.9 AIRWORTHINESS DATA – INSTRUCTIONS FOR CONTINUING AIRWORTHINESS

- (a) The AMO shall be in receipt of all airworthiness data appropriate to support the work performed from the Authority, the aircraft or aeronautical product design organisation, and any other approved design organisation in the State of Manufacture or State of Design, as appropriate.

Note: The Authority may classify data from another authority or organisation as mandatory and may require the AMO to hold such data.

- (b) Where the AMO revises airworthiness data specified in paragraph 6.5.1.9(a) of this subsection to a format or presentation more useful for its maintenance activities, the AMO shall submit to the Authority an amendment to its AMO Procedures Manual for any such proposed revisions for approval by the Authority.
- (c) All airworthiness data used by the AMO shall be kept current and made available to all personnel who require access to that data to perform their duties.

Implementing Standard: See IS: 6.5.1.9 for detailed requirements concerning airworthiness data.

6.5.1.10 REPORTING OF UNAIRWORTHY CONDITIONS

- (a) The AMO shall report to the Authority and the aircraft design organisation of the State of Design any identified fault, malfunction, defect, or other occurrence that could present a serious hazard to the aircraft.
- (b) Reports shall be made on a form and in a manner prescribed by the Authority and shall contain all information about the condition known to the AMO.
- (c) Where the AMO is contracted by an AOC holder to carry out maintenance functions, that AMO shall report to the AOC holder any fault, malfunction, defect, or other occurrence affecting the continuing airworthiness of the aircraft or other aeronautical product.
- (d) Reports shall be made as soon as practicable, but in any case, within three days of the AMO identifying the fault, malfunction, defect, or other occurrence to which the report relates.

6.5.1.11 ECCAA INSPECTIONS

- (a) Each AMO must allow the Authority to inspect the AMO and any of its contract maintenance facilities at any time to determine compliance with this part. Arrangements for maintenance, overhaul, modification, repair, or inspection by a contractor must include provisions for inspections of the contractor by the Authority.

6.5.1.12 PERFORMANCE STANDARDS

- (a) Each AMO that performs any maintenance, overhaul, modification, repair, or inspection for an air operator that is certificated under Part 9 of these regulations, has an approved maintenance programme under Part 9 Section 9.4.1.12 and has an approved reliability programme under Part 9 Section 9.4.1.13 shall perform that work in accordance with the air operator's manuals.
- (b) Except as provided in paragraph 6.5.1.12(a) of this subsection, each AMO shall perform its maintenance functions in accordance with the applicable requirements of Part 5 of these regulations.

- (c) Each AMO shall maintain, in current condition, all manufacturer's service manuals, instructions, and SBs that relate to the aeronautical product it maintains or modifies.
- (d) In addition, each AMO with an avionics rating shall comply with those requirements of Part 5 of these regulations that apply to electronic systems, and shall use materials that conform to approved specifications for equipment appropriate to its rating. It shall use test apparatus, shop equipment, performance standards, test methods, modifications, and calibrations that conform to the manufacturer's specifications or instructions, approved specifications, and if not otherwise specified, to accept safe practices of the aircraft avionics industry.

PART 6 - IMPLEMENTING STANDARDS FOR APPROVED MAINTENANCE ORGANISATIONS

For ease of reference, the number assigned to each implementing standard corresponds to its associated regulation. For example, IS: 6.2.1.5 would reflect a standard required in subsection 6.2.1.5.

IS: 6.2.1.6 RATINGS OF THE AMO

- (a) Except for job functions that are contracted out, each certificated approved maintenance organisation must provide equipment and material so that the job functions listed in this IS, as appropriate to the class or limited rating held or applied for, can be performed as required. The job functions are as follows—
 - (1) For an aircraft rating—

Classes 1, 2, 3, 4, and 5;

- (A) Metal skin and structural components;
 - (i) Repair and replace steel tubes and fittings using the proper welding techniques, when appropriate;
 - (ii) Apply anticorrosion treatment to the interior and exterior of parts;
 - (iii) Perform simple machine operations;
 - (iv) Fabricate steel fittings;

- (v) Repair and replace metal skin;
- (vi) Repair and replace alloy members and components;
- (vii) Assemble and align components using jigs or fixtures;
- (viii) Make up forming blocks or dies;
- (ix) Repair or replace ribs;
- (B) Wood Structure;
 - (i) Splice wood spars;
 - (ii) Repair ribs and spars;
 - (iii) Align interior of wings;
 - (iv) Repair or replace plywood skin;
 - (v) Apply treatment against wood decay;
- (C) Fabric covering;
 - (i) Repair fabric surfaces;
- (D) Aircraft control systems;
 - (i) Repair and replace control cables;
 - (ii) Rig complete control system;
 - (iii) Replace and repair all control system components;
 - (iv) Remove and install control system units and components;
- (E) Aircraft systems;
 - (i) Replace and repair landing gear hinge-point components and attachments;
 - (ii) Maintain elastic shock absorber units;
 - (iii) Conduct landing gear retraction cycle tests;

- (iv) Maintain electrical position indicating and wiring systems;
 - (v) Repair and fabricate fuel, pneumatic, hydraulic, and oil lines;
 - (vi) Diagnose electrical and electronic malfunctions;
 - (vii) Repair and replace electrical wiring and electronic data transmission lines;
 - (viii) Install electrical and electronic equipment;
 - (ix) Perform bench check of electrical and electronic components. (This check is not to be confused with the more complex functional test after repair or overhaul.);
- (F) Assembly operations;
- (i) Assemble aircraft components or parts, such as landing gear, wings, and controls;
 - (ii) Rig and align aircraft components, including the complete aircraft and control system;
 - (iii) Install powerplants;
 - (iv) Install instruments and accessories;
 - (v) Assemble and install cowlings, fairings, and panels;
 - (vi) Maintain and install windshields and windows;
 - (vii) Jack or hoist complete aircraft;
 - (viii) Balance flight control surfaces;
- (G) Non-destructive inspection and testing using dye penetrants and magnetic, ultrasonic, radiographic, fluorescent, or holographic inspection techniques;
- (H) Inspection of metal structures;
- (i) Inspect metal structures, using appropriate inspection equipment to perform the inspections required on an aircraft;

Classes 6 and 7;

- (A) In addition to having the capability to perform the appropriate functions set forth for class 1, 2, 3, 4, or 5 aircraft ratings, an approved maintenance organisation holding a class 6 or 7 aircraft rating for composite aircraft must have the following equipment;
 - (i) Autoclave capable of providing positive pressure and temperature consistent with materials used;
 - (ii) Air circulating oven with vacuum capability;
 - (iii) Storage equipment, such as freezer, refrigerator, and temperature-control cabinets or other definitive storage areas;
 - (iv) Honeycomb core cutters;
 - (v) Non-destructive inspection equipment such as x-ray, ultrasonic, or other types of acoustic test equipment as recommended by the manufacturer;
 - (vi) Cutting tools, such as diamond or carbide saws or router bits, suitable for cutting and trimming composite structures;
 - (vii) Scales adequate to ensure proper proportioning by weight of epoxy adhesive and resins;
 - (viii) Mechanical pressure equipment such as vacuum bagging or sand bags, as appropriate;
 - (ix) Thermocouple probes necessary to monitor cure temperatures;
 - (x) Hardness testing equipment using heat guns that are thermostatically controlled for curing repairs;

Note: Appropriate inspection equipment to perform inspection of composite structures as recommended by the manufacturer and as required for inspection of an aircraft under this section.

List of maintenance functions that may be contracted out;

- (A) For all classes of airframe ratings;
 - (B) Metal plating or anodizing;
 - (C) Complex machine operation involving the use of planners, shapers, milling machines, etc.;
 - (D) Abrasive air blasting and chemical cleaning operations;
 - (E) Heat treatment;
 - (F) Magnetic inspection;
 - (G) Repair or rebuilt metal tanks;
 - (H) Fabricate alloy members and components such as tubes, channels, cowlings, fittings, attach angles, etc.;
 - (I) Fabricate wood spars;
 - (J) Overhaul and repair hydraulic-pneumatic shock absorber units;
 - (K) Overhaul and repair brake system components;
 - (L) Overhaul and repair hydraulic system components;
 - (M) Conduct aircraft weight and balance operation (this function will be conducted in a draft free area);
 - (N) Fluorescent inspection of alloy components;
 - (O) Recovering and refinishing of components and entire aircraft;
- (2) Powerplant rating;

Class 1;

- (A) Maintain and alter powerplants, including replacement of parts;
 - (i) Perform chemical and mechanical cleaning;
 - (ii) Perform disassembly operations;
 - (iii) Replace bushings, bearings, pins, and inserts;

- (iv) Perform heating operations that may involve the use of recommended techniques that require controlled heating facilities;
 - (v) Perform chilling or shrinking operations;
 - (vi) Remove and replace studs;
 - (vii) Inscribe or affix identification information;
 - (viii) Paint powerplants and components;
 - (ix) Apply anticorrosion treatment for parts;
- (B) Inspect all parts, using appropriate inspection aids;
 - (i) Determine precise clearances and tolerances of all parts;
 - (ii) Inspect alignment of connecting rods, crankshafts, and impeller shafts;
- (C) Accomplish routine machine work;
 - (i) Ream inserts, bushings, bearings, and other similar components;
 - (ii) Reface valves;
- (D) Accomplish assembly operations;
 - (i) Perform valve and ignition-timing operations;
 - (ii) Fabricate and test ignition harnesses;
 - (iii) Fabricate and test rigid and flexible fluid lines;
 - (iv) Prepare engines for long or short term storage;
 - (v) Hoist engines by mechanical means;

Classes 2 and 3;

- (A) In addition to having the capability to perform the appropriate functions as required for class 1 powerplant rating, a maintenance organisation holding a class 2 or a class 3 powerplant rating must have the following equipment:

- (i) Testing equipment;
- (ii) Surface treatment antigallant equipment;
- (iii) Functional and equipment requirements recommended by the manufacturer;
- (iv) Appropriate inspection equipment.

List of maintenance functions that may be contracted out—

- (A) Class 1 and 2 Powerplant (Reciprocating);
 - (B) Replacement of valve guides and seats;
 - (C) Plating operations (copper, silver, cadmium, etc.);
 - (D) Replacement and repair of powerplant alloy sheet metal and steel components such as air baffles, etc.);
 - (E) Magnetic, fluorescent and other acceptable inspection aids;
 - (F) Balancing of parts, including crankshafts, impeller shafts, etc.;
 - (G) Precision grinding, honing and lapping operations (including crankshaft, cylinder barrels, etc.);
 - (H) Precision drilling, tapping, boring, milling, and cutting operations;
 - (I) Functional check powerplant accessories (this check is not to be confused with the more complex performance test of overhaul);
 - (J) Install engines in aircraft;
 - (K) Align and adjust engine controls;
- (3) Propeller Rating—

Class 1—

- (A) Remove and install propellers;

- (B) Maintain and alter propellers, including installation and replacement of parts;
 - (i) Replace bladed tipping;
 - (ii) Refinish wood propellers;
 - (iii) Make wood inlays;
 - (iv) Refinish plastic blades;
 - (v) Straighten bent blades within repairable tolerances;
 - (vi) Modify blade diameter and profile;
 - (vii) Polish and buff;
 - (viii) Perform painting operations;
- (C) Inspect components using appropriate inspection aids;
 - (i) Inspect propellers for conformity with manufacturer's drawings and specifications;
 - (ii) Inspect hubs and blades for failures and defects using all visual aids, including the etching of parts;
 - (iii) Inspect hubs for wear of splines or keyways or any other defect;
- (D) Balance propellers;
 - (i) Test for proper track on aircraft;
 - (ii) Test for horizontal and vertical unbalance using precision equipment;

Class 2;

- (A) Remove and install aircraft propellers, which may include installation and replacement of parts;
 - (i) Perform all functions listed under Class 1 propellers when applicable to the make and model propeller in this class;

- (ii) Properly lubricate moving parts;
- (iii) Assemble complete propeller and subassemblies using special tools when required;

Note: Inspect components using appropriate inspection aids for those functions listed for class 1 propellers under paragraph (a)(3)(i) of this Implementing Standard when applicable to the make and model of the propeller being worked on.

- (B) Repair or replace components or parts;
 - (i) Replace blades, hubs, or any of their components;
 - (ii) Repair or replace anti-icing devices;
 - (iii) Remove nicks or scratches from metal blades;
 - (iv) Repair or replace electrical propeller components;
- (C) Balance propellers, including those functions listed for class 1 propellers under paragraph (a)(3)(i)(D) of this Implementing Standard when applicable to the make and model of the propeller being worked on.
- (D) Test propeller pitch-changing mechanism;
 - (i) Test hydraulically operated propellers and components;
 - (ii) Test electrically operated propellers and components;

List of maintenance functions that may be contracted out—

- (A) Class 1 Propeller:
 - (B) Inspect hubs and blades for failures and defects, using magnetic or fluorescent inspection devices.
 - (C) Class 2 Propeller:
 - (D) Test of constant speed devices.
- (4) Avionics rating—

Class 1, 2, and 3—

- (A) Perform physical inspection of avionics systems and components by visual and mechanical inspection.
- (B) Perform electrical inspection of avionics systems and components by means of appropriate electrical and/or electronic test equipment.
- (C) Check aircraft wiring, antennas, connectors, relays, and other associated avionics components to detect installation faults.
- (D) Check engine ignition systems and aircraft accessories to determine sources of electrical interference.
- (E) Check aircraft power supplies for adequacy and proper functioning.
- (F) Remove, repair, and replace aircraft antennas.
- (G) Measure transmission line attenuation.
- (H) Measure avionics component values such as inductance, capacitance, and resistance.
- (I) Determine waveforms and phase in avionics equipment when applicable.
- (J) Determine proper aircraft avionics antenna, lead-in, and transmission-line characteristics and determine proper locations for type of avionics equipment to which the antenna is connected.
- (K) Determine the operational condition of avionics equipment installed in aircraft by using appropriate portable test apparatus.
- (L) Test all types of transistors: solid-state, integrated circuits; or similar devices in equipment appropriate to the class rating.
- (M) Test avionics indicators.

I. Class 1—

Note: In addition to having the capability to perform the job functions listed in paragraph (a)(4)(i):

- (a) Test and repair headsets, speakers, and microphones.

- (b) Measure radio transmitter power output.
- (c) Measure modulation values, noise, and distortion in communication equipment.

II. Class 2—

Note: In addition to having the capability to perform the job functions listed in paragraph (a)(4)(i):

- (a) Test and repair headsets.
- (b) Test speakers
- (c) Measure loop antenna sensitivity by appropriate methods.
- (d) Calibrate to approved performance standards any radio navigational equipment, en route and approach aids, or similar equipment, as appropriate to this rating.

III. Class 3—

Note: In addition to having the capability to perform the job functions listed in paragraph (a)(4)(i):

- (a) Measure transmitter power output.
 - (ii) List of maintenance functions that may be contracted out.
 - (A) Class 2 Avionics—
 - I. Repair of speakers.
 - (B) Class 3 Avionics—
 - I. Metal plating of transmission lines, wave guides, and similar equipment in accordance with appropriate specifications.
 - (C) For all Class of Avionics ratings—
 - (i) Test avionics indicators.
 - (ii) Overhaul, test, and check dynamotors, inverters, and other radio electrical apparatus.

- (iii) Paint and refinish equipment containers
 - (iv) Accomplish appropriate methods of marking calibrations, or other information on avionics control panels and other components, as required.
 - (v) Make and reproduce drawings, wiring diagrams, and other similar material required to record alteration and/or modifications to avionics (photographs may be used in lieu of drawings when they will serve as an equivalent or better means of recording).
 - (vi) Fabricate tuning shaft assemblies, brackets, cable assemblies, and other similar components used in avionics or aircraft avionics installations.
 - (vii) Install complete avionics systems in aircraft and prepare weight and balance reports (that phase of avionics installation requiring modifications to the aircraft structure must be performed, supervised, and inspected by appropriately qualified and authorised person).
- (5) Computer systems rating—
 - (i) Class 1, 2, and 3:
 - (A) Maintain computer systems in accordance with manufacturer's specifications, test requirements, and recommendations.
 - (B) Remove, maintain, and replace computer systems in aircraft.
 - (C) Inspect, test, and calibrate computer system equipment, including software.
- (6) Instrument rating:
 - Class 1:**
 - (A) Diagnose instrument malfunctions on the following instruments:

- (i) Rate-of-climb indicators.
- (ii) Altimeters.
- (iii) Airspeed indicators.
- (iv) Vacuum Indicators.
- (v) Oil pressure gauges.
- (vi) Hydraulic pressure gauges.
- (vii) De-icing pressure gauges.
- (viii) Pitot-static tube.
- (ix) Direct indicating compasses.
- (x) Accelerometer.
- (xi) Direct indicating tachometers.
- (xii) Direct reading fuel quantity gauges.

Note: Inspect, test, and calibrate the instruments listed under paragraph (a)(6)(i) of this IS on and off the aircraft, as appropriate.

Class 2:

- (A) Diagnose instrument malfunctions of the following instruments:
 - (i) Tachometers.
 - (ii) Synchroscope.
 - (iii) Electric temperature indicators.
 - (iv) Electric resistance-type indicators.
 - (v) Moving magnet-type indicators.
 - (vi) Warning units (oil and fuel).
 - (vii) Selsyn systems and indicators.

- (viii) Self-synchronous systems and indicators.
- (ix) Remote indicating compasses.
- (x) Quantity indicators.
- (xi) Avionics indicators.
- (xii) Ammeters.
- (xiii) Voltmeters.
- (xiv) Frequency meters.

Note: Inspect, test, and calibrate instruments listed under paragraph (a)(6)(i) of this IS on and off the aircraft, as appropriate.

Class 3:

- (A) Diagnose instrument malfunctions of the following instruments:
 - (i) Turn and bank indicators.
 - (ii) Directional gyros.
 - (iii) Horizon gyros.
 - (iv) Auto pilot control units and components.

Note: Inspect, test, and calibrate instruments listed under paragraph (a)(6)(iii) of this IS on and off the aircraft, as appropriate.

Class 4:

- (A) Diagnose instrument malfunctions of the following instruments:
 - (i) Capacitance-type quantity gauge.
 - (ii) Laser gyros.
 - (iii) Other electronic instruments.

Note: Inspect, test, and calibrate instruments listed under paragraph (a)(6)(iv) of this IS on and off the aircraft, as appropriate.

- (7) Accessory rating:

Class 1, 2, 3, and 4:

- (A) Perform the following functions in accordance with the manufacturers specifications and recommendations:
 - (i) Diagnose accessory malfunctions.
 - (ii) Maintain and alter accessories, including installing and replacing parts.
 - (iii) Inspect, test, and calibrate accessories on and off the aircraft as appropriate.

IS: 6.3.1.2 HOUSING AND FACILITY REQUIREMENTS

- (a) For ongoing maintenance of aircraft, the AMO shall have aircraft hangars available that are large enough to accommodate aircraft during maintenance activities.
- (b) Where the hangar is not owned by the AMO, it is recommended to:
 - (1) Establish proof of authorisation to use hangar;
 - (2) Demonstrate sufficiency of hangar space to carry out planned base maintenance by preparing a projected aircraft hangar visit plan relative to the maintenance program;
 - (3) Update the aircraft hangar visit plan on a regular basis;
 - (4) Ensure, for aircraft product maintenance, aircraft product workshops are large enough to accommodate the products on planned maintenance;
 - (5) Ensure aircraft hangar and aircraft product workshop structures prevent the ingress of rain, hail, ice, snow, wind and dust, etc.;
 - (6) Ensure that workshop floors are sealed to minimise dust generation; and

- (7) Demonstrate access to hangar accommodation for usage during inclement weather for minor scheduled work and/or lengthy defect rectification.
- (8) Aircraft maintenance staff shall be provided with an area where they may study manufacturer's maintenance instructions and complete continuing airworthiness records in a proper manner.

Note: It is acceptable to combine any or all of the above requirements into one office subject to the personnel having sufficient room to carry out assigned tasks.

- (c) Hangars used to house aircraft together with office accommodation shall be such as to insure a clean, effective and conformable working environment.
 - (1) Temperatures should be maintained at a comfortable level.
 - (2) Dust and any other airborne contamination should be kept to a minimum and not permitted to reach a level in the work area where visible aircraft or aeronautical product surface contamination is evident.
 - (3) Lighting should be such as to ensure each maintenance function should be adequately performed.
 - (4) Noise levels should not be permitted to rise to the point of distracting personnel from performing maintenance functions. Where it is impractical to control the noise source, such personnel shall be provided with the necessary personal equipment to stop excessive noise causing distraction during maintenance functions.
- (d) Where a particular maintenance function requires the application of specific environmental conditions different from the foregoing, then such conditions shall be observed. (Specific conditions are identified in the approved maintenance instructions.)
- (e) Where the working environment for line maintenance deteriorates to an unacceptable level with respect to temperature, moisture, hail, ice, snow, wind, light and dust or other airborne contamination; the particular maintenance function shall be suspended until satisfactory conditions are re-established.

- (f) For both base and line maintenance where dust or other airborne contamination results in visible surface contamination, all susceptible systems shall be sealed until acceptable conditions are re-established.
- (g) Storage facilities for serviceable aeronautical products shall be clean, well ventilated and maintained at an even dry temperature to minimise the effects of condensation.
- (h) Manufacturer standards and recommendations shall be followed for specific aircraft and aeronautical products.
- (i) Storage racks shall provide sufficient support for large aeronautical products such that the products are not distorted.
- (j) All aeronautical products, wherever practicable, shall remain packaged in protective material to minimise damage and corrosion during storage.

IS: 6.3.1.3 EQUIPMENT, TOOLS, AND MATERIAL

- (a) All applicable tools, equipment, and test equipment used for product acceptance and/or for making a finding of airworthiness shall be traceable to the National Standards of Grenada, The United States, Canada, or the United Kingdom or other National Standard as individually approved by the Authority.
- (b) Except as provided in IS 6.3.1.3(a), in the case of foreign manufactured tools, equipment, and test equipment, the standard provided by the State of Manufacture may be used if approved by the Authority.
- (c) Where the manufacturer specifies a particular tool, equipment, or test equipment then that tool, equipment, or test equipment shall be used unless the manufacturer has identified the use of an equivalent.
- (d) Except as provided in IS 6.3.1.3(c), tools, equipment, or test equipment other than that recommended by the manufacturer will be acceptable based on at least the following:
 - (1) The AMO shall have procedures in the AMO Procedures Manual if it intends to use equivalent tools, equipment, or test equipment other than that recommended by the manufacturer.

(2) The AMO shall have procedures to include—

- (A) A description of the procedures used to establish the competence of personnel that make the determination of equivalency to tools, equipment, or test equipment.
 - (B) Conducting and documenting the comparison made between the specification of the tool, equipment or test equipment recommended by the manufacturer and the equivalent tool, equipment, or test equipment proposed.
 - (C) Ensuring that the limitations, parameters, and reliability of the proposed tool, equipment, or test equipment are equivalent to the manufacturer's recommended tools, equipment, or test equipment.
 - (D) Ensuring that the equivalent tool, equipment, or test equipment is capable of performing the appropriate maintenance function, all normal tests, or calibrations, and checking all parameters of the aircraft or aeronautical product undergoing maintenance or calibration.
- (e) An AMO shall have full control (i.e., ownership, lease) of the equivalent tool, equipment, or test equipment
- (f) An AMO approved for base maintenance shall have sufficient aircraft access equipment and inspection platforms/docking such that the aircraft may be properly inspected.
- (g) An AMO shall have a procedure to inspect/service and, where appropriate, calibrate tools, equipment, and test equipment on a regular basis and indicate to users that an item is within any inspection or service or calibration time limit.
- (h) An AMO shall have a procedure if it uses a standard (primary, secondary or transfer standards) for performing calibration, that standard cannot be used to perform maintenance.
- (i) An AMO shall use a clear system of labelling all tools, equipment and test equipment to give information on when the next inspection, service, or calibration is due and to give status information if the item is unserviceable for any other reason that may not be obvious.
- (j) An AMO shall use a clear system of labelling all tools, equipment, and test equipment to give information on when such tools,

equipment, and test equipment are not used for product acceptance and/or for making a finding of airworthiness.

- (k) An AMO shall maintain a register for all calibrated tools, equipment, and test equipment together with a record of calibrations and standards used.
- (l) An AMO shall perform inspection, service, or calibration on a regular basis in accordance with the equipment manufacturers' instructions except where the AMO can show, by results, that a different time period is appropriate in a particular case and is acceptable to the Authority.

IS: 6.4.1.1 PERSONNEL REQUIREMENTS

- (a) An AMO's functions shall be subdivided under individual managers or combined in any number of ways, dependent upon the size of the AMO.
- (b) The Accountable Manager shall be responsible for ensuring that all necessary resources are available to accomplish maintenance required to support the AMO's approval.
- (c) An AMO shall have, dependent upon the extent of approval, the following, all of whom shall report to the accountable manager;
 - (1) A base maintenance manager;
 - (2) A line maintenance manager;
 - (3) A workshop manager; and
 - (4) A quality manager.

Note: In small AMOs, with the exception of the quality manager position, one or more of the above positions may be combined, subject to approval by the Authority.

- (d) The Base Maintenance Manager shall be responsible for:
 - (1) Ensuring that all maintenance required to be carried out in the hangar, plus any defect rectification carried out during

- base maintenance, is carried out to specified design and quality standards; and
- (2) Any corrective action resulting from quality compliance monitoring.
- (e) The Line Maintenance Manager shall be responsible for:
- (1) Ensuring that all maintenance required to be carried out on the line, including line defect rectification, is performed to the required standards; and
 - (2) Any corrective action resulting from quality compliance monitoring.
- (f) The Workshop Manager shall be responsible for:
- (1) Ensuring that all work on aircraft components is performed to required standards; and
 - (2) Any corrective action resulting from quality compliance monitoring.
- (g) The Quality Manager shall be responsible for:
- (1) Monitoring the AMO's compliance with Part 6; and
 - (2) Requesting remedial action as necessary by the base maintenance manager/line maintenance manager/workshop manager or the accountable manager, as appropriate.
- (h) An AMO may adopt any title for managerial positions but shall identify to the Authority the titles and persons chosen to carry out these functions.
- (i) Where an AMO chooses to appoint managers for all or any combination of the identified functions because of the size of the undertaking, these managers shall report ultimately through either the Base Maintenance Manager or Line Maintenance Manager or Workshop Manager or Quality Manager, as appropriate, to the accountable manager.
- (j) The AMO shall identify the managers specified in this subsection and shall submit their credentials submitted to the Authority. To be accepted, such managers shall have relevant knowledge and

satisfactory experience related to aircraft and aeronautical product maintenance as appropriate in accordance with these regulations.

Note: Certifying staff may report to any of the managers specified depending upon which type of control the AMO uses (for example-licensed engineers, independent inspection/dual function supervisors, etc.) so long as the quality compliance monitoring staff remain independent.

- (k) An AMO shall have a production man-hours plan showing that it has sufficient man-hours for the intended work.
- (l) If an AMO is approved for base maintenance, the plan shall relate to the aircraft hangar visit plan.
- (m) An AMO shall regularly update production man-hour plans.

Note: Work performed on any aircraft registered outside of Grenada shall be taken into account if it impacts upon the production man-hours plan.

- (n) Quality monitoring compliance function man-hours shall be sufficient to meet the requirement of paragraph 6.5.1.2(c) of the Regulations.
- (o) Planners, mechanics, supervisors and certifying staff shall be assessed for competence by "on the job" evaluation or by examination relevant to their particular role within the AMO before unsupervised work is permitted.
- (p) To assist in the assessment of competence, job descriptions are recommended for each position. The assessment shall establish that:
 - (1) Planners are able to interpret maintenance requirements into maintenance functions and have an appreciation that they have no authority to deviate from the aircraft maintenance program.
 - (2) Mechanics are able to carry out maintenance functions to any standard specified in the manufacturer's maintenance instructions and will notify supervisors of mistakes requiring rectification to re-establish required maintenance standards.
 - (3) Supervisors are able to ensure that all required maintenance functions are performed, and where not performed or where it is evident that a particular maintenance function cannot be performed to the manufacturer's maintenance instructions,

such problems will be reported to and agreed upon by the quality manager.

- (4) Certifying staff are able to determine when the aircraft or aeronautical product shall be approved for release to service.
- (q) Planners, supervisors, and certifying staff shall demonstrate their knowledge of AMO procedures relevant to their particular roles and responsibilities.
- (r) Training of certifying staff shall be performed by the AMO or by an institute selected by the AMO. In either case, the Authority shall approve the institute and the AMO shall establish the curriculum and standards for training, as well as pre-qualification standards for the personnel intended for training. Pre-qualification standards are intended to ensure that the trainee has a reasonable chance of successfully completing any course.
 - (1) Examinations shall be set at the end of each training course.
 - (2) Initial training shall cover:
 - (i) Basic engineering theory relevant to the airframe structure and systems fitted to the class of aircraft the AMO maintains;
 - (ii) Specific information on the actual aircraft type or aeronautical product on which the person is intended to become a certifying person, including the impact of repairs and system or structural defects; and
 - (iii) Company procedures relevant to the certifying staff's tasks.
 - (3) Continuation training shall cover changes in AMO procedures and changes in the standard of aircraft and/or aeronautical products maintained.
 - (4) A training program established for maintenance personnel and certifying staff by the AMO shall include;
 - (i) Details of the number of personnel who will receive initial training to qualify as certifying staff over specified time periods, and

- (ii) Training in knowledge and skills related to human performance including co-ordination with other maintenance personnel and certifying staff.

IS: 6.4.1.4 RECORDS OF CERTIFYING STAFF

- (a) The AMO shall keep the following minimum information on record with respect to each certifying person:
 - (1) Name;
 - (2) Date of birth;
 - (3) Basic training;
 - (4) Type training;
 - (5) Continuation training;
 - (6) Experience;
 - (7) Qualifications relevant to the approval;
 - (8) Scope of the authorisation;
 - (9) Date of first issue of the authorisation;
 - (10) Expiration date of the authorisation (if appropriate); and
 - (11) Identification number of the authorisation.
- (b) Records of certifying staff shall be controlled, but not necessarily run by the AMO's quality department.
- (c) The number of persons authorised to access the system shall be limited to minimise the possibility of records being altered in an unauthorised manner and to limit confidential records from become accessible to unauthorised persons.
- (d) A certifying person shall be given reasonable access on request to his or her records.
- (e) The Authority is authorised to and may investigate the records system for initial and continued approval, or when the Authority has cause to doubt the competence of a particular certifying person.

- (f) An AMO shall keep the record of a certifying person for at least two years after that person has ceased employment with the AMO or upon withdrawal of his or her authorisation. Upon request, the certifying staff shall be furnished with a copy of their record on leaving the AMO.
- (g) The authorisation document shall be in a style that makes its scope clear to certifying staff and any authorised person that may be required to examine the document. Where codes are used to define scope, an interpretation document shall be readily available.
- (h) Certifying staff are not required to carry the authorisation document at all times but shall produce it within 5 days of a request from an authorised person.

Note: Authorised persons, apart from the AMO's quality department or maintenance supervisors/managers, include the Authority.

IS: 6.5.1.1 MAINTENANCE ORGANISATION PROCEDURES MANUAL

- (a) AMO personnel shall be familiar with those parts of the manuals that are relevant to the maintenance work they perform.
- (b) An AMO shall specify in the Procedures Manual who should amend the manual, particularly in the case where the manual consists of several parts.
- (c) The Quality Manager shall be responsible for—
 - (1) Monitoring the amendment of the Procedures Manual, including associated procedures manuals
 - (2) Submitting proposed amendments to the Authority, unless the Authority has agreed, via a procedure stated in the amendment section of the Procedures Manual, that some defined class of amendments may be incorporated without approval by the Authority.
- (d) The Procedures Manual shall address four main areas—
 - (1) The management Procedures Manual covering the parts previously specified;
 - (2) The maintenance procedures covering all aspects of how aircraft components may be accepted from outside sources and how aircraft will be maintained to the required standard;

- (3) The quality system procedures, including the methods of qualifying mechanics, inspection, certifying staff and quality audit personnel; and
- (4) Contracted AOC holder procedures and paperwork.

Sample Maintenance Procedures Manual Format

Part 1 - Management

- 1.1 Corporate commitment by the accountable manager
- 1.2 Management personnel
- 1.3 Duties and responsibilities of the management personnel
- 1.4 Management Organisation Chart
- 1.5 List of certifying staff. *Note: A separate document may be referenced*
- 1.6 Manpower resources
- 1.7 General description of the facilities at each address intended to be approved
- 1.8 Organisations intended scope of work
- 1.9 Notification procedure to the Authority regarding changes to the organisation's activities/approval/location/personnel
- 1.10 Manual amendment procedures

Part 2 - Maintenance Procedures

- 2.1 Supplier evaluation procedure
- 2.2 Acceptance/inspection of aircraft components and material from outside contractors.
- 2.3 Storage, tagging and release of aircraft components and material to aircraft maintenance
- 2.4 Acceptance of tools and equipment
- 2.5 Calibration of tools and equipment

- 2.6 Use of tooling and equipment by staff (including alternate tools)
- 2.7 Cleanliness standards of maintenance facilities
- 2.8 Maintenance instructions and relationship to aircraft/aircraft component manufacturers' instructions including updating and availability to staff
- 2.9 Repair procedure
- 2.10 Aircraft maintenance program compliance
- 2.11 Airworthiness Directives procedure
- 2.12 Optional modification procedure
- 2.13 Maintenance documentation in use and completion of same
- 2.14 Technical record control
- 2.15 Rectification of defects arising during base maintenance
- 2.16 Release to service procedure
- 2.17 Records for the air carrier operator
- 2.18 Reporting of defects to the Authority/Operator/Manufacturer
- 2.19. Return of defective aircraft components to store
- 2.20 Defective components to outside contractors
- 2.21 Control of computer continuing airworthiness record systems
- 2.22 Reference to specific maintenance procedures such as:
 - Engine running procedures,
 - Aircraft pressure run procedures,
 - Aircraft towing procedures,
 - Aircraft taxiing procedures.
- 2.23 Human Factors

Part L2 - Additional Line Maintenance Procedures

- L2.1 Line maintenance control of aircraft components, tools, equipment, etc.
- L2.2 Line maintenance procedures related to servicing/fueling/de-icing, etc.
- L2.3 Line maintenance control of defects and repetitive defects
- L2.4 Line procedure for completion of technical log
- L2.5 Line procedure for pooled parts and loan parts
- L2.6 Line procedure for return of defective parts removed from aircraft

Part 3 - Quality System Procedures

- 3.1 Quality audit of organisation procedures
- 3.2 Quality audit of aircraft
- 3.3 Quality audit remedial action procedure
- 3.4 Certifying staff qualification and training procedures
- 3.5 Certifying staff records
- 3.6 Quality audit personnel
- 3.7 Qualifying inspectors
- 3.8 Qualifying mechanics
- 3.9 Exemption process control
- 3.10 Concession control for deviation from organisations' procedures
- 3.11 Qualification procedure for specialised activities such as non-destructive testing, welding, etc.
- 3.12 Control of manufacturers' working teams

Part 4 - Documentation

- 4.1 Contracted air operators
- 4.2 Air operator procedures and paperwork

4.3 Air operator record completion

Part 5 - Appendices

5.1 Sample of documents

5.2 List of subcontractors

5.3 List of line maintenance locations

IS: 6.5.1.2 MAINTENANCE PROCEDURES AND INDEPENDENT QUALITY ASSURANCE SYSTEM

Following are sample inspection items.

MAINTENANCE SYSTEM AND CERTIFYING STAFF

Reference: Regulation Part 6

MAINTENANCE PROCEDURES

GENERAL

The chief certifying staff manager is responsible to the accountable manager for full compliance with all procedures outlined in this system as appropriate to any item being inspected, repaired, overhauled or altered by the maintenance organisation. The airworthiness of those items and compliance with record requirements of the operators of those items and of the maintenance organisation depends upon conformity to the procedures of this system.

CERTIFYING STAFF

Certifying staff are required to be thoroughly familiar with all inspection methods, techniques and equipment used in their area of responsibility to determine the quality of airworthiness of an article undergoing maintenance, repair or alterations. All personnel must also maintain proficiency in the use of the various types of inspection aids to be used for inspection of the particular items undergoing inspection. Available to all certifying staff are current specifications involving inspection tolerances, limits, and procedures as set forth by manufacturer of the product undergoing inspection and other forms of inspection information such as CAA airworthiness directives, manufacturer's bulletins, etc. A file of maintenance manuals, engineering letters, service letters, CAA regulations, etc., are maintained in the inspection office.

Certifying staff assigned to maintenance organisation operations are required to familiarise themselves with the regulations applicable to such operations with particular emphasis on the following:

Part 4 – Aircraft Registration and Marking

Part 5 – Airworthiness Implementing Standard

Part 6 – Approved Maintenance Organisation

Part 7 – Instruments and equipment Implementing Standards

Part 8 – Operations Implementing Standards

Part 9 – Air Operator Certificate and Administration Implementing Standard

SUPERVISORS, CERTIFYING STAFF, AND MECHANICS

All supervisors, certifying staff, and mechanics are required to be thoroughly familiar with the requirements of this manual, ECCAA regulations, airworthiness directives and advisory circulars, manufacturer's service letters and bulletins and engineering orders. The basic maintenance system requires mechanics to sign their last name or initials for work performed by them prior to submitting the item to certifying staff for final acceptance. Certifying staff will indicate their acceptance of work performed with the application of the certifying staff acceptance stamp next to the item on the work forms. See appropriate section of this manual for sample forms and instructions for their use.

MAINTENANCE CONTINUITY

Reference: Part 6, Section 6.4.1.1, IS: 6.4.1.1. This section should show by title, who performs the maintenance continuity, the forms to be used, and disposition of the records. The maintenance continuity should encompass incoming materials, preliminary hidden damage and final inspection where applicable. It should include items as they progress through various stages of repair, overhaul or modification, including other inspections, test and calibrations (Rockwell Hardness Test, Magnaflux, Ultrasonic X-ray, etc.), adjusting or calibrating VOR, DME or ILS equipment. It should establish a system for passing along the continuity of inspection and other maintenance from one shift or person to another. It should reference manufacturer's inspection standards for the maintenance of the particular items.

CONTINUITY OF MAINTENANCE RESPONSIBILITY

Through a "Line of Succession" list maintained by the chief certifying staff manager, his/her duties are assured of performance as "Acting Chief certifying staff manager."

A status book will be provided in the hangar and each shop in which a status report will be left by each of the certifying staff leaving the job before completion of a project, for information to the succeeding certifying staff. Its purpose is to assure a continuing inspection responsibility for in progress work inspections.

All forms upon which work performed is listed have been designed to show the name of the mechanic who performs the work (or supervises it) and the names of the certifying staff inspecting that work.

Samples of work forms, inspection forms, and instructions for completing them, are contained in the appropriate section of this manual.

INCOMING MATERIALS

Reference: Part 6, Section 6.4.1.1 This section should explain how compliance is shown, how the inspections are recorded, classification of incoming materials, including checks for damage, preservation and shelf life, identification of parts by part number, and the person responsible to perform the inspection (by title). In addition, it should describe the action to be taken when materials received do not meet specifications.

PARTS RECEIVING POLICY

The chief certifying staff manager of the maintenance organisation (or designee) is responsible to see that all incoming materials, AN or MS and other hardware, parts, components, equipment and other products procured for use by the maintenance organisation are subject to receiving inspection to assure conformance to part number, purchase order and/or other applicable specifications. A record of such inspections will be recorded on the designated maintenance organisation form, Receiving Inspection. Any products that fail to meet applicable specifications will be red tagged as unserviceable, listing the discrepancy and be returned to the stockroom manager for return to vendor. To preclude those parts from being used, the stockroom manager will place such items in the locked holding area until they are repacked for shipping back to the vendor.

GENERAL TEST REQUIREMENTS:

1. New components manufactured under a type or production certificate, or in accordance with a Technical Standard Order (or similar ECCAA

approved technical data), or components which have been rebuilt by the manufacturer to production specifications, require a visual receiving inspection.

2. Any repaired or overhauled components received from an ECCAA certificated maintenance organisation do not normally require more than a visual receiving inspection before being returned to service. Repaired or overhauled components that are received from other than an ECCAA certified maintenance organisation, in addition to the normal receiving inspection, will be functionally checked before being returned to service.
3. All components requiring a functional check are routed to the proper maintenance organisation shop for the accomplishment of this check.

Note: Functional checks are performed in accordance with instructions contained in the appropriate manufacturer's publications. However, if such specific instructions are not available, functional check requirements will be determined by the chief certifying staff manager, and issued on a form to provide a means of recording compliance therewith.

Note: Functional checks are performed in accordance with instructions contained in the appropriate manufacturer's publications. However, if such specific instructions are not available, functional check requirements will be determined by the chief certifying staff manager, and issued on a form to provide a means of recording compliance therewith. If suitable test facilities are not available in maintenance organisation, components may be functionally checked in the aircraft. In any case, all functional checks must be monitored and recorded by the chief certifying staff manager or designee.

4. The Supervisor - Quality Assurance Control or certifying staff may request a functional check of any component overhauled or repaired by any agency, when of the opinion that such a check is required in order to return the component to service.
5. All adhesives, sealers, primers, finishing and other materials having limited shelf life are identified by material control labels showing the expiration date of the shelf life as established by applicable specifications. Inspectors and mechanics will dispose of any materials found in the shop or storerooms without such identification or with expired shelf life.
6. The detailed functions of material inspection are covered by the manufacturer's quality assurance directive and inspection bulletins which will be used to implement the operation of the maintenance organisation with respect to the control and identification of materials, parts and equipment received for direct use in the maintenance organisation. All

parts new or overhauled purchased from vendors will be checked for proper approval documentation prior to release for installation by the maintenance organisation.

WORK ORDER

Upon receipt of a work request for maintenance or alteration on an airframe, engine, accessory, propeller, instrument, radio or a product requiring a specialised service covered by the maintenance organisation certificate, the maintenance department will issue a (name of company) Maintenance organisation Work Order Form to authorise that work to be accomplished. The form is pre-numbered and that number will be the basic reference for the product's maintenance record. The work order will specify the work to be accomplished. The work order will be supplemented as necessary with detailed inspection instructions along with applicable forms; to assure proper inspection and repair of the unit involved. The number of additional forms used will be identified on the work order. The original of the printed and numbered work order form will be retained in the base maintenance manager's office. A logbook will be maintained in the base maintenance manager's office for recording each work order in numerical order, identifying the customer, the product for which it was issued along with the manufacturer serial number, special instructions and the work accomplished.

It will be the responsibility of the respective shop manager and chief certifying staff manager to assure that proper supplemental instructions are furnished to assure proper progressive servicing, inspection and testing of the product involved.

Mechanics will enter work accomplished and use last names or initials to sign off that work on the form. certifying staff will use their inspection stamp to sign off inspections. A list of inspectors and stamp numbers are contained in the appropriate manual Section.

See copy of work order and supplemental forms in the appropriate section of this manual.

A copy of the work order with all attachments should be on file as a permanent record of all work accomplished. The record should reflect the signature of each mechanic and certifying staff that performed maintenance on each unit. It should reflect exactly what work was accomplished. It should show all of the parts used. The records should be maintained for a period of not less than two years.

RECORD OF WORK

A detailed record shall be kept of all work performed by the maintenance organisation. A copy of each Work Order Form with all attached supplementary form(s) will be maintained in the maintenance organisation records section. A separate file area is provided for all paper work associated with the maintenance organisations work activities. Each work record is checked by an inspector for work accomplished, parts used signature of mechanic and inspectors who performed maintenance. Records are maintained in active file for two (2) years then transferred to dead storage for 5 additional years.

PRELIMINARY INSPECTION

This information should indicate who is to perform the inspection, the method of inspection and any special testing requirements. Instructions should include the type of form to be used, how defects noted are recorded and the requirement to make them part of the work order.

PRELIMINARY INSPECTION

The Chief certifying staff manager of the maintenance organisation is responsible for the performance of appropriate inspections including functional and non-destructive tests to assure that all units delivered to the maintenance organisation for maintenance, alteration or repair under the privileges of the maintenance organisation certificate are subjected to a preliminary inspection to determine the state of preservation and any defects on the items involved. This inspection will be recorded on the Preliminary Inspection Form with any discrepancies noted and the form must be attached to the work order identified with the unit involved. It will remain with the applicable inspection records until the unit is released for functional and non-destructive tests. Those forms will show the work order number and will be routed attached to the work order.

Before any work is begun, the Chief certifying staff manager will, in the case of work to be performed for an air operator under the continuous airworthiness requirements of Part 6, make sure that all necessary current information and specifications are included or referred to in the work instructions that are to accompany the article through the maintenance organisation, and that the work is done in accordance with the air operators manual.

HIDDEN DAMAGE INSPECTION

This section should describe who is to perform the inspection (by title), the depth (should include areas adjacent to obviously damaged members or components), how the inspection will be recorded, the recording and handling of any defects noted and the requirement to make the inspection a part of the work order.

INSPECTION FOR HIDDEN DAMAGE

The preliminary inspection is not limited to the area of obvious damage or deterioration but includes a thorough and searching inspection for hidden damage in areas adjacent to the damaged area and/or in the case of deterioration, a thorough review of all similar materials or equipment in a given system or structural area. The scope of this inspection will be governed by the type of unit involved with special consideration accorded previous operating history, Malfunction or Defect Reports, service bulletins and AD notes applicable to the unit involved. The inspector is responsible for listing all discrepancies noted during inspection on the work order prior to release for return to service. See the appropriate section of this manual for proper forms and instructions for using them.

This section should explain how the results of required inspections are recorded and made part of the applicable work order.

PROGRESSIVE INSPECTION

Certifying staff will be assigned to make inspections at various stages of teardown, overhaul, and repair of all units or components received by the maintenance organisation for service. Progressive inspections are accomplished with a frequency determined by applicable manual recommendations and/or maintenance organisation originated work forms.

MAJOR REPAIR AND ALTERATION AIRCRAFT AND COMPONENTS

Following the preliminary inspection, additional records may be prepared by the inspection department to provide a comprehensive historical record of the work performed. These records will contain work orders, service bulletins, AD notes, service letters, type of inspection, detailed figures related to functional tests and special non-destructive tests to be accomplished. The approved engineering or other approved technical data authorising the repair or alteration will be clearly indicated. Where special drawings are made to cover specific repair conditions, a copy of the drawing will be included in the aircraft records.

Units removed from the aircraft will be tagged with the appropriate inspection identification tag listing the aircraft serial number, unit serial number and reason for removal.

No item removed and tagged as above described will be reinstalled unless the unit is cleared as "serviceable" by inspection.

REPAIR, ALTERATION AND OVERHAUL ACCESSORIES AND APPLIANCES

Self-contained accessory and appliance units such as actuators, pumps, valves, generators, etc., which, after preliminary inspection, have been established as eligible for overhaul or repair, will be identified with a green repairable part tag with appropriate repair instructions entered on the face of the tag, as authorised by the work order. No such unit shall be approved for returned to service without a maintenance release tag authorising its return to service.

INSPECTION PROCEDURES

The Chief certifying staff manager is responsible for the complete and efficient performance of inspections assigned to the maintenance organisation to assure inspection acceptance in accordance with manual specifications or other approved technical data.

Shop supervisors are responsible for the accomplishment of all work in accordance with manual specifications or other approved technical data. The work done under the maintenance organisation's Limited Rating - Specialised Service Non-destructive Inspection by X-ray, magnetic particle, eddy current or ultrasonic must be accomplished in accordance with the (name of company) ECCAA approved process specification.

Alterations and repair will be subject to progressive inspection by the certifying staff department. Discrepancies generated during the process of accomplishing the work involved will be recorded on the appropriate work forms. Discrepancies so recorded will be corrected before the unit is submitted for final inspection. Upon completion of this progressive inspection, the area affected is given a shakedown inspection and after all rework is accomplished and accepted, the inspection will clear the unit for final acceptance.

Upon completion of a specific operation, the mechanic will sign off the records using his signature indicating that the item is complete and ready for inspection. The action accomplished to correct a specific discrepancy will be noted under each item on the work order. The certifying staff will then inspect the item to assure conformance to specifications and established workmanship standards. Functional checks of any system affected by the work involved will be accomplished before final acceptance. Inspection acceptance will be indicated by the inspector's stamp or signature.

MAINTENANCE INSPECTION

100-hour and progressive inspections and aircraft on Part 8, Subpart 8.3 programs will be accomplished in accordance with the inspection cards or inspection schedule provided for each specific model aircraft. The inspection

paperwork will be supplemented as necessary to cover items to be replaced for time, special inspection items, discrepancies and airworthiness directives. All 100-hour and annual inspection paperwork will comply with Part 5, Section 5.6.1.9.

No aircraft will be returned to service following an inspection as outlined above until all discrepancies affecting airworthiness have been corrected.

Maintenance supervisors are responsible for screening completed work orders covering work performed in their assigned area to assure that all items on the work order have been cleared, that there are no open discrepancies and that all major work accomplished is covered by approved data. Certifying staff will recheck to assure compliance with this section.

After work orders have been screened for completeness and accuracy, they are routed to the base maintenance manager's office. Such inspection and work records will be retained in active file for a period of not less than two years (as required by Part 6 of these regulations) and then transferred to dead storage for 5 additional years.

CONTINUITY OF MAINTENANCE RESPONSIBILITY

A status book will be provided in the hangar and each shop in which a status report will be entered by each of the lead mechanics informing the next shift of the status of each job not completed. Its purpose is to assure a continuing maintenance responsibility for work in progress.

HANDLING OF PARTS

This section should explain compliance with the rule. Processing of parts, identification, tag, segregation, and protection from damage and/or contamination, parts finishing, preservation, stock control and shelf life.

HANDLING OF PARTS

All items or components undergoing maintenance, repairs and/or alterations in the maintenance organisation shall have the component parts segregated and in containers in order to assure that all parts of the same unit(s) are kept together. Suitable trays, racks, stands and protective coverings (as required) are to be provided in shop areas to ensure maximum protection of all parts. Rejected parts will be identified by the use of a red reject tag and final disposition will be the responsibility of the Chief Certifying Staff Manager.

TAGGING AND IDENTIFICATION OF PARTS

The following is our four-tag system:

White tags - Used for identification of unit and customer only. To be completed by shop supervisor or a designated employee.

Red tag - Will be attached to units or parts requiring repairs or test and will include work to be performed. To be executed and signed by certifying staff only.

Green tag - To be attached to completed units which have received final inspection and are approved for return to service. The maintenance release is printed or stamped on the reverse side of this tag. (See Maintenance Release Statement, example in the appropriate section of this manual). This release will be signed by a designated certifying staff person only.

Red tag - Will be attached to rejected parts, pending final disposition. If rejected parts are in large quantities, they can be place in a special container marked "rejected parts." This tag to be completed by a certifying staff.

All tags contain the following information:

Manufacturers - model - part number - serial number - name of part owner.

The yellow tag will remain attached to the parts returned to the customer.

The red, white and green tags will be made a part of work order file. If the rejected part is returned to the customer, the red tag will remain attached and a record will be made on the work order showing the part was returned to the customer.

PART FINISHING

Painting and spraying is accomplished in an area segregated from assembly areas.

PRESERVATION OF PARTS

Components are preserved in accordance with manufacturer's recommendations or other acceptable industry standards. To afford protection against humidity, extreme temperatures, dust, rough handling or other damage, the component will be preserved by wrapping in suitable containers, plastic bags, and/or rigid boxes containing suitable shock absorption material.

Storage of "Maintenance organisation" preserved components will be accomplished by storing in a separate "Maintenance organisation" location maintained by the "Stores" department. The location should provide maximum protection from physical damage. (Expand as necessary the preservation and storage requirements to suit the products worked on under the maintenance organisation ratings.)

SHELF LIFE

For those items having a specific shelf life, a Maintenance organisation shelf life form is completed by the receiving certifying staff during the first ten (10) calendar days of each month.

Components of parts that have exceeded allowable shelf life limits will be red tagged (Condemned) and will be forwarded to the Chief Certifying Staff Manager for final disposition.

INCOMING MATERIAL

All incoming material shall be inspected for quantity, quality, conformity to dimensions or specifications and state of preservation. At this time the cure date of material having shelf life shall be noted, and the older stock shall be used first provided it is not beyond manufacturer's specifications.

HARDWARE AND EQUIPMENT STORAGE

The Stockroom Manager is responsible to the Base Maintenance Manager for the operation of the stockroom and is responsible for controlling, segregating and maintaining all stock and tools as to a serviceable or unserviceable category approved by the Chief certifying staff manager.

In addition, the Stockroom manager is required to:

- Properly store, segregate and protect materials, parts and supplies.

- Provide suitable storage facilities for storing standard parts, spare parts and assure that raw materials are separated from shop and working space.

- Provide for the preservation of all articles or parts, while in inventory, that is subject to deterioration and shelf life specifications.

- Only acceptable parts and supplies will be issued for any job. Acceptable industry practices shall be followed for the proper protection and storage of materials. (The standards for use by the maintenance organisation should be detailed here.)

RECORD OF TEST AND/OR CALIBRATION

This section should include in house tests applicable to the maintenance organisation ratings and those contracted to outside agencies. It should include a requirement for the signature of the mechanic and/or certifying staff as appropriate. The record should identify the article by serial number or company assigned number.

RECORD OF SPECIALIZED INSPECTION, TEST AND/OR CALIBRATION

Specific notations, attesting accomplishment, will be made on the appropriate printed work forms for recording specialised inspection, testing and/or calibration of a component or aircraft. (See appropriate section of this manual.)

RECORD OF INSPECTIONS

Where a record of the inspection by dimensions, tests or calibration is required by the manufacturer's technical data such record shall be made on an appropriate form properly identified with the Work Order; it must also be dated and signed by the mechanic performing the inspection, tests or calibration and/or the certifying staff as appropriate.

RECORD OF TESTS AND CALIBRATION OF PRECISION EQUIPMENT

A system is maintained on all precision test equipment that will properly identify each piece of equipment. A file system is maintained to properly identify the equipment and record the date and person testing or calibrating each individual piece of precision equipment. (Give details of system here, or state where it can be obtained.)

WORK BY OUTSIDE CONTRACTORS

When test and/or calibrations are performed by the following outside contractors they will be required to provide the records as outlined above. (List here the outside agencies and the work for which they are contracted to do for the maintenance organisation.)

RECORD OF PRECISION TEST EQUIPMENT CALIBRATION.

Identify the person (by title) responsible for the calibration and then test records. The records should include the manufacturer, model and serial or company assigned number, date of check, the method used to calibrate and the frequency, the person or company who performs checks, and the results and/or corrections made, when the next inspection is due, and requirements to tag equipment as appropriate.

CONTROL OF PRECISION TOOLS AND TEST EQUIPMENT

Precision tools, gauges, scales, pressure gauges, ammeters, ohmmeters, voltmeters, radio, electronic, X-ray, eddy current and ultrasonic test equipment used in the maintenance organisation operations are subject to periodic checks and calibration in accordance with appropriate maintenance organisation procedures. (List equipment here and outline procedures as appropriate.)

All maintenance organisation personnel, before using test equipment, are responsible to check that the testing unit has a current calibration label attached. Any piece of test equipment found in the maintenance organisation without a current calibration label attached shall be given to the certifying staff department for re-calibration.

TEST EQUIPMENT CALIBRATION REQUIREMENTS

Test equipment shall be calibrated at periodic intervals established on the basis of stability, purpose and degree of usage. One year shall be the maximum calibration interval. (List calibration periods on equipment list.)

Each piece of test equipment will be labelled. The label will identify the unit by manufacturer, model and serial number. The attached label must indicate the last calibration date and next calibration due date.

During the first week of each month the responsible will review the test equipment calibration history card file and give cards for test equipment requiring calibration to the maintenance manager and each shop foreman as appropriate. It will be the responsibility of those persons to issue work orders to maintenance organisation shops or outside contractors as necessary for the calibration of the units and attachment of updated calibration labels. After calibration, the test unit will be checked for proper labelling and the equipment calibration history card will be updated and returned to the inspection department active file.

At no time will any person be permitted to perform work on aircraft or components using test equipment which is out of calibration. The test equipment labels will be checked by supervisors at random to assure that equipment in use is in calibration. If at any time a piece of test equipment inadvertently exceeds its calibration due date, it will be immediately removed from service until a calibration check has been performed.

Standards used to calibrate test equipment must be traceable to the States National Standards or an approved foreign country's standard by certificate from the testing facility. Frequency for calibration standards may vary for different units but must never exceed a 12 month interval.

RECORD OF SELF-EVALUATIONS.

Identify the person(s) (by title) responsible to perform the self-evaluations and the individual that ensures that the capability list is kept current. The record(s) of self-evaluation shall include the person (by title), date, and the results and/or corrections made as appropriate.

The self-evaluation along with the capability list shall be reviewed and signed by the accountable manager. Procedures identifying that the maintenance organisation shall not perform such maintenance on any article until such time the accountable manager has accepted and signed the self-evaluation sheet(s) and capability list.

FINAL INSPECTION AND RELEASE TO SERVICE

This should explain compliance with the rules, who performs the inspection (by title), how it is recorded, and requires a check of maintenance work package for completion.

FINAL INSPECTION AND RELEASE TO SERVICE

Prior to approval for return to service, irrespective of the method to be used to indicate such approval, the Chief certifying staff manager will audit the records "package" as identified by the work order, to determine that all work has been inspected as required for compliance with this inspection system and Part 6 of these regulations. He/she will indicate affirmative findings approving the form per the appropriate Section of the manual.

When approval has been given to the above audit, either the Chief certifying staff manager or the individual authorised in the official roster and individual summary of employment, will approve the article for return to service. This approval will be accomplished as appropriate to the work done, the article involved, the records available with the article, and the instructions of the customer. Care will be exercised to comply with Part 5 of these regulations in every case.

Whenever the aircraft records (log) are available, record of work accomplished is expected to be made therein. This does not waive any Part 6 of these regulations records requirements. Neither will Part 5 or Part 9 of these regulations be considered waived by Part 6 of these regulations records requirements.

Articles such as appliances, accessories, and individual parts or components will not have an individual record to which an entry may be added. However, the installation of these items on an aircraft constitutes an aircraft maintenance or alteration, and records must be made accordingly.

Routinely, major repair approvals will be handled in accordance with Part 5, Section 5.7.1.1 and paragraph (b) of IS: 5.7.1.1. A maintenance release is completed as a part of the work order form at the time of approval for return to service. A separate maintenance release card will be completed and shipped on an article that is shipped to a customer. At the request of the customer (to be indicated on the work order when originated), ECCAA MR-MR&M Form will be completed instead of the maintenance release approval for return to service in accordance with the procedure in paragraph (a) of Part 5 IS: 5.7.1.1

In all cases where major alteration is involved, ECCAA MR-MR&M Form will be completed per Part 5, Section 5.7.1.1 and IS: 5.7.1.1. The authorised supervisor in whose area the repair or alteration is accomplished will be responsible for establishing that the repair or alteration was made in accordance with the requirements of Part 5 of these regulations and will sign the conformity statement (Item 6) on ECCAA MR-MR&M Form.

Certifying Staff responsible for the approval for return to service of aircraft will indicate such approval by signing the approval for return to service (Item 7) on ECCAA MR-MR&M Form. Appropriate entries will be made in the aircraft record pertinent to the repairs and alterations accomplished by the maintenance organisation. Specific reference will be made by calendar date to the applicable ECCAA MR-MR&M Form. The original ECCAA MR-MR&M Form will be inserted in the aircraft record with a copy forwarded to the ECCAA office and one copy retained with the copy of the aircraft work order.

It is the responsibility of the certifying staff authorising return to service to assure that the aircraft flight manual is properly revised following any alteration or modification to the aircraft and that the weight and balance record has been amended as necessary.

Aircraft components, appliances, and other items, other than completed aircraft repaired or overhauled as authorised by the maintenance organisation specifications, will be returned to service through the use of a maintenance release pre-printed on the serviceable parts tag described in this section of this manual. The authorised supervisor under whose jurisdiction the work is accomplished will be responsible for the release of units in the category.

No aircraft or unit may be released for return to service until the work order and other records have been reviewed for completeness and final acceptance cleared by inspection. Particular attention shall be accorded the status of applicable airworthiness directives.

MAINTENANCE RELEASE STATEMENT

A maintenance release statement stamp and/or pre-printed tag, prepared in accordance with IS: 5.7.1.1 will be used to release to service major repairs which

have been accomplished by this AMO in accordance with Part 5 of these regulations. Other records required by Part 5, Section 5.7.1.1 will be executed, as required, regardless of whether an CAA MR-MR&M Form or maintenance release has been used to return the article to service. In any event, the AMO will indicate on their copy of the work order whether or not a maintenance release was used, including the signature of the authorised certifying staff representative.

The (use only applicable rating or ratings) aircraft, airframe, aircraft engine, propeller or appliance identified above was repaired and inspected in accordance with current maintenance rules of the Civil Aviation Regulations and is hereby released to service.

"Pertinent details of the repair are on file at this maintenance organisation under Work Order Number _____ Date _____"

Signed _____
(Signature of authorised representative)

for _____
(Maintenance organisation name and certificate number)

(Address)

NOTE 1: Inspection stamp/symbol will not be used on the maintenance release.

SAMPLE OF MAINTENANCE RELEASE FOR AIR OPERATOR WORK

MAINTENANCE RELEASE STATEMENT

A maintenance release statement stamp and/or pre-printed tag, prepared in accordance with IS: 5.7.1.1, will be used to release to service major repairs which have been accomplished by this organisation in accordance with Part 5 of these regulations. Other records required by Part 5, Section 5.7.1.1 will be executed, as required, regardless of whether an CAA MR-MR&M Form or maintenance release has been used to return the article to service. In any event, the AMO will indicate on their copy of the work order whether or not a maintenance release was used, including the signature of the authorised representative.

"Example"

The (use only applicable rating or ratings) aircraft, airframe, aircraft engine, propeller or appliance identified above was repaired and inspected in accordance

with current maintenance rules of the Civil Aviation Regulations and is hereby released to service.

"Pertinent details of the repair are on file at this maintenance organisation under Work Order Number _____ Date _____"

Signed _____
(Signature of authorised representative)

for _____
(Maintenance organisation name and certificate number)

(Address)

NOTE 1: Inspection stamp/symbol will not be used on the maintenance release.

MALFUNCTION OR DEFECT AND MECHANICAL RELIABILITY REPORT

This section should explain in detail how compliance with rules and reporting requirements are to be met, and prescribe the responsibility (by title) of person(s) who prepare and submit reports.

MALFUNCTION OR DEFECT REPORT

This maintenance organisation will report to the ECCAA within 72 hours after it discovers any serious defect in, or other recurring unairworthy condition of, an aircraft, powerplant, or propeller, or any component of any of them. The report will be made on the appropriate ECCAA Form, Malfunction or Defect Report, describing the defect or malfunction completely without withholding any pertinent information. In any case, where the filing of a report under the preceding paragraph might prejudice the maintenance organisation, it will be referred to the ECCAA for a determination as to whether it must be reported. If the defect or malfunction could result in an imminent hazard to flight, the maintenance organisation will use the most expeditious method to inform the ECCAA.

MECHANICAL RELIABILITY REPORTS

When work is being accomplished for an air carrier and a defect as described under the Malfunction or Defect Report is found, the air operator will be notified in order that a Mechanical Reliability Report may be issued by the air operator.

RESPONSIBILITY FOR SUBMITTING REPORTS

The Accountable Manager and Chief Certifying Staff Manager are responsible for preparing and submitting a Malfunction or Defect Report to the ECCAA Office. (Show location of office.)

SUBCONTRACTED MAINTENANCE PROCEDURES**SUBCONTRACTED MAINTENANCE**

Any work performed by another maintenance organisation for this maintenance organisation will be inspected by the Quality Assurance department or certifying staff personnel delegated for such inspection. This inspection will be to verify that the work was performed in an airworthy manner, that parts and materials used were of such a quality to be airworthy, and that the paperwork received with the material verifies the authenticity of the part and work performed. At no time shall the stockroom manager release any parts made by, or parts having had work performed on them by a subcontractor until the Quality Assurance department or certifying staff personnel delegated has approved the materials as being airworthy.

All subcontracted work shall be kept separate from regular stock until this inspection has been performed and the material accepted for use.

If for any reason subcontracted material is rejected as being unairworthy, it will immediately be identified as unairworthy and the proper disposition made, such as scrap or return to vendor.

LIST OF SUBCONTRACTED MAINTENANCE

1. Metal plating or anodising.
2. Complex machine operations involving the use of planers, shapers, milling machines, etc.
3. Abrasive air blasting and chemical cleaning operations.
4. Heat treatment.
5. Magnetic inspection.
6. Fabricate wood spars.
7. Overhaul and repair hydraulic-pneumatic shock absorber units.
8. Overhaul and repair hydraulic system components.

9. Fluorescent inspection of alloy parts.
10. Recovering and refinishing of components and entire aircraft.

PERFORMANCE OF MAINTENANCE, PREVENTIVE MAINTENANCE, ALTERATIONS AND REQUIRED INSPECTION UNDER THE CONTINUOUS AIRWORTHINESS REQUIREMENTS OF PART 9

NOTE: This section should show how the rule is to be complied with, that the work is to be accomplished with the operator's manual and a current copy of the manual is available.

PERFORMANCE OF MAINTENANCE, PREVENTIVE MAINTENANCE, ALTERATIONS AND REQUIRED INSPECTION UNDER THE CONTINUOUS AIRWORTHINESS REQUIREMENTS OF PART 9

This maintenance organisation will perform this work in accordance with the operator's manual. The maintenance organisation will have a current copy of the applicable section of each operator's manual which contracts with the maintenance organisation for the performance of that operator's maintenance. The chief certifying staff manager will be responsible for keeping each operator's manual revised and determining that the operator's manual is current before a work order is issued.

PERFORMANCE OF WORK AT A LOCATION OTHER THAN THE MAINTENANCE ORGANISATION

Reference: Part 6, Section 6.5.1.4 In accordance with Part 6, Section 6.5.1.4, a maintenance organisation may maintain or alter any article for which it is rated at a place other than the maintenance organisation providing certain preparations are made and certain conditions are met as required by Part 6, Paragraph 6.5.1.4 (c). Performance standards are required to remain acceptable at such places of work. Part 6, Paragraph 6.5.1.4(c)(3) requires the maintenance procedure manual to contain the approved procedures governing the work to be performed at a place other than the maintenance organisation.

This is a frequently overlooked manual requirement. In order for a procedure to be valid for approval it should:

1. Be described in terms understandable to those persons who are governed by it in the performance of the work.
2. Be monitored regularly so as to ensure it covers the nature of the work that may be needed outside the maintenance organisation. This is

necessary as it is difficult to predict the nature of work to be done outside the AMO.

3. Be tailored for the particular AMO, the nature of work and the frequency expected. The following are items recommended for consideration:
 - (a) Who will authorise the work, organise the project, direct it, and who will perform the work?
 - (b) What type of work tasks will be required (supply, repairs, inspections, and communications)?
 - (c) Where some of the work is to be done. It may be advantageous to perform support work on components or parts at the base maintenance organisation as a standard procedure.
 - (d) How will the work projects be monitored and reviewed to assure procedures are adequate and that records identify the projects for accountability?
 - (e) Occasional explanations within the system description of why certain requirements, controls or reports are necessary will help employees to understand and accept the system.
4. The privilege to perform work at a location other than the maintenance organisation is to be done on a temporary basis. If a permanent AMO is established at the location, it will be necessary for the maintenance organisation to make application for a an original application for a maintenance organisation at the location.

PERFORMANCE OF MAINTENANCE AT A LOCATION OTHER THAN THE MAINTENANCE ORGANISATION

(Name of Company) will provide maintenance service for its customers on an emergency on-call basis at a place away from the maintenance organisation. (Name of Company) can only provide this service for work for which the maintenance organisation is rated. Only the Accountable Manager or the Chief Certifying Staff Manager is authorised to initiate a work order for such work.

The base maintenance manager will be responsible for assigning the personnel necessary to perform the work and appoint a person to be in charge of the work force. The chief certifying staff manager will assign the certifying staff responsible to inspect the work and assure that all required forms and work are completed as necessary. The chief certifying staff manager will assign one certifying staff personnel with the responsibility for returning the article to service.

The base maintenance manager will ensure that the article to undergo maintenance and the work force will be in an area safe for the work to be performed and that they will be protected from the elements. The base maintenance manager will be responsible for providing all the necessary manpower, work forms, technical data, tools, and equipment necessary for the accomplishment of the maintenance. The base maintenance manager will establish a system of communications between the field force and the maintenance organisation.

The stockroom manager will be responsible for assigning a stockperson who will provide parts and supply support between the maintenance organisation and the field force. All articles removed by the field force from a product undergoing maintenance at a location away from the maintenance organisation will be routed through the stockroom parts receiving department. The article(s) will be inspected in accordance with the maintenance organisation inspection procedures and either routed to the maintenance organisation shops or to contract maintenance organisations, as appropriate.

All personnel assigned to accomplish work away from the maintenance organisation shall accomplish the specific function of work in the same manner as when performed at the maintenance organisation and in accordance with Part 6.

IS: 6.5.1.4 PRIVILEGES OF THE APPROVED MAINTENANCE ORGANISATION

- (a) In order for a subcontractor to be approved by the Authority, the approval process should include a plan for auditing of the subcontractor by the AMO. The first audit of a subcontractor shall be a physical audit. It is acceptable for physical audits to take place every second year however; an assessment of the subcontractor must take place during the year that a physical audit is not required. The Authority may also audit a subcontractor.

IS: 6.5.1.6 CERTIFICATION OF RELEASE TO SERVICE

- (a) A certificate of release to service is required for the following:
 - (1) Before flight at the completion of any package of maintenance scheduled by the approved aircraft maintenance program on the aircraft, whether such maintenance took place as base or line maintenance.

Note: Only in exceptional cases may scheduled maintenance be deferred and then only in accordance with procedures specified in the AMO's

procedures manual. In all cases, the AMO must provide the owner/operator with a list of any uncorrected defects that may exist.

- (2) Before flight at the completion of any defect rectification, while the aircraft operates between scheduled maintenance.
 - (3) At the completion of any maintenance on an aircraft component when off the aircraft.
- (b) The certificate of release to service shall contain the following statement: "Certifies that the work specified except as otherwise specified was carried out in accordance with current regulations and in respect to that work the aircraft/aircraft component is hereby released to service."
- (c) The certificate of release to service shall reference the data specified in the manufacturer's or air carrier operator's instructions or the aircraft maintenance program which itself may cross-reference to a manufacturer's instruction in a maintenance manual, service bulletin, etc.
- (d) Where instructions include a requirement to insure that a dimension or test figure is within a specific tolerance as opposed to a general tolerance, the dimension or test figure shall be recorded unless the instruction permits the use of GO/NO gauges. It is not normally sufficient to state that the dimension or the test figure is within tolerance.
- (e) The date such maintenance was carried out shall include when the maintenance took place relative to any life or overhaul limitation in terms of date/flying hours/cycles/landings etc., as appropriate.
- (f) When extensive maintenance has been carried out, it is acceptable for the certificate of release to service to summarise the maintenance as long as there is a cross-reference to the work-pack containing full details of maintenance carried out. Dimensional information shall be retained in the work-pack record.
- (g) A person issuing a release to service shall use a full signature and a certification stamp except in the case where a computer release to service system is used. In this latter case, the Authority will need to be satisfied that only the particular person can electronically issue the release to service.

Note: One such method of compliance is the use of a magnetic or optical personal card in conjunction with a personal identity number

(PIN) which is keyed into the computer and known only to the individual.

IS: 6.5.1.8 AIRWORTHINESS DATA

- (a) An AMO shall be in receipt of all airworthiness data appropriate to support the work performed from the Authority, the aircraft/aeronautical product design organisation, and any other approved design organisation in the State of Manufacture or State of Design, as appropriate. Some examples of maintenance-related documents are:
- (1) Civil Aviation Regulations,
 - (2) Associated advisory material,
 - (3) Airworthiness directives,
 - (4) Manufacturers' maintenance manuals,
 - (5) Repair manuals,
 - (6) Supplementary structural inspection documents,
 - (7) Service bulletins,
 - (8) Service letters,
 - (9) Service instructions,
 - (10) Modification leaflets,
 - (11) Aircraft maintenance program,
 - (12) NDT Manual, etc.

Note: Paragraph (a) primarily refers to maintenance data that has been transcribed from the Authority and all Type Certificate (TC) holders into the AMO's format, such as customised maintenance cards or computer base data.

Note: To obtain acceptance from the Authority, it is important that accuracy of transcription is assured.

- (b) A procedure shall be established to monitor the amendment status of all data and maintain a check that all amendments are being

received by being a subscriber to any document amendment scheme.

- (c) Airworthiness data shall be made available in the work area in close proximity to the aircraft or aeronautical product being maintained and for supervisors, mechanics, and certifying staff to study.
- (d) Where computer systems are used to maintain airworthiness data, the number of computer terminals shall be sufficient in relation to the size of the work program to enable easy access, unless the computer system can produce paper copies. Where microfilm or microfiche readers/printers are used, a similar requirement is applicable.

PART 7

INSTRUMENTS AND EQUIPMENT

7.1.1 General

7.1.1.1 APPLICABILITY

- (a) This part prescribes the minimum instrument and equipment requirements for all aircraft in all operations.
- (b) The requirements of this part use the following key designators:
 - (1) AAC: all aircraft, including Commercial Air Transport (CAT) and AOC Holders appropriate to the subject of the regulations, e.g., an all aircraft regulation may only refer to seaplanes, but will include CAT and AOC seaplanes;
- (c) CAT: commercial air transport (includes AOC Holders), appropriate to the subject of the regulations, e.g., a CAT regulation may only refer to seaplanes, but will include AOC seaplanes; and
 - (1) AOC: AOC Holders. Where AOC requirements are redundant to AAC or CAT requirements, or more detailed, the AOC requirements will be followed.

7.1.1.2 DEFINITIONS

- (a) For the purpose of this part, the applicable definitions are contained in Part 1 of these regulations – “General Policies, Procedures and Definitions.”

7.1.1.3 ABBREVIATIONS

(a) The following acronyms are used in this part:

- (1) **AAC** – All Aircraft
- (2) **ACAS** – Airborne Collision Avoidance System
- (3) **AED** -- Automated External Defibrillator
- (4) **ADF** – Automatic Direction Finder
- (5) **ADFR** – Automatic Deployable Flight Recorder
- (6) **ADRS** – Aircraft Data Recording System
- (7) **AFM** – Aircraft Flight Manual
- (8) **AIR** – Airborne Image Recorder
- (9) **AIRS** – Airborne Image Recording System
- (10) **AOC** – Air Operator Certificate
- (11) **ASE** – Altimetry System Error
- (12) **ATS** – Air Traffic Service(s)
- (13) **CARS** – Cockpit Audio Recording System
- (14) **CAT I** – Category I
- (15) **CAT II** – Category II
- (16) **CAT III** – Category III
- (17) **CG** – Centre Of Gravity
- (18) **CVR** – Cockpit Voice Recorder
- (19) **CVS** – Combined Vision System
- (20) **DH** – Decision Height
- (21) **DLC** – Data Link Communication
- (22) **DLR** – Data-Link Recorder

- (23) **DLRS** – Data-Link Recording System
- (24) **DME** – Distance Measuring Equipment
- (25) **EASA** – European Union Aviation Safety Agency
- (26) **ECAM** – Electronic Centralised Aircraft Monitor
- (27) **EFB** – Electronic Flight Bag
- (28) **EFIS** – Electronic Flight Instrument Systems
- (29) **ECAS** – Engine Indication And Crew Alerting System
- (30) **ELT** – Emergency Locator Transmitter
- (31) **EUROCAE** – European Organisation for Civil Aviation Equipment
- (32) **EVS** – Enhanced Vision System
- (33) **FDR** – Flight Data Recorder
- (34) **FL** – Flight Level
- (35) **GPWS** – Ground Proximity Warning System
- (36) **HUD** – Head-Up Display
- (37) **ICAO** – International Civil Aviation Organization
- (38) **IFR** – Instrument Flight Rules
- (39) **ILS** – Instrument Landing System
- (40) **IMC** – Instrument Meteorological Conditions
- (41) **LRNS** – Long-Range Navigation System
- (42) **MACH** – Mach Number Indicator
- (43) **MEL** – Minimum Equipment List
- (44) **MHz** – Megahertz

- (45) **MLS** – Microwave Landing System
- (46) **MNPS** – Minimum Navigation Performance Specifications
- (47) **OM** – Operations Manual
- (48) **PBC** – Performance-Based Communication
- (49) **PBCS** – Performance-Based Communication And Surveillance
- (50) **PBE** – Protective Breathing Equipment
- (51) **PBN** – Performance-Based Navigation
- (52) **PBS** – Performance-Based Surveillance
- (53) **PIC** – Pilot-In-Command
- (54) **RCP** – Required Communication Performance
- (55) **RNAV** – Area Navigation
- (56) **RNP** – Required Navigation Performance
- (57) **RSP** – Required Surveillance Programme
- (58) **RTCA** – Radio Technical Commission for Aeronautics
- (59) **RVR** – Runway Visual Range
- (60) **RVSM** – Reduced Vertical Separation Minimum
- (61) **SARPs** – Standards and Recommended Practices
- (62) **STPD** – Standard Temperature Pressure Dry
- (63) **SVS** – Synthetic Vision System
- (64) **TAWS** – Terrain Awareness Warning System
- (65) **TC** – Type Certificate
- (66) **TVE** – Total Vertical Error
- (67) **VFR** – Visual Flight Rules

(68) **VOR** – VHF Omnidirectional Radio Range

7.1.1.4 GENERAL INSTRUMENT AND EQUIPMENT REQUIREMENTS

- (a) [AAC] In addition to the minimum equipment necessary for the issuance of a certificate of airworthiness, the instruments, equipment and flight documents prescribed in this part shall be installed or carried, as appropriate, in aircraft according to the aircraft used and to the circumstances under which the flight is to be conducted.
- (b) [AAC] All required instruments and equipment shall be approved and installed in accordance with applicable airworthiness requirements.
- (c) [AAC] Prior to operation in Grenada of any aircraft not registered in Grenada that uses an airworthiness inspection program approved or accepted by the State of Registry, the owner/operator shall ensure that instruments and equipment required by Grenada but not installed in the aircraft are properly installed and inspected in accordance with the requirements of the State of Registry.
- (d) [AAC] An AOC holder shall ensure that a flight does not commence unless the required equipment:
 - (1) meets the minimum performance standard and the operational and airworthiness requirements of all relevant standards;
 - (2) is installed such that the failure of any single unit required for either communication or navigation purposes, or both, will not result in the inability to communicate and/or navigate safely on the route being flown; and
 - (3) is in operable condition for the kind of operation being conducted, except as provided in the MEL.
- (e) [AAC] If equipment is to be used by one flight crewmember at his station during flight, it shall be installed so as to be readily operable from his or her station.
- (f) [AAC] When a single item of equipment is required to be operated by more than one flight crew member, it shall be installed so that the equipment is readily operable from any station at which the equipment is required to be operated.

- (g) The aircraft shall be equipped with spare fuses and bulbs of appropriate ratings for the replacement of those accessible in flight;
- (h) [AAC] An operator shall not employ electronic navigation data products that have been processed for application in the air and on the ground unless the State of the Operator has approved the operator's procedures for ensuring that the process applied and the products delivered have met acceptable standards of integrity, and that the products are compatible with the intended function of the equipment that will use them. The State of the Operator shall ensure that the operator continues to monitor both process and products;
- (i) [AAC] An operator shall implement procedures that ensure the timely distribution and insertion of current and unaltered electronic navigation data to all aircraft that require it.

7.1.2 *Flight and Navigational Instruments*

7.1.2.1 GENERAL REQUIREMENTS

- (a) [AAC] All aircraft shall be equipped with flight and navigational instruments that enable the flight crew to:
 - (1) control the flight path of the aircraft;
 - (2) carry out any required procedural manoeuvres; and
 - (3) observe the operating limitations of the aircraft in the expected operating conditions.
- (b) [AAC] When a means is provided for transferring an instrument from its primary operating system to an alternative system, the means shall include a positive positioning control and shall be marked to indicate clearly which system is being used.
- (c) [AAC] Those instruments that are used by any one flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his or her station, with the minimum practicable deviation from the position and line of vision that he or she normally assumes when looking forward along the flight path
- (d) [AAC] A person shall not operate an aircraft unless the aircraft is equipped with navigation equipment that will enable it to proceed in accordance with:
 - (1) Its operational flight plan; and

- (2) The requirements of ATS.
- (e) A person shall not operate an aircraft in defined portions of airspace, including MNPS, RVSM, or any other routes where a navigation specification for PBN has been prescribed, unless:
 - (1) Information relevant to the aircraft navigation specification capabilities is listed in the AFM or other aircraft documentation approved by the State of Design;
 - (2) The aircraft is equipped with the navigation equipment to enable it to operate in accordance with the prescribed navigation specification(s);
 - (3) The aircraft is equipped with navigation equipment that continuously provides information to the flight crew of adherence to or departure from track with respect to the required degree of accuracy at any point along that track; and
 - (4) Where the aircraft is operated in accordance with a MEL, information relevant to the aircraft navigation specification capabilities is included in the MEL.
- (f) A person shall not operate an aircraft unless the aircraft has sufficient navigation equipment that will enable the aircraft to navigate in accordance with Paragraphs 7.1.2.1(a) and (b) of this subsection, such that:
 - (1) In the event of the failure of any piece of navigation equipment at any stage of flight, the remaining equipment will enable the aircraft to continue to navigate; and
 - (2) The failure of any single unit required for communication, navigation, or surveillance purposes, or any combination thereof, will not result in the failure of another unit required for communication, navigation, or surveillance purposes.
- (g) A person shall not operate an aircraft in PBN operations unless such operations have been approved by the Authority.
- (h) When and where a navigation specification for PBN has been prescribed by the Authority, the operator shall establish and document the following before using the PBN procedure:

- (1) Normal and abnormal procedures, including contingency procedures;
 - (2) Flight crew qualification and proficiency requirements, in accordance with the appropriate navigation specifications;
 - (3) A training programme for relevant personnel, consistent with the intended operations; and
 - (4) Appropriate maintenance procedures to ensure continuing airworthiness, in accordance with the appropriate navigation specifications.
- (i) The equipment requirements in Paragraph 7.1.2.1(a) of this subsection do not apply in instances where the Authority has authorised VFR by visual reference to landmarks.
- (j) [AAC] A person shall not operate an aeroplane under IFR, or under VFR over routes that cannot be navigated by reference to visual landmarks, unless the aeroplane is equipped with navigation equipment in accordance with the requirements of ATS in the area(s) of operation.
- (k) [AAC] All aircraft intended to land in IMC or at night shall be provided with radio navigation equipment capable of receiving signals providing guidance to:
- (1) A point from which a visual landing may be effected;
 - (2) Each aerodrome at which it is intended to land in IMC; and
 - (3) Any designated alternate aerodromes.

7.1.2.2 MINIMUM FLIGHT AND NAVIGATIONAL INSTRUMENTS

- (a) [AAC] A person shall not operate any aircraft unless it is equipped with the following flight and navigational instruments:
- (1) an airspeed indicating system calibrated in knots;
 - (2) a sensitive pressure altimeter calibrated in feet with a sub-scale setting calibrated in hectopascals/millibars, adjustable for any barometric pressure likely to be set during flight;
 - (3) an accurate timepiece indicating the time in hours, minutes and seconds (approval not required);

- (4) a magnetic compass, and
- (5) any other equipment as prescribed by the Authority.

Note: This applies to both VFR and IFR operations in addition to the requirements for IFR operations prescribed elsewhere in this part.

- (b) A person shall not operate an aeroplane with speed limitations expressed in terms of Mach number unless there is a properly installed Mach number indicator.
- (c) [AAC] A person shall not operate an aircraft in VFR flight as a controlled flight unless the aircraft is equipped with the instruments required by 7.1.2.4 of this part.

7.1.2.3 INSTRUMENTS FOR OPERATIONS REQUIRING TWO PILOTS

- (a) [AAC] Whenever two pilots are required, each pilot's station shall have separate flight instruments as follows:
 - (1) an airspeed indicating system calibrated in knots;
 - (2) a sensitive pressure altimeter calibrated in feet with a sub-scale setting calibrated in hectopascals/millibars, adjustable for any barometric pressure likely to be set during flight;
 - (3) a vertical speed indicator;
 - (4) a turn and slip indicator, or a turn co-ordinator incorporating a slip indicator;
 - (5) an attitude indicator;
 - (6) a stabilised direction indicator, and
 - (7) any other equipment as prescribed by the Authority.
- (b) The second-in-command's flight instruments shall meet the same requirements for markings, indications and illumination as those required for the pilot-in-command.

7.1.2.4 IFR INSTRUMENTS

- (a) [AAC] All aircraft when operated in IFR, or when the aircraft cannot be maintained in a desired attitude without reference to one or more

flight instruments, shall be equipped with a means of measuring and displaying:

- (1) Magnetic heading (standby compass);
 - (2) The time in hours, minutes, and seconds;
 - (3) For non-AOC operations, either equipage or carriage is acceptable indicated airspeed, with a means of preventing malfunctioning due to either condensation or icing;
 - (4) turn and slip;
 - (5) aircraft attitude;
 - (6) stabilised aircraft heading;
 - (7) whether the supply of power to the gyroscopic instruments is adequate;
 - (8) outside air temperature;
 - (9) a rate-of-climb and descent;
 - (10) a minimum of two sensitive pressure altimeters with centre drum pointer or equivalent presentations, except for single pilot operations in propeller driven aircraft of less than 5700Kg MTOW, only one such altimeter is required; and
 - (11) such additional instruments or equipment as may be prescribed by the Authority.
- (b) In addition, aeroplanes with a maximum certificated take-off mass of over 5 700 kg or equipped with one or more turbojet engines shall be equipped with:
- (1) An emergency power supply for electrically operated attitude indicating instruments:
 - (i) Independent of the main electrical generating system, for the purpose of operating and illuminating, for a minimum period of 30 minutes, an attitude indicating instrument (artificial horizon), clearly visible to the PIC; and

- (ii) Automatically operative after the total failure of the main electrical generating system and clear indication given on the instrument panel that the attitude indicator(s) is being operated by emergency power;
- (2) For aeroplanes with advanced flight deck automation systems (glass flight decks), system redundancy that provides the flight crew with attitude, heading, airspeed, and altitude indications in case of failure of the primary system or display.
- (c) [AOC] All aircraft when operated in IFR, or when the aircraft cannot be maintained in a desired attitude without reference to one or more flight instruments, shall be equipped with:

(1) For all aeroplanes:

- (i) A magnetic compass;
- (ii) An accurate timepiece indicating the time in hours, minutes, and seconds;
- (iii) Two sensitive pressure altimeters with counter drum-pointer or equivalent presentation;

Note: Neither three-pointer nor drum-pointer altimeters satisfy this requirement.

- (iv) An airspeed indicating system with a means of preventing malfunctioning due to either condensation or icing;
- (v) A turn and slip indicator aeroplanes or a slip indicator for helicopters;
- (vi) Attitude indicator (artificial horizon);
- (vii) A heading indicator (directional gyroscope);

Note: The requirements of Paragraphs 7.1.2.4(c)(v), (vi), and (vii) of this subsection may be met by combinations of instruments or by integrated flight director systems provided that the safeguards against total failure, inherent in the separate instruments are retained.

- (viii) A means of indicating whether the supply of power to the gyroscopic instruments is adequate;

- (ix) A means of indicating in the flight crew compartment the outside air temperature; and
 - (x) A rate-of-climb and descent indicator; and
- (2) In addition, aeroplanes with a maximum certificated take-off mass exceeding 5 700 kg or equipped with one or more turbojet engines shall be equipped with:
 - (i) An emergency power supply for electrically operated attitude indicating instruments;
 - (ii) Independent of the main electrical generating system for the purpose of operating and illuminating, for a minimum period of 30 minutes, an attitude indicating instrument (artificial horizon), clearly visible to the PIC, and
 - (iii) Automatically operative after the total failure of the main electrical generating system and clear indication given on the instrument panel that the attitude indicator(s) is being operated by emergency power.
- (d) [AOC] A person shall not operate an aircraft under IFR, or under VFR over routes that cannot be navigated by reference to visual landmarks, unless the aircraft is equipped with navigation equipment in accordance with the requirements of air traffic services in the area(s) of operation, but not less than:
 - (1) one VOR receiving system, one ADF system, one DME and one Marker Beacon receiving system;
 - (2) one ILS or MLS where ILS or MLS is required for approach navigation purposes;
 - (3) an Area Navigation System when area navigation is required for the route being a flown;
 - (4) an additional VOR receiving system on any route, or part thereof, where navigation is based only on VOR signals; and
 - (5) an additional an additional ADF system on any route, or part thereof, where navigation is based only on NDB signals. Provided that individual requirements of Section 7.1.2.4 (d) may be met by combinations of instruments or by integrated

flight systems or by a combination of parameters on electronic displays provided that the information so available to each required pilot is no less than that provided by the instruments and associated equipment specified.

- (e) [AAC] All aircraft intended to land in IMC or at night shall be provided with radio navigation equipment capable of receiving signals providing guidance to:
 - (1) a point from which a visual landing can be effected; or
 - (2) each aerodrome at which it is intended to land in IMC; and
 - (3) any designated alternate aerodromes.
- (f) [AAC] A person shall not operate an aeroplane under IFR unless the aeroplane is equipped with an audio selector panel accessible to each required flight crew member.
- (g) [AOC] A person shall not conduct single pilot IFR operations unless the aeroplane is equipped with an autopilot with at least altitude hold and heading mode.
- (h) [AOC] A person shall not conduct single-pilot IFR or night operations in commercial air transport operations unless the aeroplane is equipped with a headset with boom microphone or equivalent and a transmit button on the control wheel.

7.1.2.5 STANDBY ATTITUDE INDICATOR

- (a) [AAC] A person shall not operate an aircraft with a maximum certified take-off mass exceeding 5,700 kg and aircraft having a maximum approved passenger seating configuration of more than 9 seats unless it is equipped with a single standby attitude indicator (artificial horizon) that:
 - (1) operates independently of any other attitude indicating system;
 - (2) is powered continuously during normal operation; and
 - (3) after a total failure of the normal electrical generating system, is automatically powered for a minimum of 30 minutes from a source independent of the normal electrical generating system.

- (b) [AAC] When the standby attitude indicator is being operated by emergency power, it shall be clearly evident to the flight crew.
- (c) [AAC] Where the standby attitude indicator has its own dedicated power supply there shall be an associated indication, either on the instrument or on the instrument pane when this supply is in use.
- (d) [AAC] If the standby attitude instrument system is installed and usable through flight attitudes of 360° of pitch and roll, the turn and slip indicators may be replaced by slip indicators.

7.1.2.6 INSTRUMENTS AND EQUIPMENT FOR CATEGORY II AND III OPERATIONS

- (a) [Category II Operations] The instruments and equipment listed in this subsection shall be installed in each aircraft operated in a Category II operation:

Note: This subsection does not require duplication of instruments and equipment required by Subsection 7.1.2.2 of this part or any other provisions of Part 7.

- (1) Group I.
 - (i) two localizer and glide slope receiving systems;

Note: Each system shall provide a basic ILS display and each side of the instrument panel must have a basic ILS display. However, a single localizer antenna and a single glide slope antenna may be used.
 - (ii) a communications system that does not affect the operation of at least one of the ILS systems;
 - (iii) a marker beacon receiver that provides distinctive aural and visual indications of the outer and the middle markers;
 - (iv) two gyroscopic pitch and bank indicating systems;
 - (v) two gyroscopic direction indicating systems;
 - (vi) two airspeed indicators;

- (vii) two sensitive altimeters adjustable for barometric pressure, having markings at 20 foot intervals and each having a placarded correction for altimeter scale error and for the wheel height of the aircraft;
- (viii) one self-monitoring radio altimeter with dual display;
- (ix) two vertical speed indicators;
- (x) a flight control guidance system that consists of either an automatic approach coupler or a flight director system;

Note: A flight director system shall display computed information as steering command in relation to an ILS localizer and, on the same instrument, either computed information as pitch command in relation to an ILS glide slope or basic ILS glide slope information. An automatic approach coupler must provide at least automatic steering in relation to an ILS localizer. The flight control guidance system may be operated from one of the receiving systems required by Paragraph 7.1.2.6(a)(1)(i) of this subsection.

- (xi) for Category II operations with decision heights below 150 feet either a marker beacon receiver providing aural and visual indications of the inner marker or a radio altimeter.
- (2) Group II.
- (i) warning systems for immediate detection by the pilot of system faults in items Paragraphs 7.1.2.6(a)(1)(i), (a)(1)(iv), (a)(1)(iv) and (a)(1)(ix), of Group I and, if installed for use in Category III operations, the radio altimeter and autothrottle system;
 - (ii) dual controls;
 - (iii) an externally vented static pressure system with an alternate static pressure source;
 - (iv) a windshield wiper or equivalent means of providing adequate cockpit visibility for a safe visual transition by either pilot to touchdown and rollout;

- (v) a heat source for each airspeed system pitot tube installed or an equivalent means of preventing malfunctioning due to icing of the pitot system.

Implementing Standard: See IS: 7.1.2.6 for Category II instrument and equipment approval and maintenance requirements.

- (b) [Category III Operations] The following instruments and equipment shall be installed, approved, and maintained in each aircraft operated in a CAT III operation, in accordance with acceptable international criteria and the AFM:

Note 1: This subsection does not require duplication of instruments and equipment required by Subsection 7.1.2.2, and Paragraph 7.1.2.6 (a) of this subsection, or any other requirements of this part.

- (1) AIRBORNE SYSTEMS FOR CAT IIIA MINIMA NOT LESS THAN RVR 200 M (600 FT). The following equipment, in addition to the instruments and navigation equipment required by this part for IFR flight and CAT II operations, is the minimum aircraft equipment required for CAT IIIA operations:
 - (i) A redundant flight control or guidance system demonstrated in accordance with acceptable international criteria. Acceptable flight guidance or control systems include the following:
 - (A) A Fail Operational or Fail Passive automatic landing system at least to touchdown;
 - (B) A Fail Operational or Fail Passive manual flight guidance system providing suitable head-up or head-down command guidance, and suitable monitoring capability at least to touchdown;
 - (C) A hybrid system, using automatic landing capability as the primary means of landing at least to touchdown; or
 - (D) Another system that can provide an equivalent level of performance and safety.
 - (ii) An automatic throttle or automatic thrust control system that meets approved criteria as specified in the AFM. However, for operations with a 15 m (50 ft) DH, or for other operations that have been specifically evaluated, such as for engine inoperative landing

capability, automatic throttles may not be required if it has been demonstrated that operations can be safely conducted, with an acceptable workload, without their use

- (iii) At least two independent navigation receivers/sensors providing lateral and vertical position or displacement information, typically with the first pilot's station receiving the information from one and the second pilot's station receiving the information from the other. The navigation receivers/sensors shall meet the criteria specified for CAT IIIA operations.
 - (iv) At least two approved radio altimeter systems that meet the performance criteria as specified in the AFM, typically with the first pilot's station receiving information from one and the second pilot's station receiving information from the other.
 - (v) Failure detection, annunciation, and warning capability, as determined acceptable by criteria in the AFM.
 - (vi) Missed approach guidance provided by one or more of the following means:
 - (A) Attitude displays that include calibrated pitch attitude markings, or a pre-established computed pitch command display;
 - (B) An approved flight path angle display; or
 - (C) An automatic or flight guidance go-around capability.
 - (vii) Suitable forward and side flight deck visibility for each pilot, as specified in the AFM.
 - (viii) Suitable windshield rain removal, ice protection, or defog capability, as specified in the AFM.
- (2) AIRBORNE SYSTEMS FOR CAT IIIB MINIMA LESS THAN RVR 200 M (600 FT) BUT NOT LESS THAN RVR 125 M (400 FT). The following equipment, in addition to the instruments and navigation equipment required by this part for IFR flight and CAT II and CAT

IIIA operations, is the minimum aircraft equipment required for CAT IIIB operations:

- (i) A redundant flight control or guidance system demonstrated in accordance with acceptable international criteria. Acceptable flight guidance or control systems include the following:
 - (A) A Fail Operational landing system with a Fail Operational or Fail Passive automatic rollout system;
 - (B) A Fail Passive landing system, limited to touchdown zone RVR not less than RVR 200 m (600 ft), with Fail Passive rollout provided automatically or by a flight guidance system providing suitable head-up or head-down guidance, and suitable monitoring capability;
 - (C) A Fail Operational hybrid automatic landing and rollout system with compatible manual flight guidance system, using automatic landing capability as the primary means of landing; or
 - (D) Another system that can provide an equivalent level of performance and safety.
- (ii) An automatic throttle or automatic thrust control system that meets the appropriate criteria, as specified in the AFM. However, for operations with a 15 m (50 ft) DH, automatic throttles may not be required if it has been demonstrated that operations can safely be conducted, with an acceptable workload, without their use.
- (iii) At least two independent navigation receivers/sensors providing lateral and vertical position or displacement information, typically with the first pilot's station receiving information from one and the second pilot's station receiving information from the other. The navigation receivers/sensors shall meet the criteria specified in the AFM.
- (iv) At least two approved radio altimeter systems that meet the performance criteria outlined in the AFM, typically with the first pilot's station receiving information from one and the second pilot's station receiving information from the other.
- (v) Failure detection, annunciation, and warning capability, as determined acceptable by the criteria in the AFM.

- (vi) Missed approach guidance provided by one or more of the following means:
 - (A) Attitude displays that include calibrated pitch attitude markings, or a pre-established computed pitch command display;
 - (B) An approved flight path angle display; or
 - (C) An automatic or flight guidance go-around capability.
- (vii) Suitable forward and side flight deck visibility for each pilot, as specified in the AFM.
- (viii) Suitable windshield rain removal, ice protection, or defog capability, as specified in the AFM.
- (3) AIRBORNE SYSTEMS FOR CAT IIIC MINIMA LESS THAN RVR 75 M (300 FT). The following equipment, in addition to the instruments and navigation equipment required by this part for IFR flight and CAT II, CAT IIIA, and CAT IIIB operations, is the minimum aircraft equipment required for CAT IIIC operations:
 - (i) A Fail Operational automatic flight control system, or a manual flight guidance system designed to meet Fail Operational system criteria, or a hybrid system in which both the Fail Passive automatic system and the monitored manual flight guidance components provide approach and flare guidance to touchdown, and in combination provide full Fail Operational capability; and
 - (ii) A Fail Operational automatic, manual, or hybrid rollout control system.

7.1.2.7 NAVIGATION EQUIPMENT FOR OPERATIONS IN RNP AND MNPS AIRSPACE

- (a) [AOC] An AOC holder shall not operate an aeroplane in RNP or MNPS airspace unless it is equipped with navigation equipment that-
 - (1) continuously provides indications to the flight crew of adherence to or departure from track to the required degree of accuracy at any point along that track; and

- (2) has been authorised by the State of Registry for RNP or MNPS operations concerned.
- (b) [AOC] The navigation equipment required for operations in RNP or MNPS airspace shall be visible and usable by either pilot seated at his duty station;
- (c) [AOC] For unrestricted operation in RNP or MNPS airspace an aeroplane shall be sufficiently provided with navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment will enable the aeroplane to navigate in accordance with the requirements of RNP or MNPS navigation;
- (d) [AOC] For operation in RNP or MNPS airspace along notified special routes, an aeroplane shall be equipped with one LRNS, unless otherwise specified.

7.1.2.8 AUTOPILOT

- (a) A person shall not operate an aircraft above FL 290 unless that aircraft is equipped with an autopilot capable of automatically maintaining a selected flight level.
- (b) A person shall not operate an aircraft in airspace for which minimum navigation performance specifications are prescribed unless that aircraft is equipped with an autopilot capable of receiving and automatically tracking the selected navigational equipment inputs.
- (c) *For commercial air transport:* A person shall not operate an aeroplane with a single pilot under IFR unless that aeroplane is equipped with an autopilot with at least altitude hold and heading mode.

7.1.2.9 IFR HELICOPTER STABILIZATION SYSTEM FOR COMMERCIAL AIR TRANSPORT

- (a) A person shall not operate a helicopter in IFR commercial air transport operations without a stabilization system, unless that helicopter was certificated by the State of Manufacture as having adequate stability without such a system.

7.1.2.10 EQUIPMENT FOR SPECIAL ALTIMETRY ACCURACY (RVSM)

- (a) For flights in defined portions of airspace where, based on Regional Air Navigation Agreement, a reduced vertical separation minimum (RVSM) of 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive, an aeroplane:
- (1) shall be provided with equipment which is capable of—
 - (i) indicating to the flight crew the flight level being flown;
 - (ii) automatically maintaining a selected flight level;
 - (iii) providing an alert to the flight crew when a deviation occurs from the selected flight level. The threshold for the alert shall not exceed ± 90 m (300 ft);
 - (iv) automatically reporting pressure-altitude;
 - (2) shall be authorized for operation in the airspace concerned by;
 - (i) The State of the Operator through operations specifications, for AOC holders; or
 - (ii) The State of Registry through a letter of authorisation, for non-AOC holders; and
 - (3) Shall satisfy the demonstration requirements specified in IS 7.1.2.10 as to the altimetry system performance requirements for vertical navigation performance capability.
- (b) Prior to granting the RVSM specific approval required by Paragraph 7.1.2.10 (b) of this subsection, the Authority shall be satisfied that—
- (1) The vertical navigation performance capability of the aeroplane satisfies the requirements specified in IS 7.1.2.10;
 - (2) The operator has instituted appropriate procedures with respect to continuing airworthiness (maintenance and repair) practices, training and programmes; and
 - (3) The operator has instituted appropriate flight crew procedures for operations in RVSM airspace.

Note: An RVSM specific approval is valid globally on the understanding that any operating procedures specific to a given region will be stated in the OM or appropriate crew guidance.

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- (c) RVSM. Grenada, in consultation with the State of Registry, if appropriate, shall ensure that, with respect to those aeroplanes mentioned in Paragraph 7.1.2.10 (b) of this subsection, adequate provisions exist for—
- (1) Receiving the reports of height-keeping performance issued by the monitoring agencies established in accordance with ICAO Annex 11: 3.3.5.1; and
 - (2) Taking immediate corrective action for individual aircraft, or aircraft type groups, identified in such reports as not complying with the height-keeping requirements for operations in airspace where RVSM is applied.
- (d) An operator with RVSM specific approval shall ensure that a minimum of two aeroplanes of each aircraft type grouping of the operator have their height-keeping performance monitored at least once every 2 years or within intervals of 1000 flight hours per aeroplane, whichever period is longer. If an operator aircraft type grouping consists of a single aeroplane, monitoring of that aeroplane shall be accomplished within the specified period.
- (e) An operator shall ensure that each aeroplane shall be sufficiently provided with navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment will enable the aeroplane to navigate in accordance with Paragraphs 7.1.2.1(a) and (b) of this subsection and Subsections 7.1.2.3 and 7.1.2.10 of this part.
- (f) The Authority shall take appropriate action with respect to aircraft and operators found to be operating in RVSM airspace in Grenada without a valid RVSM specific approval.

Note: These provisions and procedures shall address both the situation where the aircraft in question is operating without specific approval in the airspace of the State, and the situation where an operator for which the State has regulatory oversight responsibility is found to be operating without the required approval in the airspace of another State.

7.1.2.11 ELECTRONIC FLIGHT BAGS

- (a) No person shall operate an EFB on board an aircraft unless the EFB is issued a specific approval by the State of the Operator in accordance with the appropriate airworthiness requirements and the criteria for the safe operation of an aircraft, which—

- (1) Assess the EFB equipment and its associated installation hardware, including interaction with aircraft systems if applicable, to meet the appropriate airworthiness certification requirements;
 - (2) Assess the associated with the operations supported by the EFB function(s);
 - (3) Establish requirements for redundancy of the information (if appropriate) contained in and displayed by the EFB function(s);
 - (4) Establish and document procedures for the management of the EFB function(s), including any databases it may use; and
 - (5) Establish and document the procedures for the use of, and the training requirements for, the EFB function(s).
- (b) No person shall operate an EFB on board an aircraft unless the PIC and/or operator/owner has ensured that the EFB does not affect the performance of the aircraft systems or equipment or the ability to operate the aircraft and has—
- (1) Assessed the safety risk(s) associated with each EFB function;
 - (2) Established and documented the procedures for the use of, and the training requirements for, the device and each EFB function; and
 - (3) Ensured that, in the event of an EFB failure, sufficient information is readily available to the flight crew for the flight to be conducted safely.

7.1.2.12 SURVEILLANCE EQUIPMENT

- (a) A person shall not operate an aircraft unless it is provided with surveillance equipment that will enable it to operate in accordance with the requirements of ATS.
- (b) For operations where surveillance equipment is required to meet an RSP specification for PBS, an aircraft shall, in addition to the requirements specified in Paragraph 7.1.2.12(a) of this subsection—
- (1) Be provided with surveillance equipment that will enable it to operate in accordance with the prescribed RSP specification(s);

- (2) Have information relevant to the aircraft RSP specification capabilities listed in the AFM or other aircraft documentation approved by the Authority; and
 - (3) Have information relevant to the aircraft RSP specification capabilities included in the MEL.
- (c) When and where an RSP specification for PBS has been prescribed by the Authority, the operator shall establish and document the following before using the PBS procedure—
 - (1) Normal and abnormal procedures, including contingency procedures;
 - (2) Flight crew qualification and proficiency requirements, in accordance with appropriate RSP specifications;
 - (3) A training programme for relevant personnel, consistent with the intended operations; and
 - (4) Appropriate maintenance procedures to ensure continuing airworthiness, in accordance with appropriate RSP specifications.
- (d) The operator shall—
 - (1) Provide to the Authority the reports of observed surveillance performance issued by established monitoring programmes (ATS); and
 - (2) Take immediate corrective action for individual aircraft or aircraft types identified in such reports as not complying with the RSP specification(s).

7.1.2.13 ELECTRONIC NAVIGATION DATA MANAGEMENT

- (a) [AAC] No person shall employ electronic navigation data products that have been processed for application in the air and on the ground unless the Authority has approved—
 - (1) The operator's procedures for ensuring that the process applied and the products delivered have met acceptable standards of integrity and that the products are compatible with the intended function of the equipment that will use them;

- (2) The operator's programme for continual monitoring of both the process and products; and
- (3) The operator's procedures to ensure the timely distribution and insertion of current and unaltered electronic navigation data to all aircraft that require it.

7.1.2.14 AEROPLANES AND HELICOPTERS EQUIPPED WITH AUTOMATIC LANDING SYSTEMS, HEAD-UP DISPLAYS OR EQUIVALENT DISPLAYS, ENHANCED VISION SYSTEMS, SYNTHETIC VISION SYSTEMS, AND/OR COMBINED VISION SYSTEMS

- (a) A person shall not operate an aircraft equipped with automatic landing systems, a HUD or equivalent display, EVS, SVS, CVS, or any combination of those systems into a hybrid system, unless the aircraft is approved by the Authority and is in accordance with the criteria for the safe operation of an aircraft established by the State of the Operator, which will ensure that—
 - (1) The equipment meets the appropriate airworthiness certification requirements;
 - (2) The operator/owner has carried out a safety risk assessment of the operations supported by the automatic landing systems, a HUD or equivalent displays, EVS, SVS, or CVS; and
 - (3) The operator/owner has established and documented the procedures for the use of, and the training requirements for, a HUD or equivalent displays, EVS, SVS, or CVS

7.1.3 Communication Equipment

7.1.3.1 RADIO EQUIPMENT

- (a) [AAC] A person shall not operate an aircraft that is not equipped with radio equipment—
 - (1) in controlled flight;
 - (2) under instrument flight rules; or
 - (3) at night.

- (b) [AAC] All aircraft operated in VFR as a controlled flight or in IFR shall be provided with radio communication equipment capable of conducting two-way communication with those aeronautical stations and on those frequencies prescribed by the Authority, including the aeronautic emergency frequency 121.5 MHz.
- (1) capable of conducting two-way communication at any time with ATS or aeronautical stations;
 - (2) capable of conducting communications on those frequencies prescribed by the Authority;
 - (3) capable of receiving meteorological information at any time during the flight;
 - (4) capable of conducting communications on the aeronautical emergency frequency 121.5 MHz;
 - (5) approved and installed in accordance with applicable requirements, including the minimum performance requirements;
 - (6) installed such that the failure of any single unit required for communication will not result in the failure of another unit required for communication purposes; and
 - (7) meeting any other requirements as prescribed by the Authority.

Note: The requirements in Paragraphs 7.1.3.1(b)(1) through (b)(3) of this subsection are considered fulfilled if the ability to conduct the communications specified therein is established during radio propagation conditions that are normal for the route.

- (c) [AAC] A person shall not operate an aircraft in IFR, or in VFR over routes that cannot be navigated by reference to visual landmarks, unless the aircraft is equipped with communication and navigation equipment in accordance with the requirements of air traffic services in the area(s) of operation, but not less than—
- (1) two independent radio communication systems necessary under normal operating conditions to communicate with an appropriate ground station from any point on the route including diversions;

Note: Each system shall have an independent antenna installation except that, where rigidly supported non-wire antennae or other antenna installations of equivalent reliability are used, only one antenna is required.

- (2) Secondary Surveillance Radar transponder equipment as required for the route being flown.
- (d) [AOC] When more than one communications or navigation unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.
- (e) [AAC] A person shall not operate an aircraft under IFR unless it is equipped with an audio selector panel accessible to each required flight crewmember.
- (f) [AOC] A person shall not conduct single pilot IFR or night operations unless the aircraft is equipped with a headset with boom microphone or equivalent and a transmit button on the control wheel.
- (g) [CAT] A person shall not operate and aircraft unless equipped with Radio Communication equipment capable of receiving meteorological information at any time during the flight.
- (h) [AAC] For operations where communication equipment is required to meet an RCP specification for PBC, an aeroplane shall, in addition to the requirements in Paragraphs 7.1.3.1(a) and (b) of this subsection—
 - (1) be provided with communication equipment that will enable it to operate in accordance with the prescribed RCP specification;
 - (2) have information relevant to the aircraft RCP specification capabilities listed in the AFM or other aircraft documentation approved by the Authority; and
 - (3) have information relevant to the aircraft RCP specification capabilities included in the MEL.
- (i) [AAC] A person shall not operate an aircraft without meeting the established criteria where an RCP specification for PBC has been prescribed by the Authority.

- (j) [AAC] For operations where an RCP specification for PBC has been prescribed, the operator shall establish and document—
 - (1) normal and abnormal procedures, including contingency procedures;
 - (2) flight crew qualification and proficiency requirements, in accordance with appropriate RCP specifications;
 - (3) a training programme for relevant personnel consistent with the intended operations; and
 - (4) appropriate maintenance procedures to ensure continuing airworthiness, in accordance with appropriate RCP specifications.
- (k) [AAC] The operator shall ensure to provide the Authority in respect of those aircraft mentioned in Paragraph 7.1.3.1(h) of this subsection, the following—
 - (1) reports of observed communication performance issued by monitoring programmes established in accordance with ICAO Annex 11: 3.3.5.2; and
 - (2) corrective action for individual aircraft, aircraft types, or operators identified in such reports as not complying with the RCP specification.

7.1.3.2 CREW MEMBER INTERPHONE SYSTEM

- (a) [AOC] An AOC holder shall not operate an aircraft on which a flight crew of more than one is required unless it is equipped with a flight crew interphone system, including headsets and microphones, not of a handheld type, for use by all members of the flight crew.
- (b) [AOC] An AOC holder shall not operate an aircraft with a maximum certified take-off mass exceeding 15,000 kg or having a maximum approved passenger seating configuration of more than 19 unless it is equipped with a crew member interphone system that—
 - (1) operates independently of the public address system except for handsets, headsets, microphones, selector switches and signalling devices;
 - (2) provides a means of two-way communication between the flight crew compartment and each—

- (i) passenger compartment;
 - (ii) galley located other than on a passenger deck level; and
 - (iii) remote crew compartment that is not on the passenger deck and is not easily accessible from a passenger compartment;
 - (3) is readily accessible for use—
 - (i) from each of the required flight crew stations in the flight crew compartment; and
 - (ii) at required cabin crew member stations close to each separate or pair of floor level emergency exits;
 - (4) has an alerting system incorporating aural or visual signals for use by flight crew members to alert the cabin crew and for use by cabin crew members to alert the flight crew;
 - (5) has a means for the recipient of a call to determine whether it is a normal call or an emergency call; and
 - (6) provides on the ground a means of two-way communication between ground personnel and at least two flight crew members.
- (c) A person engaged in commercial air transport shall not make use of a hand-held microphone (whether for the purpose of radio communication or of intercommunication within the aircraft) whilst the aircraft is flying in controlled airspace below flight level 150 or is taking off or landing.

7.1.3.3 ALTITUDE REPORTING TRANSPONDER

- (a) A person shall not operate an aircraft unless the aircraft is equipped with an operative pressure-altitude reporting transponder that operates in accordance with the requirements of Grenada ATS and the relevant provisions of ICAO Annex 10, Volume IV.
- (b) A person shall not operate an aircraft in airspace that requires a pressure-altitude reporting transponder unless that equipment is operative.

- (c) For commercial air transport: A person shall not operate an aircraft in commercial air transport unless the aircraft is equipped with a data source that provides pressure altitude information with a resolution of 7.62 m (25 ft) or better.
- (d) For commercial air transport: A person shall not operate an aircraft in commercial air transport unless—
 - (1) the aircraft is equipped with an automatic means of detecting airborne or on-the-ground status, and
 - (2) the aircraft is equipped with a Mode S transponder-based Extended Squitter Automatic Dependent Surveillance Broadcast (ADS-B) operating on 1090 Megahertz (MHz).

Note 1: These requirements will improve the effectiveness of ACASs as well as ATS that employ Mode S radar. In particular, tracking processes are significantly enhanced with a resolution of 7.62 m (25 ft) or better.

Note 2: Mode C replies of transponders always report pressure altitude in 30.50 m (100 ft) increments irrespective of the resolution of the data source.

7.1.4 Aircraft Lights and Instrument Illumination

7.1.4.1 AIRCRAFT LIGHTS AND INSTRUMENT ILLUMINATION

- (a) [AAC] All aircraft operated at night shall be equipped with—
 - (1) a landing light;
 - (2) illumination for all flight instruments and equipment that are essential for the safe operation of the aircraft;
 - (3) lights in all passenger compartments;
 - (4) a flashlight for each crew member station; (approval not required).
 - (5) aircraft navigation lights;
 - (6) an anti-collision beacon.
- (b) [AOC] An AOC holder shall not operate an aircraft by day or night unless it is equipped with—

- (1) two landing lights;
 - (2) an anti-collision light system;
 - (3) illumination for all flight instruments and equipment that are essential for the safe operation of the aircraft;
 - (4) lights in all passenger compartments; and
 - (5) A flashlight for each crew member station (approval not required).
- (c) [AOC] An AOC holder shall not operate an aircraft by night unless, in addition to the equipment specified in Paragraph 7.1.4.1(a) of this subsection, it is equipped with—
- (1) navigation/position lights;
 - (2) two landing lights or a single light having two separately energised filaments; and
 - (3) lights to conform to the International regulations for preventing collisions at sea if the aircraft is a seaplane or an amphibian aircraft.

7.1.5 *Engine Instruments*

7.1.5.1 ENGINE INSTRUMENTS

- (a) [AAC] Unless the Authority allows or requires different instrumentation for turbine-engine-powered aircraft to provide equivalent safety, a person shall not operate any powered aircraft without the following engine instruments—
- (1) A means for indicating fuel quantity in each fuel tank to be used;
 - (2) An oil pressure indicator for each engine;
 - (3) An oil temperature indicator for each engine;
 - (4) A manifold pressure indicator for each engine; and
 - (5) A tachometer for each engine.

- (b) [AOC] Unless the Authority allows or requires different instrumentation for turbine-engine-powered aeroplanes to provide equivalent safety, in addition to the listed equipment requirements in Paragraph 7.5.1.1(a) of this subsection, a person shall not operate any powered aircraft without the following engine instruments—
- (1) A carburettor air temperature indicator for each reciprocating engine;
 - (2) A cylinder head temperature indicator for each air-cooled reciprocating engine;
 - (3) A fuel pressure indicator for each engine;
 - (4) A fuel flowmeter or fuel mixture indicator for each engine not equipped with an automatic altitude mixture control;
 - (5) An oil quantity indicator for each oil tank when a transfer or separate oil reserve supply is used;
 - (6) An independent fuel pressure warning device for each engine or a master warning device for all engines with a means for isolating the individual warning circuits from the master warning device; and
 - (7) A device for each reversible propeller, to indicate to the pilot when the propeller is in reverse pitch, that complies with the following—
 - (i) The device may be actuated at any point in the reversing cycle between the normal low pitch stop position and full reverse pitch, but it may not give an indication at or above the normal low pitch stop position; and
 - (ii) The source of indication shall be actuated by the propeller blade angle or shall be directly responsive to it.

7.1.6 *Warning Instruments and Systems*

7.1.6.1 MACH NUMBER INDICATOR

- (a) [AAC] All aircraft with speed limitations expressed in terms of Mach number shall be equipped with a Mach number indicator.

- (b) [AOC] A person shall not operate a turbo jet aircraft unless it is equipped with an installed aural mach overspeed warning.

7.1.6.2 LOSS OF PRESSURISATION INDICATOR

- (a) [AAC] All pressurised aircraft intended to be operated at flight altitudes at which the atmospheric pressure is less than 376hPa (above 25,000 ft) shall be equipped with a device to provide positive warning to the flight crew of any dangerous loss of pressurisation.

7.1.6.3 LANDING GEAR: AURAL WARNING DEVICE

- (a) [AOC] An aeroplane with retractable landing gear shall have a landing gear aural warning device that functions continuously under the following conditions—
 - (1) for aeroplanes with an established approach wing-flap position, whenever the wing flaps are extended beyond the maximum certified approach climb configuration position in the Aeroplane Flight Manual and the landing gear is not fully extended and locked.
 - (2) for aeroplanes without an established approach climb wingflap position, whenever the wing flaps are extended beyond the position at which landing gear extension is normally performed and the landing gear is not fully extended and locked.
- (b) [AOC] The warning system required by Paragraph 7.1.6.3(a) of this subsection—
 - (1) shall not have a manual shutoff;
 - (2) shall be in addition to the throttle-actuated device installed under the type certification airworthiness requirements; and
 - (3) May utilise any part of the throttle-actuated system including the aural warning device.
- (c) [AOC] The flap position-sensing unit may be installed at any suitable place in the aeroplane;
- (d) [AAC] Each powered civil aircraft with retractable landing gear shall have a landing gear position indicator.

7.1.6.4 ALTITUDE ALERTING SYSTEM

- (a) [AOC] An AOC holder shall not operate a turbine propeller powered aeroplane with a maximum certified take-off mass in excess of 5,700 kg or having a maximum approved passenger seating configuration of more than 9 seats, or a turbojet powered aeroplane, unless it is equipped with an altitude alerting system capable of—
 - (1) alerting the flight crew upon approaching preselected altitude in either ascent or descent; and
 - (2) alerting the flight crew by at least an aural signal, when deviating above or below a preselected altitude.
- (b) [AAC] For operations in defined portions of airspace where, based on Regional Air Navigation Agreement, a VSM of 300 m (1,000 ft) is applied between FL 290 and FL410, an aircraft shall be provided with equipment which is capable of providing an alert to the flight crew when a deviation occurs from the selected flight level. The threshold for the alert may not exceed ± 90 m (300 ft).

7.1.6.5 GROUND PROXIMITY WARNING SYSTEM

- (a) [AAC] A person shall not operate an aeroplane in excess of 5700kg or, authorised to carry more than 9 passengers, unless it is equipped with a GPWS which has a forward looking terrain avoidance function.
- (b) The operator shall implement database management procedures that ensure the timely distribution and update of current terrain and obstacle data to the GPWS.
- (c) [AAC] A GPWS shall automatically provide, by means of aural signals that may be supplemented by visual signals, timely and distinctive warning to the flight crew of sink rate, ground proximity, altitude loss after take-off or go around, incorrect landing configuration and downward glideslope deviation.
- (d) [AAC] A ground proximity warning system shall provide, as a minimum, warnings of the following circumstances—
 - (1) excessive descent rate;
 - (2) excessive terrain closure rate;
 - (3) excessive altitude loss after take-off or go-around;

- (4) unsafe terrain clearance while not in landing configuration;
 - (i) Gear not locked down; and
 - (ii) Flaps not in a landing position; and
- (5) excessive descent below the instrument glide path.

7.1.6.6 WEATHER RADAR – COMMERCIAL AIR TRANSPORT

- (a) [AOC] A person shall not operate an airplane having a maximum approved passenger seating of more than nine seats in commercial air transport unless it has an approved weather radar installed.
- (b) [AOC] A person shall not operate an airplane having a maximum certificated takeoff mass of more than 5700 kg in commercial air transport unless it has an approved weather radar installed.
- (c) [AOC] A person shall not begin a commercial air transport passenger flight under IFR, when current weather reports indicate that thunderstorms or other potentially hazardous conditions that could be detected by the installed weather radar may reasonably be expected along the route, unless that equipment is operating satisfactorily.
- (d) [AOC] If the weather radar becomes inoperative on a commercial air transport passenger aircraft en route, the aircraft must be operated under the instructions and procedures specified in the AOC holder's Operations Manual.

7.1.6.7 AIRBORNE COLLISION AVOIDANCE SYSTEM (ACAS)

- (a) [AAC] Any ACAS installed on an aircraft in Grenada shall be approved by the Authority.
- (b) [AAC] Each person operating an aircraft equipped with an ACAS shall have that system on and operating.
- (c) [AAC] An ACAS shall operate in accordance with the relevant provisions of ICAO Annex 10, Volume IV.
- (d) A person shall not operate a turbine engine aeroplane with a maximum certificated takeoff mass in excess of 5,700 kg or authorized to carry more than 19 passengers, unless it is equipped with an ACAS II.

Note: In anticipation of changing international requirements, the Authority recommends that all aeroplanes should be equipped with an airborne collision avoidance system (ACAS II).

7.1.6.8 FORWARD LOOKING WIND SHEAR WARNING SYSTEM - TURBOJET AIRCRAFT

- (a) [AOC] All turbojet aeroplanes with a maximum certificated take-off mass of over 5 700 kg or authorised to carry more than nine passengers shall be equipped with a forward looking wind shear warning system.
- (b) [AOC] The forward wind shear warning system shall be capable of providing the pilot with an aural and visual warning of wind shear ahead of the aircraft and the information required to permit the pilot to safely commence and continue a missed approach or go-around or to execute an escape manoeuvre if necessary.
- (c) The forward wind shear warning system shall also provide an indication to the pilot when the limits specified for the certification of automatic landing equipment are being approached, when such equipment is in use.

7.1.6.9 LOCATION OF AN AEROPLANE IN DISTRESS

- (a) A person shall not operate an aeroplane with a maximum certificated take-off mass of over 5 700 kg, for which the certificate of airworthiness is first issued on or after 1 January 2023, unless the aeroplane is equipped to autonomously transmit information from which a position can be determined by the operator at least once every minute, when in distress.
- (b) As of 01 January 2025, all aeroplanes of a maximum certificated take-off mass of over 27 000 kg for which the individual certificate of airworthiness is first issued on or after 01 January 2024, shall autonomously transmit information from which a position can be determined by the operator at least once every minute, when in distress.
- (c) ACTIVATION/DEACTIVATION. The equipment shall—
 - (1) Automatically activate immediately or within 5 seconds after detection of an activation event;
 - (2) Be capable of manual activation; and

- (3) Be capable of deactivation using the same mechanism that activated it.
- (d) TRANSMISSION. The equipment shall meet the following criteria—
 - (1) Location within a 6 NM radius, including after any accident;
 - (2) Timestamp of the position information; and
 - (3) The accuracy of position information shall, as a minimum, meet the position accuracy requirements established for ELTs.
- (e) The operator shall make position information of a flight in distress available to the appropriate organisations, as established by the Authority.

Note: Aircraft behaviour events may include, but are not limited to, unusual attitudes, unusual speed conditions, collision with terrain, total loss of thrust/propulsion on all engines, and ground proximity warnings.

7.1.7 Flight and Cockpit Voice Recorders

- (a) Flight Recorder Systems: Crash-protected flight recorders, for both aeroplanes and helicopters, shall comprise one or more of the following—
 - (1) An FDR
 - (2) A CVR
 - (3) An AIR; or
 - (4) A DLR.
- Note: When image or data link information is required to be recorded on a crash protected flight recorder, it is permissible to record it on either the CVR or the FDR.*
- (b) Flight Recorder Systems: Lightweight flight recorders for aeroplanes shall comprise one or more of the following systems—
 - (1) An ADRS
 - (2) A CARS

(3) An AIRS; or

(4) A DLRS

Note: When image or data link information is required to be recorded on a lightweight flight recorder, it is permissible to record it on either the CARS or the ADRS.

- (c) Flight Recorder Systems: Combination recorders (FDR/CVR) may be used to meet the equipage requirements for helicopters.

7.1.7.1 FLIGHT DATA AND VOICE RECORDERS – GENERAL

- (a) The flight recorders shall be constructed, located and installed so as to provide maximum practical protection for the recordings in order that the recorded information may be preserved, recovered and transcribed. Flight recorders shall meet the prescribed crashworthiness and fire protection specifications.

- (b) Non-deployable flight recorder containers shall be painted a distinctive orange colour.

- (c) Non-deployable crash-protected flight recorders shall—

- (1) Carry reflective material to facilitate their location; and
- (2) Have securely attached an automatically activated underwater locating device operating at a frequency of 37.5 kHz. This device shall operate for a minimum of 90 days.

- (d) ADFR containers shall—

- (1) Be painted a distinctive orange colour; however, the surface
- (2) visible from outside the aircraft may be of another colour;
- (3) Carry reflective material to facilitate their location;
- (4) Have an integrated automatically activated ELT; and (4) Have specific requirements that can be found in IS 7.1.7.1.

- (e) Flight recorder systems shall be installed so that—

- (1) The probability of damage to the recordings is minimised;

- (2) There is an aural or visual means for pre-flight checking that the flight recorder systems are operating properly; and
 - (3) If the flight recorder systems have an erasure device, the installation shall be designed to prevent operation of the device during flight time or crash impact;
 - (4) For aircraft for which the individual certificate of airworthiness is first issued on or after 01 January 2023, a flight-crew-operated erase function shall be provided on the flight deck which, when activated, modifies the recording of a CVR and AIR so that it cannot be retrieved using normal replay or copying techniques. The installation shall be designed to prevent activation during flight. In addition, the probability of an inadvertent activation of an erase function during an accident shall also be minimised; and
 - (5) They meet the prescribed crashworthiness and fire protection specifications.
- (f) The crash-protected flight recorders shall be installed so that they receive electrical power from a bus that provides the maximum reliability for operation of the flight recorders without jeopardising service to essential or emergency loads.
 - (g) The lightweight flight recorders shall be connected to a power source having the characteristics which ensure proper and reliable recording in the operational environment.
 - (h) The flight recorder systems, when tested by methods approved by the State of Design, shall be demonstrated to be suitable for the environmental extremes over which they are designed to operate.
 - (i) Means shall be provided for an accurate time correlation between the flight recorder systems' recordings.
 - (j) The manufacturer shall provide the State of Design with the following information with respect to the flight recorder systems—
 - (1) Manufacturer's operating instructions, equipment limitations, and installation procedures;
 - (2) Manufacturer's test reports;
 - (3) Parameter origin or source and equations that relate counts to units of measurement; and

- (4) Detailed information to ensure the continued serviceability of the flight recording system.
- (k) The holder of the airworthiness approval for the installation design of the flight recorder system shall make available the relevant continuing airworthiness information to the operator of the aeroplane to be incorporated in the continuing airworthiness maintenance programme. This continuing airworthiness information shall cover in detail all the tasks required to ensure the continued serviceability of the flight recorder system.
- (l) Flight recorders shall—
 - (1) be calibrated and have operational checks and evaluations of recordings to ensure the continued serviceability of the recorders, as required by the Authority; and
 - (2) meet the prescribed crashworthiness and fire protection specifications.
- (m) Flight recorders shall record in a digital mode.
- (n) An aircraft required to have both CVR and FDR may alternatively be equipped with--
 - (1) a single combination (CVR/FDR) recorder, for aircraft with a maximum certificated takeoff mass of 5700 kg or less; or
 - (2) two combination (CVR/FDR) recorders, for aircraft with a maximum certificated takeoff mass of more than 5700 kg.

7.1.7.2 FLIGHT DECK VOICE RECORDERS

- (a) All aeroplanes of a maximum certificated take-off mass of over 5,700Kg, shall be equipped with a CVR, the objective of which is the recording of the aural environment on the flight deck during flight time;
- (b) All helicopters of a maximum certificated take-off mass of over 3,180Kg, shall be equipped with a CVR, the objective of which is the recording of the aural environment on the flight deck during flight time. For helicopters not equipped with an FDR, at least main rotor speed shall be recorded on one track of the CVR.

Note: In anticipation of changing international requirements, the Authority recommends that all AOC holders of multiengine turbine

powered aircraft with a maximum certificated takeoff mass of 5700 kg or less install a voice recorder.

- (c) The flight deck voice recorder shall be capable of retaining the information recorded during at least the last 30 minutes. Except that for aircraft, for which the individual certificate of airworthiness was first issued after 1st January 2003, the CVR shall be capable of retaining the information recorded during at least the last two hours of its operation.
- (d) If an aircraft is equipped to utilize digital communications with ATS, those communications shall be recorded on either the flight deck voice or flight data recorder. If recorded on the flight data recorder, the minimum recording duration of the digital communications shall be equal to the duration of the CVR and readily correlatable to the cockpit voice recorder recording.
- (e) All aircraft which utilize data link communications for which the individual certificate of airworthiness was first issued after 1 January 2005 and are required to carry a CVR, shall record on a flight recorder, all data link communications to and from the aircraft. The minimum recording duration shall be equal to the duration of the CVR, and shall be correlated to the recorded cockpit audio. Sufficient information to derive the content of the data link communications message, and, whenever practical, the time the message was displayed to or generated by the crew shall be recorded.

7.1.7.3 FLIGHT DATA RECORDERS

- (a) All aeroplanes of a maximum certificated take-off mass of over 27,000Kg, shall be equipped with a type I FDR
- (b) All aeroplanes of a maximum certificated take-off mass of over 5,700Kg, up to and including 27,000Kg, shall be equipped with a type II FDR
- (c) All aeroplanes of a maximum certificated take-off mass of over 5,700Kg, for which the individual certificate of airworthiness is first issued after 1st January 2005, shall be equipped with a type IA FDR

Note: In anticipation of changing international requirements, the Authority recommends that all AOC holders of multiengine turbine powered aircraft with a maximum certificated takeoff mass of 5700 kg or less install a Type IIA FDR

- (d) All helicopters of a maximum certificated take-off mass of over 7,000Kg, shall be equipped with a type IV FDR
- (e) All helicopters of a maximum certificated take-off mass of over 3,180Kg, for which the individual certificate of airworthiness is first issued after 1st January 2005, shall be equipped with a type IVA FDR

Note: In anticipation of changing international requirements, the Authority recommends that all AOC holders of helicopters with a maximum certificated takeoff mass of over 2700 kg up to and including 7000Kg install a Type V FDR

- (f) The use of engraving metal foil and photographic film flight data recorders shall be discontinued.
- (g) FDRs shall be capable of retaining the information recorded during at least the last—
 - (1) Type I and II - 25 hours of operation
 - (2) Type IIA - 30 minutes of operation
 - (3) Type IV, IVA and V – 10 hours of operation
- (h) The specific data to be recorded by flight recorders shall be as required in the most current edition of ICAO Annex 6, Part 1, Ch 6.3.

7.1.7.4 OPERATION OF FLIGHT RECORDER SYSTEMS

- (a) Flight recorder systems shall not be switched off during flight time.
- (b) To preserve flight recorder records, flight recorders shall be deactivated upon completion of flight time following an accident or incident. The flight recorders shall not be reactivated before their disposition as determined in accordance with the accident/incident regulations of Grenada.

Note 1: The need for removal of the flight recorder records from the aircraft will be determined by the investigation authority in the State conducting the investigation, with due regard to the seriousness of an occurrence and the circumstances, including the impact on the operation.

Note 2: The operator's responsibilities regarding the retention of flight recorder records are contained in the accident and incident regulations of Grenada.

7.1.7.5 CONTINUED SERVICEABILITY AND INSPECTION OF FLIGHT RECORDER SYSTEMS

- (a) The operator shall conduct operational checks and evaluations of recordings from the flight recorder systems to ensure the continued serviceability of the recorders.

Implementing Standard: See IS 7.1.7.5 for the procedures for the inspection of the flight recorder systems.

7.1.7.6 FLIGHT RECORDER ELECTRONIC DOCUMENTATION

- (a) Operators shall provide to accident investigation authorities the documentation of flight recording systems parameters in electronic format and in accordance with industry specifications.

7.1.7.7 COMBINATION RECORDERS

- (a) [AAC] A person shall not operate an aeroplane of a maximum certificated take-off mass of over 5 700 kg which is required to be equipped with both an FDR and a CVR unless the aeroplane is equipped with—
 - (1) An FDR and a CVR; or
 - (2) Two combination recorders (FDR/DVR);
- (b) [AOC] A person shall not operate an aeroplane of a maximum certificated take-off mass of over 5 700 kg which is required to be equipped with both an FDR and a CVR unless—
 - (1) The aeroplane is equipped with an FDR and a CVR or, alternatively, equipped with two combination recorders (FDR/CVR); or
 - (2) For aeroplanes type certificated on or after 1 January 2016, the aeroplane is equipped with two combination recorders (FDR/CVR).

Note: The requirement may be satisfied by equipping the aeroplanes with two combination recorders (one forward and one aft) or separate devices.

- (c) [AOC] A person shall not operate an aeroplane of a maximum certificated take-off mass of over 15 000 kg which is required to be equipped with both a CVR and an FDR and was type certificated on or after 1 January 2016 unless—
 - (1) The aeroplane is equipped with two combination recorders (FDR/CVR); and
 - (2) One recorder is located as close to the flight deck as practicable, and the other recorder located as far aft as practicable.
- (d) [AOC] A person shall not operate a multi-engined turbine-engined aeroplane of a maximum certificated take-off mass of 5 700 kg or less unless the aeroplane is equipped with—
 - (1) An FDR and/or a CVR; or
 - (2) One combination recorder (FDR/CVR).

7.1.7.8 FLIGHT RECORDER DATA RECOVERY

- (a) All aeroplane of a maximum certificated take-off mass of over 27 000 kg which are authorised to carry more than 19 passengers, and for which the application for type certification is submitted to a Contracting State on or after 1 January 2021, shall be equipped with a means approved by the Authority to recover flight recorder data and make it available in a timely manner.
- (b) In approving the means to make flight recorder data available in a timely manner, the Authority shall take into account the following—
 - (1) The capabilities of the operator;
 - (2) Overall capability of the aeroplane and its systems as certified by State of Design;
 - (3) The reliability of the means to recover the appropriate CVR channels and appropriate FDR data; and
 - (4) Specific mitigation measures.

7.1.7.9 FLIGHT DATA RECORDERS AND AIRCRAFT DATA RECORDING SYSTEMS

- (a) The FDR or ADRS shall start to record prior to the aircraft moving under its own power and shall record continuously until the termination of the flight when the aircraft is no longer capable of moving under its own power.

7.1.7.10 TYPE AND PARAMETERS

- (a) AEROPLANE. Aeroplane FDR shall record the parameters prescribed in IS 7.1.7.10 (A).
- (b) HELICOPTER. Helicopter FDR shall record the parameters prescribed in IS 7.1.7.10 (B).

7.1.7.11 AIRCRAFT EQUIPAGE FOR OPERATIONS

- (a) A person shall not operate the following aeroplane unless the aeroplane is equipped with an FDR capable of recording the aural environment of the flight deck during flight time.
- (b) [AAC] All turbine-engined aeroplanes with a seating configuration of more than five passenger seats and a maximum certificated take-off mass of 5 700 kg or less, for which the application for a TC is first made to the appropriate Authority on or after 1 January 2016, shall be equipped with—
 - (1) An FDR that shall record at least the first 16 parameters prescribed in IS 7.1.7.10(A);
 - (2) A Class C AIR or AIRS that shall record at least the flight path and speed parameters displayed to the pilot(s) as prescribed in IS 7.1.7.11; or
 - (3) An ADRS that shall record at least the first 7 parameters prescribed in IS 7.1.7.11.
 - (i) If further ADRS recording capacity is available, the recording of any parameters from 8 onwards defined in IS 7.1.7.11 shall be considered.

Note: TC first issued refers to the date of issuance of the original TC for the aeroplane type, not the date of certification of particular aeroplane variants or derivative models.

- (c) [AOC] All turbine-engined aeroplanes of a maximum certificated take-off mass of 5 700 kg or less, for which the individual certificate of airworthiness is first issued on or after 1 January 2016, shall be equipped with—
 - (1) An FDR that shall record at least the first 16 parameters prescribed in IS 7.1.7.10(A);
 - (2) A Class C AIR or AIRS that shall record at least the flight path and speed parameters displayed to the pilot(s) as defined in IS 7.1.7.11; or
 - (3) An ADRS that shall record at least the first 7 parameters listed in IS 7.1.7.11.
- (d) [AAC] All aeroplanes of a maximum certificated take-off mass of over 27 000 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 1989, shall be equipped with an FDR that shall record at least the first 32 parameters prescribed in IS 7.1.7.10(A).
- (e) [AAC] All aeroplanes of a maximum certificated take-off mass of over 5 700 kg, up to and including 27 000 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 1989, shall be equipped with an FDR that shall record at least the first 16 parameters prescribed in IS 7.1.7.10(A).
- (f) [AOC] All multi-engined turbine-engined aeroplanes of a maximum certificated take-off mass of 5 700 kg or less, for which the individual certificate of airworthiness is first issued on or after 1 January 1990, shall be equipped with an FDR that shall record at least the first 16 parameters prescribed in IS 7.1.7.10(A).
- (g) [AOC] All turbine-engined aeroplanes with a maximum certificated take-off mass of over 5 700 kg, except those in Paragraph 7.1.7.11.(h) of this subsection, for which the individual certificate of airworthiness was first issued before 1 January 1989, shall be equipped with an FDR that shall record at least the first five parameters prescribed in IS 7.1.7.10(A).
- (h) [AOC] All turbine-engined aeroplanes with a maximum certificated take-off mass of over 5 700 kg, except those in 7.1.7.11 of this part, for which the individual certificate of airworthiness was first issued on or after 1 January 1987 but before 1 January 1989, shall be equipped with an FDR that shall record at least the first nine parameters prescribed in IS 7.1.7.10(A).

- (i) [AOC] All turbine-engined aeroplanes with a maximum certificated take-off mass of over 27 000 kg, for which the individual certificate of airworthiness was first issued on or after 1 January 1987 but before 1 January 1989, that are of types of which the prototype was certificated by the appropriate Authority after 30 September 1969, shall be equipped with an FDR that shall record at least the first 16 parameters prescribed in IS 7.1.7.10(A).
- (j) [AOC] All turbine-engined aeroplanes with a maximum certificated take-off mass of over 27 000 kg, for which the individual certificate of airworthiness was first issued before 1 January 1987, that are of types of which the prototype was certificated by the appropriate Authority after 30 September 1969, shall be equipped with an FDR that shall record, in addition to the first five parameters prescribed in IS 7.1.7.10(A), such additional parameters as are necessary to meet the objectives of determining—
 - (1) The attitude of the aeroplane in achieving its flight path; and
 - (2) The basic forces acting upon the aeroplane resulting in the achieved flight path and the origin of such basic forces.
- (k) [AAC] All aeroplanes of a maximum certificated take-off mass of over 5 700 kg, for which the individual certificate of airworthiness is first issued after 1 January 2005, shall be equipped with an FDR that shall record at least the first 78 parameters prescribed in IS 7.1.7.10(A).
- (l) All aeroplanes of a maximum certificated take-off mass of over 5 700 kg, for which the application for type certification is submitted on or after 1 January 2023, shall be equipped with an FDR capable of recording at least the 82 parameters prescribed in IS 7.1.7.10(A).
- (m) All aeroplanes of a maximum certificated take-off mass of over 5 700 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 2023, shall be equipped with an FDR capable of recording at least the 82 parameters prescribed in IS 7.1.7.10(A).
- (n) A person shall not operate the following helicopter unless the helicopter is equipped with an FDR capable of recording the aural environment of the flight deck during flight time.
- (o) [AAC] All helicopters with a maximum certificated take-off mass of over 3 175 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 2016, shall be equipped with an

FDR that shall record at least the first 48 parameters prescribed in IS 7.1.7.10(B).

- (p) [AAC] All helicopters with a maximum certificated take-off mass of over 7 000 kg, or having a passenger seating configuration of more than 19, for which the individual certificate of airworthiness is first issued on or after 1 January 1989, shall be equipped with an FDR that shall record at least the first 30 parameters prescribed in IS 7.1.7.10(B).
- (q) [AAC] All helicopters with a maximum certificated take-off mass of over 3 175 kg, up to and including 7 000 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 1989, shall be equipped with an FDR that shall record at least the first 15 parameters prescribed in IS 7.1.7.10(B).
- (r) [AOC] All turbine-engined helicopters of a maximum certificated take-off mass of over 2 250 kg, up to and including 3 175 kg, for which the application for a TC is first made to the appropriate Authority on or after 1 January 2018, shall be equipped with—
 - (1) An FDR that shall record at least the first 48 parameters prescribed in IS 7.1.7.10(B);
 - (2) A Class C AIR or AIRS that shall record at least the flight path and speed parameters displayed to the pilot(s), as defined in IS 7.1.7.11; or
 - (3) An ADRS that shall record the first 7 parameters prescribed in IS 7.1.7.11.
- (s) [AOC] All helicopters of a maximum certificated take-off mass of 3 175 kg or less, for which the individual certificate of airworthiness is first issued on or after 1 January 2018, shall be equipped with—
 - (1) An FDR that shall record at least the first 48 parameters prescribed in IS 7.1.7.10(B);
 - (2) A Class C AIR or AIRS that shall record at least the flight path and speed parameters displayed to the pilot(s), as defined in IS 7.1.7.11; or
 - (3) An ADRS that shall record the first 7 parameters prescribed in IS 7.1.7.11.

- (t) All helicopters of a maximum certificated take-off mass of over 3 175 kg, for which the application for type certification is submitted on or after 1 January 2023, shall be equipped with an FDR capable of recording at least the 53 parameters prescribed in IS 7.1.7.10(B).
- (u) All helicopters of a maximum certificated take-off mass of over 3 175 kg for which the individual certificate of airworthiness is first issued on or after 1 January 2023 shall be equipped with an FDR capable of recording at least the 53 parameters prescribed in IS 7.1.7.10(B)

Note 1: For aircraft for which the application for type certification is submitted to a Contracting State before 1 January 2016, specifications applicable to crash-protected flight recorders may be found in EUROCAE ED112A Minimum Operational Performance Specifications (MOPS), or earlier equivalent documents.

Note 2: For aircraft for which the application for type certification is submitted to a Contracting State on or after 1 January 2016, specifications applicable to crash-protected flight recorders may be found in EUROCAE ED112A, Minimum Operational Performance Specification (MOPS), or equivalent documents.

Note 3: Specifications applicable to lightweight flight recorders may be found in EUROCAE ED-155, Minimum Operational Performance Specification (MOPS), or equivalent documents.

Note 4: Chapter 1, Section II, contains requirements for States regarding the use of voice, image, and/or data recordings and transcripts.

Note 5: The erase function is intended to prevent access to CVR and AIR recordings by normal replay or copying means, but shall not prevent accident investigation authorities access to such recordings by specialised replay or copying techniques.

Note 6: Lightweight flight recorders comprise one or more of the following systems: an ADRS; a CARS; an AIRS; or a DLRS. Image and data link information may be recorded on either a CARS or an ADRS.

7.1.7.12 RECORDING TECHNOLOGY

- (a) FDRs, ADRS, AIRs, or AIRS shall not use engraving metal foil, frequency modulation, photographic film, or magnetic tape in aircraft registered in Grenada or operated in commercial air transport operations in Grenada.

7.1.7.13 DURATION

- (a) FDRs on aeroplanes shall be capable of retaining the information recorded during at least the last 25 hours of operation, with the exception of those installed on aeroplanes referenced in Paragraph 7.1.7.11(f) of this part for which the FDR shall retain the information recorded during at least the last 30 minutes of operation, and, in addition, sufficient information from the preceding take-off for calibration purposes.
- (b) FDRs on helicopters shall retain the information recorded during at least the last 10 hours of operation.

7.1.7.14 COCKPIT VOICE RECORDERS AND COCKPIT AUDIO RECORDING SYSTEMS

- (a) Start and Stop Logic – Cockpit Voice Recorders and Cockpit Audio Recording Systems
 - (1) The CVR and CARS shall start to record prior to the aircraft moving under its own power and shall record continuously until the termination of the flight when the aircraft is no longer capable of moving under its own power.
 - (2) In addition, depending on the availability of electrical power, the CVR or CARS shall start to record as early as possible during the flight deck checks prior to engine start at the beginning of the flight until the flight deck checks immediately following engine shutdown at the end of the flight.
 - (3) The CVR shall record simultaneously on four separate channels, or more, at least the following—
 - (i) Voice communication transmitted from or received in the aircraft by radio;
 - (ii) Aural environment on the flight deck;
 - (iii) Voice communication of flight crew members on the flight deck using the aircraft's interphone system, if installed; and
 - (iv) Digital communications with ATS, unless recorded by the FDR.

- (4) The preferred CVR audio allocation shall be as follows—
 - (i) PIC audio panel;
 - (ii) Co-pilot audio panel;
 - (iii) Additional flight crew positions and time reference; and
 - (iv) Flight deck area microphone.
 - (5) The CARS shall record simultaneously on two separate channels, or more, at least the following—
 - (i) Voice communication transmitted from or received in the aircraft by radio;
 - (ii) Aural environment on the flight deck; and
 - (iii) Voice communication of flight crew members on the flight deck using the aircraft's interphone, if installed.
 - (6) The preferred CARS audio allocation shall be as follows—
 - (i) Voice communication; and
 - (ii) Aural environment on the flight deck.
 - (7) On a tape-based CVR, to ensure accurate time correlation between channels, the recorder shall record in an in-line format. If a bi-directional configuration is used, the in-line format and channel allocation shall be retained in both directions.
- (b) Aircraft Equipage for Operations Using CVR and CARS
- (1) A person shall not operate an aeroplane unless the aeroplane is equipped with a CVR and CARS as listed below—
 - (i) [AAC] All turbine-engined aeroplanes required to be operated by more than one pilot and for which the application for a TC is first submitted to the appropriate Authority on or after 1 January 2016 shall be equipped with either a CVR or a CARS.
 - (ii) [AAC] All aeroplanes of a maximum certificated take-off mass of over 5 700 kg, for which the individual

certificate of airworthiness is first issued on or after 1 January 1987, shall be equipped with a CVR.

- (iii) [AOC] All aeroplanes of a maximum certificated take-off mass of over 5 700 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 2003, shall be equipped with a CVR capable of retaining the information recorded during at least the last 2 hours of its operation.
 - (iv) [AOC] All aeroplanes of a maximum certificated take-off mass of over 5 700 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 1987, shall be equipped with a CVR.
 - (v) [AOC] All turbine-engined aeroplanes with a maximum certificated take-off mass of over 27 000 kg, for which the individual certificate of airworthiness was first issued before 1 January 1987, that are of types of which the prototype was certificated by the appropriate Authority after 30 September 1969, shall be equipped with a CVR.
 - (vi) [AOC] All turbine-engined aeroplanes with a maximum certificated take-off mass of over 5 700 kg, up to and including 27 000 kg, for which the individual certificate of airworthiness was first issued before 1 January 1987, that are of types of which the prototype was certificated by the appropriate Authority after 30 September 1969, shall be equipped with a CVR.
- (2) A person shall not operate a helicopter unless the helicopter is equipped with a CVR as listed below—
- (i) [AAC] All helicopters of a maximum certificated take-off mass of over 7 000 kg shall be equipped with a CVR. For helicopters not equipped with an FDR, at least main rotor speed shall be recorded on the CVR.
 - (ii) [AAC] All helicopters of a maximum certificated take-off mass of over 3 175 kg, for which the individual certificate of worthiness is first issued on or after 1 January 1987, shall be equipped with a CVR. For helicopters not equipped with an FDR, at least main rotor speed shall be recorded on the CVR.

(c) Discontinuation

- (1) CVRs and CARS shall not use magnetic tape or wire in aircraft registered in Grenada or operated in commercial air transport operations in Grenada.

(d) Duration

- (1) A CVR shall retain the information recorded during at least the last 2 hours of its operation.
- (2) All aeroplanes of a maximum certificated take-off mass of over 27 000 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 2021, shall be equipped with a CVR that shall retain the information recorded during at least the last 25 hours of its operation.
- (3) All aeroplanes that are required to be equipped with CARS, and for which the individual certificate of airworthiness is first issued on or after 01 January 2025, shall be equipped with a CARS that shall retain the information recorded during at least the last 2 hours of their operation.

(e) Cockpit Voice Recorder Alternate Power Source

- (1) [AOC] A person shall not operate an aeroplane required to be equipped with a CVR unless the aeroplane is equipped with CVR alternate power that—
 - (i) Automatically engages and provides 10 minutes, plus or minus one minute, of operation whenever aeroplane power to the recorder ceases, either by normal shutdown or by any other loss of power;
 - (ii) Powers the CVR and its associated flight deck area microphone components; and
 - (iii) Is located as close as practicable to the alternate power source.
- (2) [AOC] A person shall not operate an aeroplane of a maximum certificated take-off mass of over 27 000 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 2018, unless the aeroplane is equipped with an alternate power source, as described in Paragraph 7.1.7.14(a) of this subsection, that powers—

- (i) The forward CVR, in the case of combination recorders; or
- (ii) At least one CVR.

Note 1: "Alternate" means separate from the power source that normally provides power to the CVR. The use of aeroplane batteries or other power sources is acceptable provided that the requirements above are met and electrical power to essential and critical loads is not compromised.

Note 2: When the CVR function is combined with other recording functions within the same unit, powering the other functions is allowed.

7.1.7.15 DATA LINK RECORDERS AND RECORDING SYSTEM

- (a) A person shall not operate an aeroplane or a helicopter for which the individual certificate of airworthiness is first issued on or after 1 January 2016, and which use any of the DLC applications referred to in IS 7.1.7.15 and are required to carry a CVR, unless the aircraft records the DLC messages on a crash protected flight recorder.
- (b) A person shall not operate an aeroplane or a helicopter modified on or after 1 January 2016, which use any of the DLC applications referred to in IS 7.1.7.15, unless the aircraft records the DLC message on a crash-protected flight recorder or the installed DLC equipment is compliant with a TC issued or aircraft modification first approved prior to 01 January 2016. .
- (c) A person shall not operate an aeroplane or a helicopter where the aircraft flight path is authorised or controlled through the use of data link messages, unless all data link messages, both uplinks to the aircraft and downlinks from the aircraft, are recorded on the aircraft. As far as practicable, the time the messages were displayed to the flight crew and the time of the responses shall be recorded.
- (d) A person shall not operate an aeroplane or a helicopter where the individual certificate of airworthiness was first issued before 01 January 2016, that are required to carry a CVR and are modified on or after 01 January 2016 to use any of the DLC applications referred to in IS 7.1.7.15 shall record the DLC messages on a crash-protected flight recorder.

Note: A Class B AIR may be a means for recording data link communications applications messages to and from the aircraft where it is not practical or is prohibitively expensive to record those data link communications applications messages on FDR or CVR.

- (e) DURATION.
 - (1) The minimum recording duration shall be equal to the duration of the CVR.
- (f) CORRELATION.
 - (1) Data link recording shall be correlated to the flight deck audio.

7.1.7.16 AIRBORNE IMAGE RECORDER AND AIRBORNE IMAGE RECORDING SYSTEM

- (a) No person shall operate an aircraft unless the AIR or AIRS shall start to record prior to the aircraft moving under its own power and shall record continuously until the termination of the flight when the aircraft is no longer capable of moving under its own power. In addition, depending on the availability of electrical power, the AIR or AIRS shall start to record as early as possible during the flight deck checks prior to engine start at the beginning of the flight until the flight deck checks immediately following engine shutdown at the end of the flight.
- (b) AIRs are classified as follows—
 - (1) A Class A AIR or AIRS captures the general flight deck area in order to provide data supplemental to conventional flight recorders.
 - (2) A Class B AIR or AIRS captures data link message displays.
 - (3) A Class C AIR or AIRS captures instruments and control panels.

Note 1: To respect crew privacy, the flight deck area view may be designed as far as practical to exclude the head and shoulders of crew members whilst seated in their normal operating position.

Note 2: A Class C AIR or AIRS may be considered as a means for recording flight data where it is not practical or is prohibitively expensive to record on an FDR, or where an FDR is not required.

7.1.7.17 FLIGHT CREW-MACHINE INTERFACE RECORDING

(a) GENERAL.

- (1) No person shall operate an aeroplane of a maximum certificated take-off mass of over 5 700 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 2023, unless the aeroplane shall be equipped with a crash-protected flight recorder that shall record the information displayed to the flight crew from electronic displays, as well as the operation of switches and selectors by the flight crew as defined in IS 7.1.7.10;
- (2) No Person shall operate an aircraft unless the AIR or AIRS shall start to record prior to the aircraft moving under its own power and record continuously until the termination of the flight when the aircraft is no longer capable of moving under its own power. In addition, depending on the availability of electrical power, the AIR or AIRS shall start to record as early as possible during the flight deck checks prior to engine start at the beginning of the flight until the flight deck checks immediately following engine shutdown at the end of the flight.

(b) APPLICATIONS TO BE RECORDED—

- (1) The operation of switches and selectors and the information displayed to the flight crew from electronic displays shall be captured by sensors or other electronic means;
- (2) The recording of operation of switches and selectors by the flight crew shall include the following: (i) Any switch or selector that will affect the operation and the navigation of the aircraft; and (ii) Selection of normal and alternate systems.
- (3) The recording of the information displayed to the flight crew from electronic displays shall include the following—
 - (i) Primary flight and navigation displays;
 - (ii) Aircraft system monitoring displays;
 - (iii) Engine indication displays;
 - (iv) Traffic, terrain and weather displays;

- (v) Crew alerting system displays;
 - (vi) Stand-by instruments; and
 - (vii) Installed EFB to the extent that it is practical.
- (4) If image sensors are used, the recording of such images shall not capture the head and shoulders of the flight crew members whilst seated in their normal operating position
- (c) DURATION
 - (1) The minimum flight crew-machine interface recording duration shall be at least for the last 2 hours.
- (d) CORRELATION
 - (1) Flight crew-machine interface recordings shall be able to be correlated to the recorded flight deck audio.

7.1.8 *Emergency, Rescue, and Survival Equipment*

7.1.8.1 EMERGENCY EQUIPMENT: ALL AIRCRAFT

- (a) [AAC] An item of emergency and flotation equipment shall be—
 - (1) readily accessible to the crew and, with regard to equipment located in the passenger compartment, to passengers without appreciable time for preparatory procedures;
 - (2) clearly identified and clearly marked to indicate its method of operation;
 - (3) marked as to date of last inspection; and
 - (4) marked as to contents when carried in a compartment or container.
- (b) An aircraft operator shall at all times have available for immediate communication to search and rescue coordination centres, list containing information on the emergency and survival equipment carried on board any of their aircraft engaged in international air navigation. The information shall include, as applicable, the number, colour and type of life rafts and pyrotechnics, details of emergency supplies, water supplies and the type and frequencies of the emergency portable radio equipment.

7.1.8.2 EMERGENCY EXIT EQUIPMENT - PASSENGERS

- (a) [AAC] A passenger-carrying land plane emergency exit (other than over-the-wing) that is more than 6 feet from the ground with the aeroplane on the ground and the landing gear extended, shall have an approved means to assist the occupants in descending to the ground.
- (b) [AAC] A passenger emergency exit, its means of access, and its means of opening shall be conspicuously marked by a sign visible to occupants approaching along the main passenger aisle.
- (c) [AOC] A passenger-carrying aeroplane shall have an emergency lighting system, independent of the main lighting system that—
 - (1) illuminates each passenger exit marking and locating sign;
 - (2) provides enough general lighting in the passenger cabin; and
 - (3) includes floor proximity emergency escape path marking for aircraft—
 - (i) having a maximum total weight authorised exceeding 5700kg;
 - (ii) which are turbo-jet and which have a maximum total weight authorised exceeding 22,700kg;
 - (iii) which, in accordance with the certificate of airworthiness, may carry more than 19 passengers.
- (d) [AAC] A passenger emergency exit and the means of opening that exit from the outside shall be marked on the outside of the aeroplane.
- (e) [AAC] A passenger-carrying aeroplane shall be equipped with a slip-resistant escape route that meets the requirements under which that aeroplane was type certified.

Implementing Standard: See IS: 7.1.8.2 for details of the emergency exit equipment requirements.

7.1.8.3 VISUAL SIGNALLING DEVICES

- (a) [AAC] A person shall not operate an aircraft over water or across land areas which have been designated by Grenada as areas in which search and rescue may be difficult, unless equipped with such signalling devices as may be appropriate to the area overflown, to include—
 - (1) visual signals for use by intercepting and intercepted aircraft;
 - (2) at least one pyrotechnic signalling device for each life raft required for overwater operations, and
 - (3) Any other requirements specified by the Authority.

7.1.8.4 SURVIVAL KITS

- (a) [AAC] A person shall not operate an aircraft across land areas which have been designated by Grenada as areas in which search and rescue would be especially difficult, unless equipped with enough survival kits for the number of occupants of the aircraft and is appropriately equipped for the route to be flown.
- (b) [AAC] A person shall not operate an aircraft over water at distances which require the carriage of life rafts, unless each raft is equipped with lifesaving equipment, including means of sustaining life as may be appropriate to the area overflown.

7.1.8.5 EMERGENCY LOCATOR TRANSMITTER

- (a) [AAC] All aircraft shall be equipped with at least one automatic ELT.
- (b) All helicopters on all flights operated across land areas which have been designated by Grenada as areas in which search and rescue would be especially difficult, shall be equipped with at least one automatic ELT.
- (c) All aircraft on all flights operated across land areas which have been designated by Grenada as areas in which search and rescue would be especially difficult, shall be equipped with at least one automatic ELT.
- (d) [AAC] A person shall not operate an aircraft authorised to carry more than 19 passengers unless equipped with at least one automatic ELT or 2 ELTs of any type.

- (e) [AAC] A person shall not operate an aircraft authorised to carry more than 19 passengers, for which the individual certificate of airworthiness is first issued after 1st July 2008 unless equipped with—
 - (1) At least two ELTs, one of which shall be automatic; or
 - (2) At least one ELT and a capability that meets the requirements of 7.1.6.9 of this part unless some other means of compliance of aircraft distress tracking has been used.
- (f) [AAC] A person shall not operate an aircraft authorised to carry 19 passengers or less unless equipped with one ELT of any type.
- (g) [AAC] A person shall not operate an aircraft authorised to carry 19 passengers or less for which the individual certificate of airworthiness was issued after 1st July 2008 unless equipped with at least one automatic ELT.
- (h) All aircraft operated in long-range overwater operations, or over designated land areas where search and rescue may be especially difficult, without having on the aeroplane at least two ELTs, one of which shall be automatic—
 - (1) on long range over water flights over routes on which the aircraft may be over water and at more than a distance corresponding to 120 minutes at cruising speed or 740km (400NM), whichever is the lesser;
 - (2) on flights away from land suitable for making an emergency landing in the event of the critical power unit becoming inoperative at any point along the route;
 - (3) on flights away from land suitable for making an emergency landing when two power units are inoperative on aircraft having three or more power units; and
 - (4) for all other aircraft, over routes on which the aircraft may be over water and at more than a distance corresponding to 30 minutes or 185km, whichever is the lesser
- (i) [AOC] A person shall not operate an aircraft in extended overwater operations without having on the aircraft a survival type ELT that transmits simultaneously on 121.5 and 406 MHz, and meets the technical standards specified by the Authority and in the current edition of Annex 10, Volume III;

- (j) [AOC] At least one survival type ELT shall be located with each life raft carried (See Subsection 7.1.8.17 of this part).
- (k) [AAC] Batteries used in ELT's shall be replaced (or recharged if the battery is rechargeable) when—
 - (1) the transmitter has been in use for more than one cumulative hour; or
 - (2) 50 percent of their useful life (or for rechargeable batteries, 50 percent of their useful life of charge) has expired.
- (l) [AAC] The expiration date for a replacement or recharged ELT battery shall be legibly marked on the outside of the transmitter.

Note: The battery useful life (or useful life of charge) requirements do not apply to batteries (such as water-activated batteries) that are essentially unaffected during probable storage intervals.

7.1.8.6 PORTABLE FIRE EXTINGUISHERS

- (a) [AAC] A person shall not operate an aircraft unless the aircraft is equipped with portable fire extinguishers of a type that, when discharged, will not cause dangerous contamination of the air within the aircraft. At least one portable fire extinguisher shall be located in—
 - (1) The pilot's compartment; and
 - (2) Each passenger compartment that is separate from the pilots' compartment and not readily accessible to the flight crew.
- (b) [AOC] A person shall not operate an aircraft unless it is equipped with portable fire extinguishers accessible for use in crew, passenger, and cargo compartments as follows—
 - (1) the type and quantity of extinguishing agent shall be suitable for the kinds of fires likely to occur in the compartment where the extinguisher is intended to be used;

Note: For passenger compartments, the extinguisher shall be designed to minimise the hazard of toxic gas concentrations.

- (2) at least one portable fire extinguisher shall be provided and conveniently located for use in each Class E cargo compartment which is accessible to crew members during

flight, and at least one shall be located in each upper and lower lobe galley;

- (3) at least one portable fire extinguisher shall be conveniently located on the flight deck for use by the flight crew;
- (4) at least one portable fire extinguisher shall be conveniently located in the passenger compartment of aircraft having a passenger seating capacity of 30 or less;
- (5) for each aircraft having a passenger seating capacity of more than 30, there shall be at least the following number of portable fire extinguishers conveniently located and uniformly distributed throughout the compartment.

Minimum Number of Hand Fire Extinguishers	Passenger Seating Capacity
0 through 29	1
30 through 60	2
61 through 200	3
201 through 300	4
301 through 400	5
401 through 500	6
501 through 600	7
601 or more	

- (c) [AAC] Any agent used in a built-in fire extinguisher for each lavatory disposal receptacle for towels or waste in an aircraft for which the individual certificate of airworthiness is first issued on or after 31 December 2011 and any extinguishing agent used in a portable fire extinguisher in an aeroplane for which the individual certificate of airworthiness is first issued on or after 31 December 2018 shall—
 - (1) Meet the applicable minimum performance requirements of the Authority; and
 - (2) Not contain Halon 1211, Halon 1301, or Halon 2402.

Note 1: The substances listed in Paragraph 7.9.1.7(c)(2) of this part, Halon 1211, Halon 1301, and Halon 2402, are listed Annex A, Group II of the Montreal Protocol on Substances that Deplete the Ozone

Layer, 8th Edition, 2009, which is listed in ICAO Annex 6, Part I: 6.2.2.1; ICAO Annex 6, Part II: 2.4.2.3; and ICAO Annex 6, Part III, Section III: 4.1.3.2.

7.1.8.7 LAVATORY FIRE EXTINGUISHER

- (a) [AOC] A person shall not operate a passenger-carrying transport category aircraft unless each lavatory in the aeroplane is equipped with a built-in fire extinguisher for each disposal receptacle for towels, paper, or waste located within the lavatory.
- (b) [AOC] Built-in lavatory fire extinguishers shall be designed to discharge automatically into each disposal receptacle upon occurrence of a fire in the receptacle.
- (c) [AAC] Any agent used in a built-in fire extinguisher for each lavatory disposal receptacle for towels or waste in an aircraft for which the individual certificate of airworthiness is first issued on or after 31 December 2011 and any extinguishing agent used in a portable fire extinguisher in an aeroplane for which the individual certificate of airworthiness is first issued on or after 31 December 2018 shall—
 - (1) Meet the applicable minimum performance requirements of the Authority; and
 - (2) Not contain Halon 1211, Halon 1301, or Halon 2402.

Note 1: The substances listed in Paragraph 7.1.8.7(c)(2) of this part, Halon 1211, Halon 1301, and Halon 2402, are listed Annex A, Group II of the Montreal Protocol on Substances that Deplete the Ozone Layer, 8th Edition, 2009, which is listed in ICAO Annex 6, Part I: 6.2.2.1; ICAO Annex 6, Part II: 2.4.2.3; and ICAO Annex 6, Part III, Section III: 4.1.3.2.

Note 2: Information concerning extinguishing agents is contained in the UNEP Halons Options Committee Technical Note 1, New Technology Halon Alternatives, and FAA Report DOT/FAA/AR-99-63, Options to the Use of Halons for Aircraft Fire Suppression Systems.

7.1.8.8 LAVATORY SMOKE DETECTOR

- (a) [AOC] A person shall not operate a passenger-carrying transport category aeroplane unless each lavatory in the aeroplane is equipped with a smoke detector system or equivalent that provides—
 - (1) a warning light in the flight deck; or

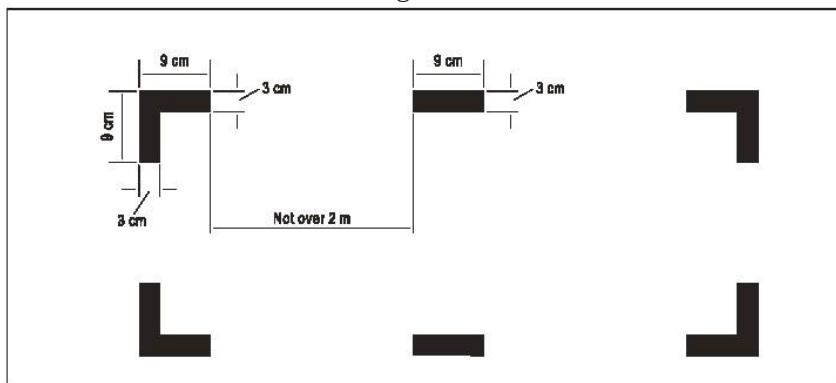
- (2) a warning light or audio warning in the passenger cabin which would be readily detected by a Cabin Crew, taking into consideration the positioning of Cabin Crew throughout the passenger compartment during various phases of flight.

7.1.8.9 CRASH AXE

- (a) [AOC] An AOC holder shall not operate an aircraft of a maximum certificated take-off mass of over 5700kg unless it is equipped with a crash axe appropriate to effective use in that type of aircraft, stored in a place not visible to passengers on the aircraft.

7.1.8.10 MARKING OF BREAK-IN POINTS

- (a) [AAC] If areas of the fuselage suitable for break-in by rescue crews in an emergency are marked on an aircraft, such areas shall be marked as shown below, and the colour of the markings shall be red or yellow and, if necessary, they shall be outlined in white to contrast with the background.



- (b) If the corner markings are more than 2 m apart, intermediate lines 9 cm x 3 cm shall be inserted so that there is no more than 2 m between adjacent markings.

7.1.8.11 FIRST-AID KIT, EMERGENCY MEDICAL KIT AND UNIVERSAL PRECAUTION KIT

- (a) First Aid Kit—

- (1) [AOC] A person shall not operate an aircraft unless it is equipped with approved first aid kit(s) and the contents of the first aid kit(s) comply with the requirements prescribed in IS 7.1.8.11
- (2) The contents of first aid kits to be carried shall comply with the requirements prescribed in IS 7.1.8.11.
- (3) [AOC] The number of first-aid kits to be carried shall be to the following scale—

Number of passenger seats installed	Number of first-aid kits required
0 to 50	1
51 to 150	2
151 to 250	3
250 to 400	4
401 to 500	5
More than 500	6

Note: See IS 7.1.8.11

(b) Emergency Medical Kit—

- (1) [AOC] A person shall not operate a passenger flight in an aeroplane with 30 seats or more unless the aircraft is equipped with an approved emergency medical kit for treatment of injuries or medical emergencies that might occur during flight time or in minor accidents.
- (2) [AOC] The contents of the medical kits to be carried shall comply with the requirements prescribed in IS 7.1.8.11.
- (3) [AOC] The medical kit shall be stored in a secure location.

(c) Universal Precaution Kit—

- (1) A person shall not operate an aircraft that requires a cabin crew member unless the aircraft is equipped with at least one universal precaution kit.
- (2) The contents of universal precaution kit to be carried shall comply with the requirements prescribed in IS 7.1.8.11.
- (3) Each aircraft shall carry universal precaution kit in accordance with the following—
 - (i) Two kits; and
 - (ii) Additional kits, as determined by the Authority, at times of increased public health risk, such as outbreak of a serious communicable disease having pandemic potential.

7.1.8.12 OXYGEN STORAGE AND DISPENSING APPARATUS

- (a) [AAC] All aircraft intended to be operated at altitudes requiring the use of supplemental oxygen shall be equipped with adequate oxygen storage and dispensing apparatus.
- (b) [AAC] The oxygen apparatus, the minimum rate of oxygen flow, and the supply of oxygen shall meet applicable airworthiness standards for type certification in the transport category as specified by the Authority.
- (c) [AOC] A AOC holder shall not operate an aircraft at altitudes above 10,000 feet unless it is equipped with oxygen masks, located so as to be within the immediate reach of flight crew members while at their assigned duty station.
- (d) [AOC] An AOC holder shall not operate a pressurised aircraft at altitudes above 25,000 feet unless—
 - (1) flight crew member oxygen masks are of a quick donning type;
 - (2) sufficient spare outlets and masks and/or sufficient portable oxygen units with masks are distributed evenly throughout the cabin to ensure immediate availability of oxygen to each required cabin crew member regardless of his location at the time of cabin pressurisation failure.
- (e) [AOC] An oxygen-dispensing unit connected to oxygen supply terminals is installed so as to be automatically deployable and

immediately available to each occupant, wherever seated. The total number of dispensing units and outlets shall exceed the number of seats by at least 10%. The extra units are to be evenly distributed throughout the cabin.

- (f) [AOC] The amount of supplemental oxygen for sustenance required for a particular operation shall be determined on the basis of flight altitudes and flight duration, consistent with the operating procedures established for each operation in the Operations Manual and with the routes to be flown, and with the emergency procedures specified in the Operations Manual.

Implementing Standard: See IS: 7.1.8.12 to determine the amount of supplemental oxygen needed for nonpressurised and pressurised aircraft.

7.1.8.13 PROTECTIVE BREATHING EQUIPMENT

- (a) [AOC] An AOC holder shall not operate an aircraft with a maximum certified takeoff mass exceeding 5700 kg. or having a maximum approved seating configuration of more than 19 seats unless—
- (1) it has PBE to protect the eyes, nose and mouth of at least one flight crew member while on flight deck duty and to provide oxygen for a period of not less than 15 minutes; and
 - (2) it has sufficient portable PBE to protect the eyes, nose and mouth of all required cabin crew members and to provide breathing gas for a period of not less than 15 minutes.
- (b) [AOC] The oxygen supply for PBE may be provided by the required supplemental oxygen system.
- (c) [AOC] The PBE intended for flight crew use shall be conveniently located on the flight deck and be easily accessible for immediate use by each required flight crew member at their assigned duty station.
- (d) [AOC] The PBE intended for cabin crew use shall be installed adjacent to each required cabin crew member duty station.
- (e) [AOC] Easily accessible portable PBE shall be provided and located at or adjacent to the required hand fire extinguishers except that, where the fire extinguisher is located inside a cargo compartment, the PBE shall be stowed outside but adjacent to the entrance to that compartment.

- (f) [AOC] The PBE while in use shall not prevent required communication.

7.1.8.14 FIRST AID OXYGEN DISPENSING UNITS

- (a) [AOC] An AOC holder shall not conduct a passenger carrying operation in a pressurised aircraft at altitudes above 25,000 feet, when a cabin crew member is required to be carried, unless it is equipped with—
 - (1) undiluted first-aid oxygen for passengers who, for physiological reasons, may require oxygen following a cabin depressurisation; and
 - (2) a sufficient number of dispensing units, but in no case less than two, with a means for cabin crew to use the supply.
- (b) [AOC] The amount of first-aid oxygen required in Paragraph 7.1.8.14(a) of this subsection for a particular operation and route shall be determined on the basis of—
 - (1) flight duration after cabin depressurisation at cabin altitudes of more than 8,000 feet;
 - (2) an average flow rate of at least 3 litres Standard Temperature Pressure Dry/minute/person; and
 - (3) at least 2% of the passengers carried, but in no case for less than one person.
- (c) The amount of first aid oxygen required for a particular operation shall be determined on the basis of cabin pressure altitudes and flight duration, consistent with the operating procedures established for each operation and route.
- (d) The oxygen equipment provided shall be capable of generating a mass flow to each user of at least 4 litres per minute, STPD. Means may be provided to decrease the flow to not less than 2 litres per minute, STPD, at any altitude.

7.1.8.15 MEGAPHONES

- (a) [AOC] Each person operating a passenger-carrying aircraft with a seating capacity of more than 19, shall have a portable battery-powered megaphone or megaphones readily accessible to the crew members assigned to direct emergency evacuation.

- (b) [AOC] The number and location of megaphones required in Paragraph 7.1.8.15(a) of this subsection shall be determined as follows—
- (1) on aircraft with a seating capacity of more than 19 and less than 100 passengers, one megaphone shall be located in the passenger cabin where it would be readily accessible to a normal Cabin Crew seat;
 - (2) on aircraft with a seating capacity of more than 99 passengers, two megaphones in the passenger cabin on each aircraft one installed at the forward end and the other at the most rearward location where it would be readily accessible to a normal Cabin Crew seat; and
 - (3) for aeroplane with more than one passenger deck, in all cases when the total passenger seating configuration of a deck is more than 60, at least one megaphone is required on the deck.

7.1.8.16 INDIVIDUAL FLOTATION DEVICES

(a) LANDPLANES.

- (1) [AAC] Landplanes shall carry the equipment prescribed in Paragraph 7.1.8.16(a)(2) of this subsection—
 - (i) When flying en route over water beyond gliding distance from the shore;
 - (ii) When flying over water at a distance of more than 93 km (50 NM) away from the shore for aircraft capable of maintaining safe altitude after the failure of one engine for two-engine aircraft and the failure of two engines for three- or four-engine aircraft; or
 - (iii) When taking off or landing at an aerodrome where the Authority has determined the take-off or approach path is so disposed over water that in the event of a mishap there would be the likelihood of a ditching.
- (2) [AAC] One life jacket or equivalent flotation device equipped with a means of electric illumination shall be carried for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided.

(b) SEAPLANES.

- (1) [AAC] For all flights, seaplanes shall be equipped with the equipment prescribed in Paragraph 7.1.8.16(a)(2) of this subsection.

Note: Life jackets accessible from seats or berths located in crew rest compartments are required only if the seats or berths concerned are certified to be occupied during take-off and landing.

7.1.8.17 LIFE RAFTS

- (a) [AAC] In addition to the equipment prescribed in Subsections 7.8.1.16 and 7.8.1.18 of this part, life rafts in sufficient numbers to carry all persons on board shall be installed in—

- (1) Aeroplanes operated on long range overwater flights;
- (2) All other aeroplanes when they are operated over water away from land suitable for making an emergency landing at a distance of more than 185 km (100 NM) in the case of single-engine aeroplanes, and more than 370 km (200 NM) in the case of multi-engine aeroplanes capable of continuing flight with one engine inoperative;
- (3) Class 1 and Class 2 helicopters when they are operated over water at a distance from land corresponding to more than 10 minutes at normal cruise speed; and
- (4) Class 3 helicopters when they are operated over water beyond autorotational or safe forced landing distance from land.

- (b) [AOC] An aircraft shall have life rafts with a sufficient capacity to carry all persons on board in the event of the loss of one raft of the largest capacity.

- (c) All life rafts shall be stowed so as to facilitate their ready use in an emergency.

- (d) Life rafts shall be equipped with the following life-sustaining equipment—

- (1) An electric survivor locator light;
- (2) A survival kit;

- (3) A pyrotechnic signalling device; and
- (4) An ELT. (Section 7.9.1.5 of this part provides additional requirements for first aid oxygen dispensing units.)
- (e) [AOC] In helicopters, life rafts that are not deployable by remote control and that have a mass of more than 40 kg shall be equipped with a means of mechanically assisted deployment.

7.1.8.18 FLOTATION DEVICE FOR HELICOPTER DITCHING

- (a) [AAC] All helicopters flying over water at a distance from land corresponding to more than 10 minutes at normal cruise speed in the case of performance Class 1 or 2 helicopters, or flying over water beyond auto rotational or safe forced landing distance from land in the case of performance Class 3 helicopters, shall be fitted with a permanent or rapidly deployable means of floatation so as to ensure a safe ditching of the helicopter.

7.1.8.19 8.8 KHZ UNDERWATER LOCATING DEVICE

- (a) All aircraft of a maximum certified take-off mass of over 27 000kg, shall be equipped with an Underwater Locating Device operating at a frequency of 8.8kHz.
- (b) The Underwater Locating Device shall—
 - (1) Automatically activated;
 - (2) Operate for a minimum of 30 days;
 - (3) Not be installed in the wings or empennage.

7.1.9 *Miscellaneous Systems and Equipment*

7.1.9.1 SEATS, SAFETY BELTS AND SHOULDER HARNESSSES

- (a) [AAC] An aircraft used in passenger operations shall be equipped with the following seats, safety belts, and shoulder harnesses that meet the airworthiness requirements for type certification of that aircraft—
 - (1) a seat or berth with safety belt for each person on board over an age of 2;

Note: A berth designed to be occupied by two persons, such as a multiple lounge or divan seat, shall be equipped with an approved safety belt for use by two occupants during en route flight only.

- (2) A safety harness for each flight crew member seat.
 - (i) The safety harness for each pilot seat shall incorporate a device that will automatically restrain the occupant's torso in the event of rapid deceleration.
 - (ii) The safety harness for each pilot seat, which includes shoulder straps and a seat belt, shall incorporate a restraining device to prevent a suddenly incapacitated pilot from interfering with the flight controls.
- (3) A forward or rearward facing (within 15 degrees of the longitudinal axis of the aircraft) seat in the passenger compartment, for the use of each cabin crew member required to satisfy the intent of 9.3.1.7 in respect of emergency evacuation.
- (4) The cabin crew member seats shall be located near floor level and other emergency exits as required by the Authority for emergency evacuation.

7.1.9.2 PASSENGER AND PILOT COMPARTMENT DOORS

- (a) [AOC] PILOT COMPARTMENT DOOR.
 - (1) [AAC] In all aircraft which are equipped with a flight crew compartment door, this door shall be capable of being locked and, means provided by which cabin crew can discretely notify the flight crew in the event of suspicious activity or security breaches in the cabin
 - (2) All passenger carrying aircraft—
 - (i) of a maximum certificated take-off mass in excess of 54 500 kg; or
 - (ii) of a maximum certificated take-off mass in excess of 45 500 kg with a passenger seating capacity greater than 19; or

- (iii) with a passenger seating capacity greater than 60 shall be equipped with an approved flight crew compartment door that is designed to resist penetration by small arms fire and grenade shrapnel and, to resist forcible intrusions by unauthorised persons. This door shall be capable of being locked and unlocked from either pilot's station
- (3) In all aircraft equipped with a flight crew compartment door—
 - (i) this door shall be closed and locked from the time all external doors are closed following embarkation until any such door is opened for disembarkation, except when necessary to permit access and egress by authorised persons; and
 - (ii) means shall be provided for monitoring from either pilot's station the entire door area outside the flight crew compartment to identify persons requesting entry and, to detect suspicious behaviour or potential threat.
- (b) [AOC] PASSENGER COMPARTMENT DOORS.
 - (1) Each passenger compartment door shall have—
 - (i) A means for the crew, in an emergency, to unlock each door that leads to a compartment that is normally accessible to passengers and that can be locked by passengers;
 - (ii) A placard on each door used to access a required passenger emergency exit, indicating that such door shall be open during take-off and landing; and
 - (iii) A means readily available for each crew member to unlock any door that separates a passenger compartment from another compartment that has emergency exit provisions.

7.1.9.3 PASSENGER INFORMATION SIGNS

- (a) [CAT] An aircraft over 5700kg shall not operate unless it is equipped with—
 - (1) at least one passenger information sign (using either letters or symbols) notifying when smoking is prohibited and one sign

(using either letters or symbols) notifying when safety belts should be fastened and shall, when illuminated, be legible to each person seated in the passenger cabin under all probable conditions of cabin illumination;

- (2) signs which notify when safety belts should be fastened and when smoking is prohibited and shall be so constructed that the crew can turn them on and off;
 - (3) a sign or placard affixed to each forward bulkhead and each passenger seat back that read "Fasten Seat Belt While Seated."
- (b) [AAC] Notwithstanding Paragraph 7.1.9.3(a) of this subsection, no person shall operate an aircraft in which all passenger seats are not visible from the flight deck, unless the aircraft is equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

7.1.9.4 PUBLIC ADDRESS SYSTEM

- (a) [AOC] An AOC holder shall not operate a passenger carrying aeroplane with a maximum approved passenger seating configuration of more than 19 unless a public address system is installed that—
- (1) operates independently of the interphone systems except for handsets, headsets, microphones, selector switches and signalling devices;
 - (2) Is readily accessible for immediate use from each required flight crew member station;
 - (3) for each required floor level passenger emergency exit which has an adjacent cabin crew seat, has a microphone which is readily accessible to the seated cabin crew member, except that one microphone may serve more than one exit, provided the proximity of the exits allows unassisted verbal communication between seated cabin crew members;
 - (4) is capable of operation within 10 seconds by a cabin crew member at each of those stations in the compartment from which its use is accessible; and
 - (5) is audible and intelligible at all passenger seats, toilets, and cabin crew seats and workstations.

- (b) [AOC] No AOC holder may operate a passenger-carrying helicopter with a maximum approved passenger seating configuration of more than 19 unless a public address system is installed that—
 - (1) Operates independently of the interphone systems except for handsets, headsets, microphones, selector switches, and signalling devices;
 - (2) Is readily accessible for immediate use from each required flight crew member station;
 - (3) For each required floor-level passenger emergency exit that has an adjacent cabin crew seat, has a microphone that is readily accessible to the seated cabin crew member, except that one microphone may serve more than one exit, provided the proximity of the exits allows unassisted verbal communication between seated cabin crew members;
 - (4) Is capable of operation within 10 seconds by a cabin crew member at each of those stations in the compartment from which its use is accessible;
 - (5) Is audible and intelligible at all passenger seats, lavatories, and cabin crew seats and workstations; and
 - (6) Following a total failure of the normal electrical generating system, provides reliable operation for a minimum of 10 minutes.
- (c) [AOC] No AOC holder may operate a passenger-carrying helicopter with a maximum approved passenger seating configuration of more than 9 but less than 19 without a public address system installed unless—
 - (1) The helicopter is designed without a bulkhead between pilot and passengers; and
 - (2) The operator is able to demonstrate in a manner acceptable to the Authority that, when the helicopter is in flight, the pilot's voice is audible and intelligible at all passenger seats.

7.1.9.5 MATERIALS FOR CABIN INTERIORS

- (a) A person shall not operate an aircraft unless each compartment used by the crew or passengers meets the following requirements of the State of Design:

- (1) Materials shall be at least flash resistant;
 - (2) The wall and ceiling linings and the covering of upholstering, floors, and furnishings shall be flame resistant;
 - (3) Each compartment where smoking is to be allowed shall be equipped with self-contained ash trays that are completely removable, and other compartments shall be placarded against smoking; and
 - (4) Each receptacle for used towels, papers, and wastes shall be of fire-resistant material and shall have a cover or other means of containing possible fires started in the receptacles.
- (b) For aircraft for which the State of Design has developed new airworthiness requirements for cabin interiors since original type certification, the owner of the aircraft shall ensure that all materials that do not meet current State of Design requirements shall have them replaced upon the first major overhaul of the aircraft cabin or refurbishing of the cabin interior with materials that meet the new requirements.

7.1.9.6 MATERIALS FOR CARGO AND BAGGAGE COMPARTMENTS

- (a) [AAC] Each cargo compartment shall have ceiling and sidewall liner panels that are constructed of materials that meet the test requirements for flame resistance of cargo compartment liners as prescribed for type certification.

Note: The term "liner" includes any design feature, such as a joint or fastener, which would affect the capability of the liner to safely contain fire.

7.1.9.7 POWER SUPPLY, DISTRIBUTION, AND INDICATION SYSTEM

- (a) [AOC] An AOC holder shall not operate an aircraft unless it is equipped with—
- (1) a power supply and distribution system that meets the airworthiness requirements for certification of an aircraft in the transport category, as specified by the Authority, or
 - (2) a power supply and distribution system that is able to produce and distribute the load for the required instruments and equipment, with use of an external power supply if any one

power source or component of the power distribution system fails; and

Note: The use of common elements in the power system may be approved if the Authority finds that they are designed to be reasonably protected against malfunctioning.

- (3) a means for indicating the adequacy of the power being supplied to required flight instruments.
- (b) [AOC] Engine-driven sources of energy, when used, shall be on separate engines.

7.1.9.8 PROTECTIVE CIRCUIT FUSES

- (a) [AOC] An AOC holder shall not operate an aircraft in which protective fuses are installed unless there are spare fuses available for use in flight equal to at least 10% of the number of fuses of each rating or three of each rating whichever is the greater.

7.1.9.9 ICING PROTECTION EQUIPMENT

- (a) [AAC] Unless an aircraft is certified under the transport category airworthiness requirements relating to ice protection, a person shall not operate an aircraft in expected or actual icing conditions unless the aircraft is equipped for the prevention or removal of ice on windshields, wings, control surfaces, empennage, propellers, rotor blades, or other parts of the aircraft where ice formation will adversely affect the safety of the aircraft.
- (b) [AAC] A person shall not operate an aircraft in expected or actual icing conditions at night unless the aircraft is equipped with a means to illuminate or detect the formation of ice. Any illumination that is used shall be of a type that will not cause glare or reflection that may handicap crew members in the performance of their duties.

7.1.9.10 PITOT HEAT AND INDICATION SYSTEMS

- (a) [AAC] A person shall not operate an aircraft in flight unless it is equipped with a pitot heat system with a means of preventing malfunctions due to either condensation or icing.
- (b) [AOC] An AOC holder shall not operate a transport category aircraft equipped with a flight instrument pitot heating system unless the aircraft is also equipped with an operable pitot heat indication system that complies with the following requirements—

- (1) the indication provided shall incorporate an amber light that is in clear view of a flight crew member;
 - (2) the indication provided shall be designed to alert the flight crew if either the pitot heating system is switched "off," or
 - (3) the pitot heating system is switched "on" and any pitot tube heating element is inoperative.
- (c) An integrated flight crew alerting system that will notify the crew if the pitot system is malfunctioning

7.1.9.11 STATIC PRESSURE SYSTEM

- (a) [AAC] A person shall not operate an aircraft unless it is equipped with two independent static pressure systems, vented to the outside atmospheric pressure so that they will be least affected by airflow variation or moisture or other foreign matter and installed so as to be airtight except for the vent.
- (b) [AAC] A person shall not operate an aircraft in IFR unless the aircraft is equipped with a static pressure system vented to the outside atmospheric pressure so that it will be least affected by airflow variation or moisture or other foreign matter, and installed so as to be airtight except for the vent, and a means of selecting an alternative source of static pressure.
- (c) Propeller driven aircraft of less than 5,700Kg MTOW may have one static pressure system which includes an alternate static source.

7.1.9.12 WINDSHIELD WIPERS

- (a) [AOC] An AOC holder shall not operate an aircraft with a maximum certified take-off mass of more than 5700 kg unless it is equipped at each pilot station with a windshield wiper or equivalent means to maintain a clear portion of the windshield during precipitation.

7.1.9.13 CHART HOLDER

- (a) [AOC] aircraft that have been originally type certificated with chart holders must have one installed. An AOC holder shall not operate an aircraft with a chart holder unless it can be illuminated for night operations.

7.1.9.14 COSMIC RADIATION DETECTION EQUIPMENT

- (a) [AAC] A person shall ensure that aircraft intended to be operated above 15,000 m (49,000 ft) are equipped with—
 - (1) an instrument to measure and indicate continuously the dose rate of total cosmic radiation being received (i.e., the total of ionising and neutron radiation of galactic and solar origin) and the cumulative dose on each flight.
 - (2) A system of on-board quarterly radiation sampling acceptable to the Authority—
 - (i) The sampling shall be carried out in conjunction with a radiological agency or similar organisation acceptable to the Authority.
 - (ii) Sixteen route sectors that include flight above 15 000 m (49 000 ft) shall be sampled every quarter (3 months). Where less than 16 route sectors that include flight above 15 000 m (49 000 ft) are achieved each quarter, then all sectors above 15 000 m (49 000 ft) shall be sampled.
 - (iii) The cosmic radiation recorded shall include both the neutron and non-neutron components of the radiation field.
 - (iv) The results of the sampling, including a cumulative summary quarter on quarter, shall be reported to the Authority under arrangements acceptable to the Authority.
- (b) A display unit readily visible to a flight crew member.
- (c) The operator shall maintain records so that the total cosmic radiation dose received by each crew member over a period of twelve consecutive months can be determined. The operator shall maintain records so that the total cosmic radiation dose received by each crew member over a period of 12 consecutive months can be determined.

7.1.9.15 MARITIME SOUND SIGNALLING DEVICE

- (a) [AAC] All seaplanes for all flights shall be equipped with equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

7.1.9.16 ANCHORS

- (a) [AAC] All seaplanes for all flights shall be equipped with one anchor, and one sea anchor (drogue), when necessary to assist in manoeuvring (approval for the anchors not required).

Note.- "Seaplanes" includes amphibians operated as seaplanes.

7.1.9.17 OUTSIDE AIR TEMPERATURE

- (a) A person shall not operate an aircraft in flight unless it is equipped with a means of indicating the outside air temperature in the flight crew compartment.

7.1.9.18 MICROPHONES

- (a) EQUIPAGE. A person shall not operate the following aircraft or in the following conditions unless the aircraft is equipped with a boom microphone or equivalent available at each required flight crew member flight duty station—
 - (1) [AAC-Aeroplane] Any aeroplane in IFR conditions;
 - (2) [AOC-Aeroplane] Any aeroplane in commercial air transport operations; or
 - (3) [AAC-Helicopter] Any helicopter.
- (b) USAGE. All flight crew members required to be on flight deck duty shall communicate through boom microphones or equivalent under the following operations or conditions—
 - (1) [AAC-Aeroplane] During IFR operations;
 - (2) [AOC-Aeroplane] Below flight level 150; or
 - (3) [AAC-Helicopter] At all times.

PART 7 – IMPLEMENTING STANDARDS FOR INSTRUMENTS AND EQUIPMENT

For ease of reference the number assigned to each IS corresponds to its associated regulation. For example, IS 7.1.2.6 would reflect a standard required by 7.1.2.6 of this part

PART 7 – IMPLEMENTING STANDARDS**IS: 7.1.2.6 CATEGORY II: INSTRUMENTS AND EQUIPMENT APPROVAL AND CONTINUING AIRWORTHINESS REQUIREMENTS**

- (a) GENERAL. The instruments and equipment required by 7.1.2.6 of this part shall be approved as provided in this IS before being used in CAT II operations. Before presenting an aircraft for approval of the instruments and equipment, it shall be shown that since the beginning of the 12th calendar month before the date of submission—
 - (1) The ILS localiser and glide slope equipment were bench checked according to the manufacturer's instructions and found to meet those standards specified in RTCA Paper 23-63/DO-177 dated 14 March 1963, *Standard Adjustment Criteria for Airborne Localizer and Glideslope Receivers*;
 - (2) The altimeters and the static pressure systems were tested and inspected; and
 - (3) All other instruments and items of equipment specified in 7.1.2.6 of this part that are listed in the proposed maintenance programme were bench checked and found to meet the manufacturer's specifications.
- (b) FLIGHT CONTROL GUIDANCE SYSTEM. All components of the flight control guidance system shall be approved as installed by the evaluation programme specified in paragraph (e) of this IS if they have not been approved for CAT III operations under applicable type or supplemental type certification procedures. In addition, subsequent changes to make, model, or design of the components shall be approved under this paragraph. Related systems or devices, such as the autothrottle and computed missed approach guidance system, shall be approved in the same manner if they are to be used for CAT II operations.

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- (c) RADIO ALTIMETER. A radio altimeter shall meet the performance criteria of this paragraph for original approval and after each subsequent modification.
- (1) The radio altimeter shall display to the flight crew clearly and positively the wheel height of the main landing gear above the terrain;
 - (2) The radio altimeter shall display wheel height above the terrain to an accuracy of 1.5 m (± 5 ft) or 5 per cent, whichever is greater, under the following conditions—
 - (i) Pitch angles of zero to $\pm 5^\circ$ about the mean approach attitude;
 - (ii) Roll angles of zero to 20° in either direction;
 - (iii) Forward velocities from minimum approach speed up to 200 knots; or
 - (iv) Sink rates from zero to 5 m (15 ft) per second at altitudes from 31 m (100 ft) to 61 m (200 ft).
 - (3) Over level ground, the radio altimeter shall track the actual altitude of the aircraft without significant lag or oscillation;
 - (4) With the aircraft at an altitude of 61 m (200 ft) or less, any abrupt change in terrain representing no more than 10 per cent of the aircraft's altitude shall not cause the altimeter to unlock, and indicator response to such changes shall not exceed 0.1 seconds and, in addition, if the system unlocks for greater changes, it shall reacquire the signal in less than 1 second;
 - (3) Systems that contain a push-to-test feature shall test the entire system (with or without an antenna) at a simulated altitude of less than 152 m (500 ft); and
 - (4) The system shall provide to the flight crew a positive failure warning display any time there is a loss of power or an absence of ground return signals within the designed range of operating altitudes.
- (d) OTHER INSTRUMENTS AND EQUIPMENT. All other instruments and items of equipment required by 7.1.2.6 of this part shall be capable of performing as necessary for CAT II operations. Approval

is also required after each subsequent modification to these instruments and items of equipment.

- (e) EVALUATION PROGRAMME.
- (f) APPLICATION. Approval by evaluation is requested as a part of the application for approval of the CAT II manual.
- (g) DEMONSTRATIONS. Unless otherwise authorised by the Authority, the evaluation programme for each aircraft requires the demonstrations specified in this paragraph. At least 50 ILS approaches shall be flown with at least 5 approaches on each of 3 different ILS facilities and no more than one-half of the total approaches on any one ILS facility. All approaches shall be flown under simulated instrument conditions to a 30 m (100 ft) DH and 90 per cent of the total approaches made shall be successful. A successful approach is one in which—
 - (1) At the 30 m (100 ft) DH, the indicated airspeed and heading are satisfactory for a normal flare and landing (speed shall be ± 5 knots of programmed airspeed, but may not be less than computed threshold speed if autothrottles are used);
 - (2) The aircraft, at the 30 m (100 foot) DH, is positioned so that the flight deck is within, and tracking so as to remain within, the lateral confines of the runway extended;
 - (3) Deviation from glide slope after leaving the outer marker does not exceed 50 per cent of full-scale deflection as displayed on the ILS indicator;
 - (4) No unusual roughness or excessive attitude changes occur after leaving the middle marker; and
 - (5) In the case of an aircraft equipped with an approach coupler, the aircraft is sufficiently in trim when the approach coupler is disconnected at the DH to allow for the continuation of a normal approach and landing.
- (h) RECORDS. During the evaluation programme, the following information shall be maintained by the applicant for the aircraft with respect to each approach and shall be made available to the Authority upon request—
 - (1) Each deficiency in airborne instruments and equipment that prevented the initiation of an approach;

- (2) The reasons for discontinuing an approach, including the altitude above the runway at which it was discontinued;
 - (3) Speed control at the 30 m (100 ft) DH if autothrottles are used;
 - (4) Trim condition of the aircraft upon disconnecting the auto coupler with respect to continuation to flare and landing;
 - (5) Position of the aircraft at the middle marker and at the DH indicated both on a diagram of the basic ILS display and a diagram of the runway extended to the middle marker. Estimated touchdown point shall be indicated on the runway diagram;
 - (6) Compatibility of the flight director with the auto coupler, if applicable; and
 - (7) Quality of overall system performance.
- (i) EVALUATION. A final evaluation of the flight control guidance system is made upon successful completion of the demonstrations. If no hazardous tendencies have been displayed or are otherwise known to exist, the system is approved as installed.
- (j) Each maintenance programme for CAT II instruments and equipment shall contain the following—
- (1) A list of each instrument and item of equipment specified in 7.1.2.6 of this part that is installed in the aircraft and approved for CAT II operations, including the make and model of those specified in Paragraph 7.1.2.6(a)(1) of this part;
 - (2) A schedule that provides for the performance of inspections under paragraph (5) of this IS within 3 calendar months after the date of the previous inspection. The inspection shall be performed by a person authorised by Part 5 of these regulations, except that each alternate inspection may be replaced by a functional flight check. This functional flight check shall be performed by a pilot holding a CAT II pilot authorisation for the type aircraft checked;
 - (3) A schedule that provides for the performance of bench checks for each listed instrument and item of equipment that is specified in Paragraph 7.1.2.6(a)(1) of this part within 12 calendar months after the date of the previous bench check;

- (4) A schedule that provides for the performance of a test and inspection of each static pressure system within 12 calendar months after the date of the previous test and inspection;
 - (5) The procedures for the performance of the periodic inspections and functional flight checks to determine the ability of each listed instrument and item of equipment specified in Paragraph 7.1.2.6(a)(1) of this part to perform as approved for CAT II operations, including a procedure for recording functional flight checks;
 - (6) A procedure for assuring that the pilot is informed of all defects in listed instruments and items of equipment;
 - (7) A procedure for assuring that the condition of each listed instrument and item of equipment upon which maintenance is performed is at least equal to its CAT II approval condition before it is returned to service for CAT II operations; and
 - (8) A procedure for an entry in the continuing airworthiness records that shows the date, aerodrome, and reasons for each discontinued CAT II operation because of a malfunction of a listed instrument or item of equipment.
- (k) BENCH CHECK. A bench check required by this section shall comply with this paragraph.
- (1) Except as specified in paragraph (k)(2) of this IS, the bench check shall be performed by a certificated repair station holding one of the following ratings as appropriate to the equipment checked—
 - (i) An instrument rating; or
 - (ii) An avionics rating.
 - (2) The bench check shall be performed by a certificated air operator on aircraft identified in its approved operations specifications with the approved authorisations to perform maintenance and approve for return to service its own aircraft maintained under a continuing airworthiness maintenance programme under an equivalent system identified in Part 9 of these regulations.
 - (3) The bench check shall consist of removal of an instrument or item of equipment and performance of the following—

- (i) A visual inspection for cleanliness, impending failure, and the need for lubrication, repair, or replacement of parts;
 - (ii) Correction of items found by that visual inspection; and
 - (iii) Calibration to at least the manufacturer's specifications unless otherwise specified in the approved CAT II Manual for the aircraft in which the instrument or item of equipment is installed.
- (l) EXTENSIONS. After the completion of one maintenance cycle of 12 calendar months, a request to extend the period for checks, tests, and inspections is approved if it is shown that the performance of particular equipment justifies the requested extension.

IS: 7.1.2.10 REDUCED VERTICAL SEPARATION MINIMUM – ALTIMETRY SYSTEM PERFORMANCE REQUIREMENTS FOR OPERATIONS IN RVSM AIRSPACE

- (a) With respect to groups of aeroplanes that are nominally of identical design and build with respect to all details that may influence the accuracy of height-keeping performance, the height-keeping performance capability shall be such that the TVE for the group of aeroplanes shall have a mean no greater than 25 m (80 ft) in magnitude and shall have a standard deviation no greater than $28 - 0.013z^2$ for $0 \leq z \leq 25$ when z is the magnitude of the mean TVE in metres, or $92 - 0.004z^2$ for $0 \leq z \leq 80$ where z is in feet. In addition, the components of TVE shall have the following characteristics—
 - (1) The mean ASE of the group shall not exceed 25 m (80 ft) in magnitude;
 - (2) The sum of the absolute value of the mean ASE and of three standard deviations of ASE shall not exceed 75 m (245 ft); and
 - (3) The differences between cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and, in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.
- (b) With respect to aeroplanes for which the characteristics of the airframe and altimetry system fit are unique and so cannot be classified as belonging to a group of aeroplanes encompassed by paragraph (a) of this IS, the height-keeping performance capability shall be such that the components of the TVE of the aeroplane have the following characteristics—

- (1) The ASE of the aeroplane shall not exceed 60 m (200 ft) in magnitude under all flight conditions; and
- (2) The differences between the cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and, in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.

IS: 7.1.7.1 CONSTRUCTION AND INSTALLATION

- (a) The following requirements shall apply to an ADFR—
 - (1) Deployment shall take place when the aeroplane structure has been significantly deformed;
 - (2) Deployment shall take place when an aeroplane sinks in water;
- (3) The ADFR shall not be capable of manual deployment;
- (4) The ADFR shall be able to float on water;
- (5) The ADFR deployment shall not compromise the safe continuation of the flight;
- (6) The ADFR deployment shall not significantly reduce the chance of survival of the recorder and of successful transmission by its ELT; The ADFR deployment shall not release more than one piece;
- (7) The ADFR deployment shall not release more than one piece;
- (8) An alert shall be made to the flight crew when the ADFR is no longer captive to the aircraft;
- (9) The flight crew shall have no means to disable ADFR deployment when the aircraft is airborne;
- (10) The ADFR shall contain an integrated ELT, which shall activate automatically during the deployment sequence. Such ELT may be of a type that is activated in-flight and provides information from which a position can be determined; and

- (11) The integrated ELT of an ADFR shall satisfy the same requirements as an ELT required to be installed on an aeroplane. The integrated ELT shall at least have the same performance as the fixed ELT to maximise detection of the transmitted signal.

Note: If an integrated ELT of a type that is activated in flight is used within an ADFR, it may be a means to comply with the requirements prescribed in 7.1.6.9 of this part.

IS: 7.1.7.5 CONTINUED SERVICEABILITY AND INSPECTION OF FLIGHT RECORDER SYSTEMS

- (a) The operator shall, prior to the first flight of the day, monitor the built-in test features for the flight recorders and flight data acquisition unit, when installed, by manual and/or automatic checks.
- (b) FDR systems or ADRS, CVR systems or CARS, and AIR systems or AIRS shall have recording inspection intervals of 1 year; subject to the approval from the Authority, this period may be extended to 2 years provided these systems have demonstrated a high integrity of serviceability and self-monitoring. DLR systems or DLRS shall have recording inspection intervals of 2 years; subject to the approval from the Authority, this period may be extended to 4 years provided these systems have demonstrated high integrity of serviceability and self-monitoring.
- (c) The operator shall carry out inspections as follows—
- (1) An analysis of the recorded data from the flight recorders shall ensure that the recorder operates correctly for the nominal duration of the recording;
- (2) The FDR or ADRS recording from a complete flight shall be examined in engineering units to evaluate the validity of all recorded parameters. Particular attention shall be given to parameters from sensors dedicated to the FDR or ADRS. Parameters taken from the aircraft's electrical bus system need not be checked if their serviceability can be detected by other aircraft systems;
- (3) The readout facility shall have the necessary software to accurately convert the recorded values to engineering units and to determine the status of discrete signals;

- (4) An examination of the recorded signal on the CVR or the CARS shall be carried out by replay of the CVR or CARS recording. While installed in the aircraft, the CVR or CARS shall record test signals from each aircraft source and from relevant external sources to ensure that all required signals meet intelligibility standards;
 - (5) Where practicable, during the examination, a sample of in-flight recordings of the CVR or CARS shall be examined for evidence that the intelligibility of the signal is acceptable; and
 - (6) An examination of the recorded images on the AIR or AIRS shall be carried out by replay of the AIR or AIRS recording. While installed in the aircraft, the AIR or AIRS shall record test images from each aircraft source and from relevant external sources to ensure that all required images meet recording quality standards.
- (d) An examination of the recorded messages on the DLR or DLRS shall be carried out by replay of the DLR or DLRS recording.
- (e) A flight recorder system shall be considered unserviceable if there is a significant period of poor quality data, unintelligible signals, or if one or more of the mandatory parameters are not recorded correctly.
- (f) The operator shall make available a report of the recording inspection on request to Authorities for monitoring purposes.
- (g) Calibration of the FDR system—
- (1) For those parameters that have sensors dedicated only to the FDR and are not checked by other means, recalibration shall be carried out at an interval determined by the continuing airworthiness information for the FDR system. In the absence of such information, a recalibration shall be carried out at least every 5 years. The recalibration shall determine any discrepancies in the engineering conversion routines for the mandatory parameters and to ensure that parameters are being recorded within the calibration tolerances; and
 - (2) When the parameters of altitude and airspeed are provided by sensors that are dedicated to the FDR system, there shall be a recalibration performed at an interval determined by the continuing airworthiness information for the FDR system. In the absence of such information, a recalibration shall be carried out at least every 2 years.

IS: 7.1.7.10(A) FLIGHT DATA RECORDERS: TYPES AND PARAMETERS – AEROPLANE

- (a) PARAMETERS – GENERAL.
 - (1) The parameters that satisfy the requirements for FDRs are listed in table 1.
 - (2) The number of parameters to be recorded shall depend on aeroplane complexity.
 - (3) The parameters without an asterisk (*) are mandatory parameters that shall be recorded regardless of aeroplane complexity.
 - (4) The parameters designated by an asterisk (*) shall be recorded if an information data source for the parameter is used by aeroplane systems or the flight crew to operate the aeroplane. However, other parameters may be substituted with due regard to the aeroplane type and the characteristics of the recording equipment.
- (b) If further FDR recording capacity is available, recording of the following additional information shall be considered—
 - (1) Operational information from electronic display systems, such as EFIS, ECAM, and EICAS. Use the following order of priority—
 - (i) Parameters selected by the flight crew relating to the desired flight path (e.g., barometric pressure setting, selected altitude, selected airspeed, DH, and autoflight system engagement and mode indications if not recorded from another source);
 - (ii) Display system selection/status (e.g., SECTOR, PLAN, ROSE, NAV, WXR, COMPOSITE, COPY);
 - (iii) Warnings and alerts; and
 - (iv) The identity of displayed pages for emergency procedures and checklists.
 - (2) Retardation information including brake application for use in the investigation of landing overruns and rejected take-offs.

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- (c) ALL FLIGHT DECK FLIGHT CONTROL FORCES*. Control wheel, control column, rudder pedal flight deck input forces
 - (d) VERTICAL DEVIATION*. ILS glide path, MLS elevation, GNSS approach path
 - (e) HORIZONTAL DEVIATION*. ILS localiser, MLS azimuth, GNSS approach path
 - (f) DME 1 and 2 distances*
 - (g) PRIMARY NAVIGATION SYSTEM REFERENCE*. GNSS, INS, VOR/DME, MLS, Loran C, ILS
 - (h) BRAKES*. Left and right brake pressure, left and right brake pedal position
 - (i) Date*
 - (j) Event marker*
 - (k) Head up display in use*
 - (l) Para visual display on*

Note: It is not intended that aeroplanes issued with an individual certificate of airworthiness before 01 January 2016 be modified to meet the range, sampling, accuracy or resolution guidance detailed in this IS.

- (m) PARAMETERS – FLIGHT PATH AND SPEED AS DISPLAYED TO THE PILOT(S). The parameters that satisfy the requirements for flight path and speed as displayed to the pilot(s) are listed below. The parameters without an asterisk (*) are mandatory parameters that shall be recorded. In addition, the parameters designated by an asterisk (*) shall be recorded if an information source for the parameter is displayed to the pilot(s) and is practicable to record—
 - (1) Pressure altitude
 - (2) Indicated airspeed or calibrated airspeed
 - (3) Heading (primary flight crew reference)
 - (4) Pitch attitude
 - (5) Roll attitude

- (6)

Engine thrust/power
- (7)

Landing gear status*
- (8)

Total or outside air temperature*
- (9)

Time*
- (10)

Navigation data*: drift angle, wind speed, wind direction, latitude/longitude
- (11)

Radio altitude*
- (n)

The parameters that satisfy the requirements for ADRS are listed in IS 7.1.7.11.

Table 1. Parameter Characteristics for Flight Data Recorders – Aeroplanes

The first 16 (or 15) parameters satisfy the requirements for a Type II and Type IIA FDR.

The first 32 parameters satisfy the requirements for a Type I FDR.

The total 78 parameters satisfy the requirements for a Type IA FDR.

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
1	Time (UTC when available, otherwise relative time count or GNSS sync)		24 hours	4	±0.125%/h	1 s
2	Pressure altitude		-300 m (-1 000 ft) to maximum certificated altitude of aircraft +1 500 m (+5 000 ft)	1	±30 m to ±200 m (±100 ft to ±700 ft)	1.5 m (5 ft)
3	Indicated airspeed or calibrated airspeed		95 km/h (50 kt) to max V_{So} (Note 1) V_{So} to 1.2 V_D (Note 2)	1	±5% ±3%	1 kt (0.5 kt recommended)
4	Heading (primary flight crew reference)		360°	1	±2°	0.5°

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
5	Normal acceleration (Note 8)	Application for type certification submitted to a Contracting State before 01 January 2016	-3 g to +6 g	0.125	±1% of maximum range excluding datum error of ±5%	0.004 g
		Application for type certification submitted to a Contracting State on or after 01 January 2016	-3 g to +6 g	0.0625	±1% of maximum range excluding datum error of ±5%	0.004 g
6	Pitch attitude		±75° or usable range, whichever is greater	0.25	±2°	0.5°
7	Roll attitude		±180°	0.25	±2°	0.5°
8	Radio transmission keying		On-off (one discrete)	1		
9	Power on each engine (Note 3)		Full range	1 (per engine)	±2%	0.2% of full range or the resolution required to operate the aircraft
10*	Trailing edge flap and flight deck control selection		Full range or each discrete position	2	±5% or as pilot's indicator	0.5% of full range or the resolution required to operate the aircraft

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
11*	Leading edge flap and flight deck control selection		Full range or each discrete position	2	±5% or as pilot's indicator	0.5% of full range or the resolution required to operate the aircraft
12*	Thrust reverser position		Stowed, in transit, and reverse	1 engine (per		
13*	Ground spoiler/speed brake selection (selection and position)		Full range or each discrete position	1	±2% unless higher accuracy uniquely required	0.2% of full range
14	Outside air temperature		Sensor range	2	±2°C	0.3°C
15*	Autopilot/autothrottle/AFCS mode and engagement status		A suitable combination of discretised	1		
16	Longitudinal acceleration (Note 8)	Application for type certification submitted to a Contracting State before 01 January 2016	±1 g	0.25	±0.015 g excluding a datum error of ±0.05 g	0.004 g
		Application for type certification submitted to a Contracting State on or after 01 January 2016	±1 g	0.0625	±0.015 g excluding a datum error of ±0.05 g	0.004 g

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
17	Lateral acceleration (Note 8)	Application for type certification submitted to a Contracting State before 01 January 2016	±1 g	0.25	±0.015 g excluding a datum error of ±0.05 g	0.004 g
		Application for type certification submitted to a Contracting State on or after 01 January 2016	±1 g	0.0625	±0.015 g excluding a datum error of ±0.05 g	0.004 g
18	Pilot input and/or control surface position-primary controls (pitch, roll, yaw) (Notes 4 and 8)	Application for type certification submitted to a Contracting State before 01 January 2016	Full range	0.25	±2° unless higher accuracy uniquely required	0.2% of full range or as installed
		Application for type certification submitted to a Contracting State on or after 01 January 2016	Full range	0.125	±2° unless higher accuracy uniquely required	0.2% of full range or as installed
19	Pitch trim position		Full range	1	±3% unless higher accuracy uniquely required	0.3% of full range or as installed
20*	Radio altitude		-6 m to 750 m	1	±0.6 m (±2 ft) or ±3%	0.3 m (1 ft) below 150 m

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
			(–20 ft to 2 500 ft)		whichever is greater below 150 m (500 ft) and $\pm 5\%$ above 150 m (500 ft)	(500 ft); 0.3 m (1 ft) + 0.5% of full range above 150 m (500 ft)
21*	Vertical beam deviation (ILS/GNSS/GLS glide path, MLS elevation, IRNAV/IAN vertical deviation)		Signal range	1	$\pm 3\%$	0.3% of full range
22*	Horizontal beam deviation (ILS/GNSS/GLS localiser, MLS azimuth, IRNAV/IAN lateral deviation)		Signal range	1	$\pm 3\%$	0.3% of full range
23	Marker beacon passage		Discrete	1		
24	Master warning		Discrete	1		
25	Each NAV receiver frequency selection (<i>Note 5</i>)		Full range	4	As installed	
26*	DME 1 and 2 distance (includes Distance to		0 – 370 km (0 – 200 NM)	4	As installed	1 852 m (1 NM)

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
	runway threshold (GLS) and Distance to missed approach point (IRNAV/IAN) (Notes 5 and 6)					
27	Air/ground status		Discrete	1		
28*	GPWS/TAWS /GCAS status (selection of terrain display mode including pop-up display status) and (terrain alerts, both cautions and warnings, and advisories) and (on/off switch position)		Discrete	1		
29*	Angle of attack		Full range	0.5	As installed	0.3% of full range
30*	Hydraulics, each system (low pressure)		Discrete	2		0.5% of full range
31*	Navigation data (latitude/longitude, ground speed, and		As installed	1	As installed	

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
	drift angle) (Note 7)					
32*	Landing gear and selector position		Discrete	4	As installed	
33*	Groundspeed		As installed	1	Data shall be obtained from the most accurate system	1 kt
34	Brakes (left and right)		(Maximum	1	±5%	2% of full range
	brake pressure, left and right brake pedal position)		metered brake range, discretised or full range)			
35*	Additional engine parameters (EPR, N ₁ , indicated vibration level, N ₂ , EGT, fuel flow, fuel cut-off lever position, N ₃ , engine fuel metering valve position)	Engine fuel metering valve position: Application for type certification submitted to a Contracting State on or after 01 January 2023	As installed	Each engine each second	As installed	2% of full range
36*	TCAS/ACAS (traffic alert and collision avoidance system)		Discretised	1	As installed	
37*	Wind shear warning		Discrete	1	As installed	

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
38*	Selected barometric setting (pilot, co-pilot)		As installed	64	As installed	0.1 mb (0.01 in-Hg)
39*	Selected altitude (all pilot selectable modes of operation)		As installed	1	As installed	Sufficient to determine crew selection
40*	Selected speed (all pilot selectable modes of operations)		As installed	1	As installed	Sufficient to determine crew selection
41*	Selected Mach (all pilot selectable modes of operation)		As installed	1	As installed	Sufficient to determine crew selection
42*	Selected vertical speed (all pilot selectable modes of operation)		As installed	1	As installed	Sufficient to determine crew selection
43*	Selected heading (all pilot selectable modes of operation)		As installed	1	As installed	Sufficient to determine crew selection
44*	Selected flight path (all pilot selectable modes of operation) (course/DSTR K, path angle,			1	As installed	

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
	final approach path (IRNAV/IAN))					
45*	Selected DH		As installed	64	As installed	Sufficient to determine crew section
46*	EFIS display format (pilot, co-pilot)		Discrete(s)	4	As installed	
47*	Multi-function/engine/alerts display format		Discrete(s)	4	As installed	
48*	AC electrical bus status		Discrete(s)	4	As installed	
49*	DC electrical bus status		Discrete(s)	4	As installed	
50*	Engine bleed valve position		Discrete(s)	4	As installed	
51*	APU bleed valve position		Discrete(s)	4	As installed	
52*	Computer failure		Discrete(s)	4	As installed	
53*	Engine thrust command		As installed	2	As installed	
54*	Engine thrust target		As installed	4	As installed	2% of full range
55*	Computed CG		As installed	64	As installed	1% of full range
56*	Fuel quantity in CG trim tank		As installed	64	As installed	1% of full range

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
57*	HUD in use		As installed	4	As installed	
58*	Paravirtual display on/off		As installed	1	As installed	
59*	Operational stall protection, stick shaker, and pusher activation		As installed	1	As installed	
60*	Primary navigation system reference (GNSS, INS, VOR/DME, MLS, LORAN C, localiser glideslope)		As installed	4	As installed	
61*	Ice detection		As installed	4	As installed	
62*	Engine warning each engine vibration		As installed	1	As installed	
63*	Engine warning each engine over temperature		As installed	1	As installed	
64*	Engine warning each engine oil pressure low		As installed	1	As installed	
65*	Engine warning each engine over speed		As installed	1	As installed	

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
66*	Yaw trim surface position		Full range	2	±3% unless higher accuracy uniquely required	0.3% of full range
67*	Roll trim surface position		Full range	2	±3% unless higher accuracy uniquely required	0.3% of full range
68*	Yaw or sideslip angle		Full range	1	±5%	0.5°
69*	De-icing and/or antiicing systems selection		Discrete(s)	4		
70*	Hydraulic pressure (each system)		Full range	2	±5%	100 psi
71*	Loss of cabin pressure		Discrete	1		
72*	Flight deck trim control input position, Pitch		Full range	1	±5%	0.2% of full range or as installed
73*	Flight deck trim control input position, Roll		Full range	1	±5%	0.2% of full range or as installed
74*	Flight deck trim control input position, Yaw		Full range	1	±5%	0.2% of full range or as installed

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
75*	All flight deck flight control input forces (control wheel, control column, rudder pedal)		Full range (± 311 N (± 70 lbf), ± 378 N (± 85 lbf), ± 734 N (± 165 lbf))	1	$\pm 5\%$	0.2% of full range or as installed
76*	Event marker		Discrete	1		
77*	Date		365 days	64		
78*	ANP or EPE or EPU		As installed	4	As installed	
79*	Cabin pressure altitude	Application for type certification submitted to a Contracting State on or after 01 January 2023	As installed (0 m (0 ft) to 12 192 m (40 000 ft) recommended)	1	As installed	31 m (100 ft)
80*	Aeroplane computed weight	Application for type certification submitted to a Contracting State on or after 01 January 2023	As installed	64	As installed	1% of full range
81*	Flight director command	Application for type certification submitted to a Contracting State on or after 01 January 2023	Full range	1	$\pm 2^\circ$	0.5°

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
82*	Vertical speed	Application for type certification submitted to a Contracting State on or after 01 January 2023	As installed	0.25	As installed (32 ft/min recommended)	16 ft/min

Note 1: V_{So} stalling speed or minimum steady flight speed in the landing configuration.

Note 2: V_D design diving speed.

Note 3: Record sufficient inputs to determine power.

Note 4: For aeroplanes with control systems in which movement of a control surface will back drive the pilot's control, "or" applies. For aeroplanes with control systems in which movement of a control surface will not back drive the pilot's control, "and" applies. In aeroplanes with split surfaces, a suitable combination of inputs is acceptable in lieu of recording each surface separately. In aeroplanes with independent pilot input on primary controls, each pilot input on primary controls needs to be recorded separately.

Note 5: If signal available in digital form.

Note 6: Recording of latitude and longitude from INS or other navigation system is a preferred alternative.

Note 7: If signals readily available.

Note 8: It is not intended that aeroplanes issued with an individual certificate of airworthiness before 01 January 2016 be modified to meet the measurement range, maximum sampling and recording interval, accuracy limits, or recording resolution description detailed in IS 7.8.2.1(A).

IS: 7.1.7.10(B) FLIGHT DATA RECORDERS AND AIRCRAFT DATA RECORDING SYSTEMS: TYPES AND PARAMETERS – HELICOPTERS

- (a) The parameters that satisfy the requirements for FDRs are listed in table 2. The number of parameters to be recorded shall depend on helicopter complexity. The parameters without an asterisk (*) are mandatory parameters that shall be recorded. The parameters designated by an asterisk (*) shall also be recorded if an information data source for an asterisked parameter is used by helicopter systems or the flight crew to operate the helicopter. However, other parameters may be substituted with due regard to the helicopter type and the characteristics of the recording equipment.

- (b) The following parameters satisfy the requirements for flight path and speed—
 - (1) Pressure altitude
 - (2) Indicated airspeed
 - (3) Outside air temperature
 - (4) Heading
 - (5) Normal acceleration
 - (6) Lateral acceleration
 - (7) Longitudinal acceleration (body axis)
 - (8) Time or relative time count
 - (9) Navigation data*: drift angle, wind speed, wind direction, latitude/longitude
 - (10) Radio altitude*
- (c) If further FDR recording capacity is available, recording of the following additional information shall be considered—
 - (1) Additional operational information from electronic displays, such as EFIS, ECAM, and EICAS; and
 - (2) Additional engine parameters (EPR, N_1 , fuel flow, etc.).
- (d) The parameters that satisfy the requirements for ADRS are listed in IS 7.1.7.11.

Table 2. Parameter Characteristics for Flight Data Recorders – Helicopters

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
1	Time (UTC when available, otherwise relative time count or GNSS time sync)		24 hours	4	±0.125%/h	1 s
2	Pressure altitude		-300 m (–1 000 ft) to maximum certificated altitude of aircraft +1 500 m (+5 000 ft)	1	±30 m to ±200 m (±100 ft to ±700 ft)	1.5 m (5 ft)
3	Indicated airspeed		As the installed pilot display measuring system	1	±3%	1 kt
4	Heading		360°	1	± 2°	0.5°
5	Normal acceleration		-3 g to +6 g	0.125	±0.09 g excluding a datum error of ±0.045 g	0.004 g
6	Pitch attitude		±75° or 100% of usable range, whichever is greater	0.5	± 2°	0.5°
7	Roll attitude		±180°	0.5	±2°	0.5°

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
8	Radio transmission on keying		On-off (one discrete)	1	---	---
9	Power on each engine		Full range	1 (per engine)	±2%	0.1% of full range
10	Main rotor					
	Main rotor speed		50% – 130%	0.51	±2%	0.3% of full range
	Rotor brake		Discrete		---	---
11	Pilot input and/or control surface position-primary controls (Collective pitch, longitudinal cyclic pitch, lateral cyclic pitch, tail rotor pedal)		Full range	0.5 (0.25 recommended)	±2% unless higher accuracy uniquely required	0.5% of operating range
12	Hydraulics, each system (low pressure and selection)		Discrete	1	---	---

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
13	Outside air temperature		Sensor range	2	±2°C	0.3°C
14*	Autopilot/ autothrottle/AFCS mode and engagement status		A suitable combination of discretes	1	---	---
15*	Stability augmentation system engagement		Discrete	1	---	---
16*	Main gearbox oil pressure		As installed	1	As installed	6.895 kN/m ² (1 psi)
17*	Main gearbox oil temperature		As installed	2	As installed	1°C
18	Yaw acceleration (or yaw rate)		±400°/second	0.25	±1.5% max range excluding datum error of ±5%	±2°/s
19*	Sling load force		0 to 200% of certified load	0.5	±3% of max range	0.5% for maximum certified load
20	Longitudinal acceleration		±1 g	0.25	±0.015 g excluding datum error of ± 0.05 g	0.0004 g
21	Lateral acceleration		±1 g	0.25	±0.015 g excluding datum error of ± 0.05 g	0.0004 g

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
22*	Radio altitude		-6 m to 750 m (-20 ft to 2 500 ft)	1	±0.6 m (±2 ft) or ±3% whichever is greater below 150 m (500 ft) and ±5% above 150 m (500 ft)	0.3 m (1ft) below 150 m (500 ft), 0.3 m (1 ft) + 0.5% of full range above 150 m (500 ft)
23*	Vertical beam deviation		Signal range	1	±3%	0.3% of full range
24*	Horizontal beam deviation		Signal range	1	±3%	0.3% of full range
25	Marker beacon passage		Discrete	1	---	---
26	Warnings		Discrete(s)	1	---	---
27	Each navigation receiver frequency selection		Sufficient to determine selected frequency	4	As installed	----
28*	DME 1 and 2 distance		0 – 370 km (0 – 200 NM)	4	As installed	1 852 m (1 NM)
29*	Navigation data (latitude/longitude, ground speed, drift angle, wind		As installed	2	As installed	As installed

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
	speed, wind direction)					
30*	Landing gear or gear selector position		Discrete	4	---	---
31*	Engine exhaust gas temperature (T ₄)		As installed	1	As installed	
32*	Turbine inlet temperature (TIT/ITT)		As installed	1	As installed	
33*	Fuel contents		As installed	4	As installed	
34*	Altitude rate		As installed	1	As installed	
35*	Ice detection		As installed	4	As installed	
36*	Helicopter health and usage monitor system		As installed	—	As installed	
37	Engine control modes		Discrete	1	----	----
38*	Selected barometric setting (pilot and copilot)		As installed	64	As installed	0.1 mb (0.01 in Hg)

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
39*	Selected altitude (all pilot selectable modes of operation)		As installed	1	As installed	Sufficient to determine crew selection
40*	Selected speed (all pilot selectable modes of operation)		As installed	1	As installed	Sufficient to determine crew selection
41*	Selected Mach (all pilot selectable modes of operation)		As installed	1	As installed	Sufficient to determine crew selection
42*	Selected vertical speed (all pilot selectable modes of operation)		As installed	1	As installed	Sufficient to determine crew selection
43*	Selected heading (all pilot selectable modes of operation)		As installed	1	As installed	Sufficient to determine crew selection
44*	Selected flight path (all pilot selectable modes of operation)		As installed	1	As installed	Sufficient to determine crew selection

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
45*	Selected DH		As installed	4	As installed	Sufficient to determine crew selection
46*	EFIS display format (pilot and co-pilot)		Discrete(s)	4	---	---
47*	Multifunction/engine/alert displays display format		Discrete(s)	4	---	---
48*	Event marker		Discrete	1	---	---
49*	GPWS/TAWS/GCAS status (selection of terrain display mode including pop-up display status) and (terrain alerts, both cautions and warnings, and advisories) and (on/off	Application for type certification submitted to a Contracting State on or after 01 January 2023	Discrete(s)	1	As installed	

Serial Number	Parameter	Applicability	Measurement Range	Maximum Sampling and Recording Interval (seconds)	Accuracy Limits (sensor input compared to FDR read-out)	Recording Resolution
	switch position) and (operational status)					
50*	TCAS/ACAS (traffic alert and collision avoidance system) and (operational status)	Application for type certification submitted to a Contracting State on or after 01 January 2023	Discrete(s)	1	As installed	
51*	Primary flight controls – pilot input forces	Application for type certification submitted to a Contracting State on or after 01 January 2023	Full range	0.125 (0.0625 recommended)	± 3% unless higher accuracy is uniquely required	0.5% of operating range
52*	Computed centre of gravity	Application for type certification submitted to a Contracting State on or after 01 January 2023	As installed	64	As installed	1% of full range
53*	Helicopter computed weight	Application for type certification submitted to a Contracting State on or after 01 January 2023	As installed	64	As installed	1% of full range

IS: 7.1.7.11 AIRCRAFT EQUIPAGE FOR OPERATION – AIRCRAFT DATA RECORDING SYSTEM

- (a) ADRS shall be capable of recording, as appropriate to the aircraft, at least the essential (E) parameters listed in table 3.
- (b) The measurement range, recording interval, and accuracy of parameters on installed equipment is usually verified by methods approved by the Authority.
- (c) Documentation concerning parameter allocation, conversion equations, periodic calibration, and other serviceability/maintenance information shall be maintained by the operator. The documentation shall be sufficient to ensure that accident investigation authorities have the necessary information to read out the data in engineering units.

Table 3. Parameter Characteristics for Aircraft Data Recording Systems

No.	Parameter Name	Minimum Recording Range	Maximum Recording Interval in Seconds	Minimum Recording Accuracy	Minimum Recording Resolution	Remarks
1	(a) Heading (Magnetic or True)	±180°	1	±2°	0.5°	Heading is preferred; if not available, yaw rate shall be recorded
	(b) Yaw rate	±300°/s	0.25	±1% + drift of 360°/h	2°/s	
2	(a) Pitch attitude	±90°	0.25	±2°	0.5°	Pitch attitude is preferred; if not available, pitch rate shall be recorded
	(b) Pitch rate	±300°/s	0.25	±1% + drift of 360°/h	2°/s	

No.	Parameter Name	Minimum Recording Range	Maximum Recording Interval in Seconds	Minimum Recording Accuracy	Minimum Recording Resolution	Remarks
3	(a) Roll attitude	±180°	0.25	±2°	0.5°	Roll attitude is preferred; if not available, roll rate shall be recorded
	(b) Roll rate	±300°/s	0.25	±1% + drift of 360°/h	2°/s	
4	Positioning system:					
	(a) Time	24 hours	1	±0.5 s	0.1 s	UTC time preferred where available
	(b) Latitude/longitude	Latitude: ±90° Longitude: ±180°	2 (1 if available)	As installed (0.00015° recommended)	0.00005°	--
	(c) Altitude	-300 m (-1 000 ft) to maximum certificated altitude of aeroplane +1 500 m (5 000 ft)	2 (1 if available)	As installed (±15 m (±50 ft) recommended)	1.5 m (5 ft)	--
	(d) Ground speed	0 – 1 000 kt	2 (1 if available)	As installed (±5 kt recommended)	1 kt	
	(e) Track	0 – 360°	2 (1 if available)	As installed (±2° recommended)	0.5°	
	(f) Estimated error	Available range	2 (1 if available)	As installed	As installed	Shall be recorded if

No.	Parameter Name	Minimum Recording Range	Maximum Recording Interval in Seconds	Minimum Recording Accuracy	Minimum Recording Resolution	Remarks
						readily available
5	Normal acceleration	-3 g to + 6 g (*)	0.25 (0.125 if available)	As installed (± 0.09 g excluding a datum error of ± 45 g recommended)	0.004 g	--
6	Longitudinal acceleration	± 1 g (*)	0.25 (0.125 if available)	As installed (± 0.015 g excluding a datum error of ± 0.05 g recommended)	0.004 g	--
7	Lateral acceleration	± 1 g (*)	0.25 (0.125 if available)	As installed (± 0.015 g excluding a datum error of ± 0.05 g recommended)	0.004 g	--
8	External static pressure (or pressure altitude)	34.4 mb (3.44 in-Hg) to 310.2 mb (31.02 inHg) or available sensor range	1	As installed (± 1 mb (0.1 in-Hg) or ± 30 m (± 100 ft) to ± 210 m (± 700 ft) recommended)	0.1 mb (0.01 in-Hg) or 1.5 m (5 ft)	--
9	Outside air temperature (or total air temperature)	-50 to $+90^{\circ}\text{C}$ or available sensor range	2	As installed ($\pm 2^{\circ}\text{C}$ recommended)	1°C	--
10	Indicated air speed	As the installed pilot display	1	As installed ($\pm 3\%$ recommended)	1 kt (0.5 kt recommended)	--

No.	Parameter Name	Minimum Recording Range	Maximum Recording Interval in Seconds	Minimum Recording Accuracy	Minimum Recording Resolution	Remarks
		measuring system or available sensor range				
11	Engine RPM	Full range including overspeed condition	Each engine each second	As installed	0.2% of full range	--
12	Engine oil pressure	Full range	Each engine each second	As installed (5% of full range recommended)	2% of full range	--
13	Engine oil temperature	Full range	Each engine each second	As installed (5% of full range recommended)	2% of full range	--
14	Fuel flow or pressure	Full range	Each engine each second	As installed	2% of full range	--
15	Manifold pressure	Full range	Each engine each second	As installed	0.2% of full range	--
16	Engine thrust/ power/ torque parameters required to determine propulsive thrust/power*	Full range	Each engine each second	As installed	0.1% of full range	*Sufficient parameters (e.g., EPRN/N1 or torque/Np as appropriate to the particular engine shall be recorded to

No.	Parameter Name	Minimum Recording Range	Maximum Recording Interval in Seconds	Minimum Recording Accuracy	Minimum Recording Resolution	Remarks
						determine power in both normal and reverse thrust. A margin for possible overspeed shall be provided)
17	Engine gas generator speed (Ng)	0 – 150%	Each engine each second	As installed	0.2% of full range	--
18	Free power turbine speed (Nf)	0 – 150%	Each engine each second	As installed	0.2% of full range	--
19	Coolant temperature	Full range	1	As installed (±5°C recommended)	1 °C	--
20	Main voltage	Full range	Each engine each second	As installed	1 Volt	--
21	Cylinder head temperature	Full range	Each cylinder	As installed	2% of full range	--

IS: 7.1.7.15 DATA LINK RECORDER APPLICABILITY

- (a) Messages applying to the applications listed in table 4 shall be recorded. Applications without the asterisk (*) are mandatory applications that shall be recorded regardless of the system complexity. Applications with an (*) shall be recorded only as far as is practicable given the architecture of the system.

- (b) Descriptions of the applications for DLRs are contained in the table 4.

Table 4. Description of Applications for Data Link Recorders

Item No.	Application Type	Application Description	Recording Content
1	Data link initiation	This includes any applications used to log on to or initiate data link service. In FANS-1/A and ATN, these are ATS facilities notification (AFN) and context management (CM), respectively	C
2	Controller/pilot communication	This includes any application used to exchange requests, clearances, instructions, and reports between the flight crew and controllers on the ground. In FANS1/A and ATN, this includes the CPDLC application. It also includes applications used for the exchange of oceanic (OCL) and departure clearances (DCL) as well as data link delivery of taxi clearances	C
3	Addressed surveillance	This includes any surveillance application in which the ground sets up contracts for delivery of surveillance data. In FANS-1/A and ATN, this includes the automatic dependent surveillance – contract (ADS-C) application. Where parametric data are reported within the message they shall be recorded within the message, they shall be recorded unless data from the same source are recorded on the FDR	C
4	Flight information	This includes any service used for delivery of flight information to specific aircraft. This includes, for example, data link aviation weather report service (DMETAR), data link automatic terminal service (D-ATIS), digital Notice to Airmen (D-NOTAM) and other textual data link services	C

Item No.	Application Type	Application Description	Recording Content
5	Aircraft broadcast surveillance	This includes elementary and enhanced surveillance systems, as well as ADS-B output data. Where parametric data sent by the aircraft are reported within the message, they shall be recorded unless data from the same sources are recorded on the FDR	M*
6	Aeronautical operational control data	This includes any application transmitting or receiving data used for aeronautical operational control purposes	M*

Key:

C Complete contents recorded.

M Information that enables correlation to any associated records stored separately from the aircraft.

* Applications to be recorded only as far as is practicable given the architecture of the system.

(c) DLC recording installation clarification is contained in table 5.

Table 5. Data Link Communications (DLC) Recording Installation Clarification

Rows	Date individual certificate of airworthiness was first issued	Date aircraft TC issued or modification for DLC equipment first approved	Date of activation for use of DLC equipment	DLC recording required	SARPs reference
1	On or after 01 January 2016	On or after 01 January 2016	On or after 01 January 2016	Yes	6.3.3.1.1
2	On or after 01 January 2016	Before 01 January 2016	On or after 01 January 2016	Yes	6.3.3.1.1

3	Before 01 January 2016	On or after 01 January 2016	On or after 01 January 2016	Yes	6.3.3.1.2
4	Before 01 January 2016	Before 01 January 2016	Before 01 January 2016	No	6.3.3.1.2
5	Before 01 January 2016	Before 01 January 2016	On or after 01 January 2016	1 No	6.3.3.1.2 6.3.3.1.3

¹ Not required, but recommended

Notes:

1. *Date individual certificate of airworthiness was first issued* is self-explanatory.
2. *Date aircraft TC issued or modification for DLC equipment first approved* is the date that allows the installation of DLC equipment on the aircraft and refers to the airworthiness approval of the installation of aircraft components such as the structural and wiring provisions with which the DLC equipment needs to be compliant. These airworthiness approvals are usually in a form of a TC, a supplemental TC, or an amended TC. It is not uncommon for original customers of an aircraft that have airworthiness approvals related to DLC capability, to choose not to install the DLC equipment or choose not to have it activated even if the aircraft is prepared for it.
3. *Date of activation for use of DLC equipment* refers to the date that a DLC application referred to in Paragraph 7.1.7.15(d) of this part was first activated for use.
 - DLC equipment as used in these provisions, refer to the physical unit(s) (e.g., box(es)) that was approved to a minimum performance standard issued by a certification authority (e.g., TSO or ETSO).
 - The activation of DLC functions refers to approved software activation of DLC functions or software updates.
4. *DLC recording required* refers to the requirement to record DLC messages in accordance with provisions of Paragraphs 7.1.7.15(a), (b), and (d) of this part.
 - (d) GENERAL.
 - (1) It is the date on which the CVR capabilities of the aircraft were approved that determines the DLC recording requirement. The

date in which the DLC equipment was approved to a minimum performance standard is not relevant for CVR recording requirement purposes.

- (2) For the DLC equipment to be compliant with an airworthiness approval, it needs to be able to use, without modification, the installed aircraft components that are necessary to provide the DLC function such as the—
 - (i) Datalink router (e.g., hosted in the communications management unit), and Radios (e.g., VHF, HF datalink, Satcom) and related antennas.
- (3) Approved software updates to installed equipment or software activation of functions normally do not alter the DLC equipment compliance with the rest of the aircraft systems.

(e) EXAMPLES.

- (1) For rows 1 and 2: The recording requirement is driven by Paragraph 7.1.7.15(a) of this part, which is based on when the individual certificate of airworthiness was first issued. Any subsequent airworthiness modifications related to DLC capability do not exempt the aircraft from the requirement to record DLC messages.
- (2) For rows 3 to 5 — General—
 - (i) The recording requirement is driven by Paragraph 7.1.7.15(b) of this part and is based on whether or not the aircraft has an airworthiness approval for DLC capabilities and the date of its issue.
 - (ii) Since there was no requirement to record DLC messages prior to 01 January 2016, airworthiness approvals related to DLC capability issued before that date did not necessarily include this function.
- (3) For row 3: The recording requirement applies regardless of when the certificate of airworthiness was issued, because an airworthiness approval related to DLC capability was issued on or after 01 January 2016. The date of installation of the equipment would typically be after the airworthiness approval.

- (4) For row 4: The recording requirement does not apply because the aircraft's certificate of airworthiness and an airworthiness approval related to DLC capability was issued before 01 January 2016. The date of installation of DLC equipment is not a factor for DLC message recording requirements as long as the equipment is compliant with that airworthiness approval.
- (5) For row 5—
 - (i) The recording requirement does not apply because the aircraft's certificate of airworthiness and an airworthiness approval related to DLC capability was issued before 01 January 2016. The date of installation of DLC equipment is not a factor for DLC message recording requirements as long as the equipment is compliant with that airworthiness approval.
 - (ii) Notwithstanding the above, if the activation for use of the DLC equipment is on or after 01 January 2016, DLC messages shall be recorded in accordance with Paragraph 7.1.7.15(d) of this part.

IS: 7.1.8.2 EMERGENCY EXIT EQUIPMENT – PASSENGERS

- (a) The emergency exit equipment for aeroplanes in Paragraph 7.1.8.2(a) of this part shall meet the following requirements.
- (b) The assisting means for a floor-level emergency exit shall meet the requirements under which the aeroplane was type certified.
- (c) The location of each passenger emergency exit shall be—
 - (1) Recognisable from a distance equal to the width of the cabin; and
 - (2) Indicated by a sign visible to occupants approaching along the main passenger aisle.
- (d) There shall be an emergency exit locating sign—
 - (1) Above the aisle near each over-the-wing passenger emergency exit, or at another ceiling location if it is more practical because of low headroom;

- (2) Next to each floor-level passenger emergency exit, except that one sign may serve two such exits if they both can be seen readily from that sign; and
 - (3) On each bulkhead or divider that prevents fore and aft vision along the passenger cabin, to indicate emergency exits beyond and obscured by it, except that if this is not possible, the sign may be placed at another appropriate location.
- (e) Each passenger emergency exit marking and each locating sign shall be manufactured to meet the interior emergency exit marking requirements under which the aeroplane was type certified, unless the Authority cites different requirements for compliance with this paragraph.

Note: No sign may continue to be used if its luminescence (brightness) decreases to below 250 micro lamberts.

- (f) Sources of general cabin illumination may be common to both the emergency and the main lighting systems if the power supply to the emergency light system is independent of the power supply to the main lighting system.
 - (1) The emergency lighting system shall provide enough general lighting in the passenger cabin so that the average illumination, when measured at 40-inch intervals at seat armrest height, on the centerline of the main passenger aisle, is at least 0.05 foot-candles.
 - (2) Each emergency light shall—
 - (i) Be operable manually both from the flight crew station and from a point in the passenger compartment that is readily accessible to a normal cabin crew member seat;
 - (ii) Have a means to prevent inadvertent operation of the manual controls;
 - (iii) When armed or turned on at either station, remain lighted or become lighted upon interruption of the aeroplane's normal electric power;
 - (iv) Provide the required level of illumination for at least 10 minutes at the critical ambient conditions after emergency landing; and

- (v) Have a flight deck control device that has “on,” “off,” and “armed” positions.
- (3) The location of each passenger emergency exit operating handle and instructions for opening the exit shall be shown in accordance with the requirements under which the aeroplane was type certified, unless the Authority cites different requirements for compliance with this paragraph.
- (4) No operating handle or operating handle cover may continue to be used if its luminescence (brightness) decreases to below 100 micro lamberts.
- (5) Access to emergency exits shall be provided as follows for each passenger-carrying aeroplane—
 - (i) Each passageway between individual passenger areas, or leading to a Type I or Type II emergency exit, shall be unobstructed and at least 20 inches wide;
 - (ii) There shall be enough space next to each Type I or Type II emergency exit to allow a crew member to assist in the evacuation of passengers without reducing the unobstructed width of the passageway below that required in paragraph(a)(4)(i) of this IS; and
 - (iii) There shall be access from the main aisle to each Type III and Type IV exit. The access from the aisle to these exits shall not be obstructed by seats, berths, or other protrusions in a manner that would reduce the effectiveness of the exit. In addition, the access shall meet the emergency exit access requirements under which the aeroplane was type certificated, unless the Authority cites different requirements for compliance with this paragraph.
- (6) If it is necessary to pass through a passageway between passenger compartments to reach any required emergency exit from any seat in the passenger cabin, the passageway shall not be obstructed. However, curtains may be used if they allow free entry through the passageway.
- (7) No door may be installed in any partition between passenger compartments.

- (8) If it is necessary to pass through a doorway separating the passenger cabin from other areas to reach any required emergency exit from any passenger seat, the door shall have a means to latch it in open position, and the door shall be latched open during each takeoff and landing. The latching means shall be able to withstand the loads imposed upon it when the door is subjected to the ultimate inertia forces, relative to the surrounding structure, prescribed in the airworthiness standards for type certification in the transport category as cited by the Authority.
- (9) Each passenger emergency exit and the means of opening that exit from the outside shall be marked on the outside of the aeroplane with a 5-cm (2-in) coloured band outlining the exit on the side of the fuselage.
- (10) Each passenger emergency exit marking, including the band, shall be readily distinguishable from the surrounding fuselage area by contrast in colour and shall comply with the following—
 - (i) If the reflectance of the darker colour is 15 per cent or less, the reflectance of the lighter colour shall be at least 45 per cent; and
 - (ii) If the reflectance of the darker colour is greater than 15 per cent, at least a 30 per cent difference between its reflectance and the reflectance of the lighter colour shall be provided.

Note: “Reflectance” is the ratio of the luminous flux reflected by a body to the luminous flux it receives.

- (11) Exits that are not in the side of the fuselage shall have external means of opening and applicable instructions marked conspicuously in red or, if red is inconspicuous against the background colour, in bright chrome yellow and, when the opening means for such an exit is located on only one side of the fuselage, a conspicuous marking to that effect shall be provided on the other side.
- (12) Each passenger-carrying aeroplane shall be equipped with exterior lighting that meets the requirements under which that aeroplane was type certificated, unless the Authority cites different requirement for compliance with this paragraph.

- (13) Each passenger-carrying aeroplane shall be equipped with a slip-resistant escape route that meets the requirements under which that aeroplane was type certificated, unless the Authority cites different requirements for compliance with this paragraph.
- (14) Each floor-level door or exit in the side of the fuselage (other than those leading into a cargo or baggage compartment that is not accessible from the passenger cabin) that is 112 cm (44 in) or more high and 51 cm (20 in) or more wide, but not wider than 117 cm (46 in), each passenger ventral exit, and each tail cone exit shall meet the requirements of this section for floor-level emergency exits.

Note: The Authority may grant a deviation from this paragraph if it finds that circumstances make full compliance impractical and that an acceptable level of safety has been achieved.

- (15) Approved emergency exits in the passenger compartments that are in excess of the minimum number of required emergency exits shall meet all the applicable provisions of this IS and shall be readily accessible.
- (16) The ventral exit and tail cone exit on each passenger-carrying aeroplane with a certificated take-off mass of 5 700 kg (12 500 lbs) or more shall be—
 - (i) Designed and constructed so that it cannot be opened during flight; and
 - (ii) Marked with a placard readable from a distance of 76 cm (30 in) and installed at a conspicuous location near the means of opening the exit, stating that the exit has been designed and constructed so that it cannot be opened during flight.
- (17) PORTABLE LIGHTS. A person shall not operate a passenger-carrying aeroplane unless the aeroplane is equipped with independent portable light stowage provisions accessible from each cabin crew member seat.

IS: 7.1.8.11 FIRST AID KITS, MEDICAL EMERGENCY KIT AND UNIVERSAL PRECAUTION KITS

- (a) The required first aid kits shall include at least the following—

- (1) List of contents
- (2) Antiseptic swabs (10/pack)
- (3) Bandage: adhesive strips
- (4) Bandage: gauze 7.5 cm × 4.5 m
- (5) Bandage: triangular; safety pins
- (6) Dressing: burn 10 cm × 10 cm
- (7) Dressing: compress, sterile 7.5 cm × 12 cm
- (8) Dressing: gauze, sterile 10.4 cm × 10.4 cm
- (9) Tape: adhesive 2.5 cm (roll)
- (10) Steri-strips (or equivalent adhesive strip)
- (11) Hand cleanser or cleansing towelettes
- (12) Pad with shield, or tape, for eye
- (13) Scissors: 10 cm [as allowed by national regulations]
- (14) Tape: Adhesive, surgical 1.2 cm × 4.6 m
- (15) Tweezers: splinter
- (16) Disposable gloves (multiple pairs)
- (17) Thermometers (non-mercury)
- (18) Mouth-to-mouth resuscitation mask with one-way valve
- (19) First aid manual, current edition
- (20) Incident record form
- (21) Mild to moderate analgesic [as allowed by national regulations]
- (22) Antiemetic [as allowed by national regulations]
- (23) Nasal decongestant [as allowed by national regulations]

(24) Antacid [as allowed by national regulations]

(25) Antihistamine [as allowed by national regulations]

Note: The carriage of AEDs will be determined by operators or the Authority on the basis of a risk assessment, taking into account the particular needs of the operation.

(b) [AOC] The required emergency medical kit shall include the following equipment—

(1) List of contents

(2) Stethoscope

(3) Sphygmomanometer (electronic preferred)

(4) Airways, oropharyngeal (three sizes)

(5) Syringes (appropriate range of sizes)

(6) Needles (appropriate range of sizes)

(7) Intravenous catheters (appropriate range of sizes)

(8) Antiseptic wipes

(9) Gloves (disposable)

(10) Needle disposal box

(11) Urinary catheter

(12) System for delivering intravenous fluids

(13) Venous tourniquet

(14) Sponge gauze

(15) Tape – adhesive

(16) Surgical mask

(17) Emergency tracheal catheter (or large gauge intravenous cannula)

- (18) Umbilical cord clamp
- (19) Thermometers (non-mercury)
- (20) Basic life support cards
- (21) Bag-valve mask
- (22) Flashlight and batteries

Note: If a cardiac monitor is available (with or without an AED), add to the above list.

- (c) [AOC] The required emergency medical kit shall include the following medication—
 - (1) Epinephrine 1:1 000
 - (2) Antihistamine – injectable
 - (3) Dextrose 50% (or equivalent) – injectable: 50 ml
 - (4) Nitroglycerin tablets, or spray
 - (5) Major analgesic
 - (6) Sedative anticonvulsant – injectable
 - (7) Antiemetic – injectable
 - (8) Bronchial dilator – inhaler
 - (9) Atropine – injectable
 - (10) Adrenocortical steroid – injectable
 - (11) Diuretic – injectable
 - (12) Medication for postpartum bleeding
 - (13) Sodium chloride 0.9% (minimum 250 ml)
 - (14) Acetyl salicylic acid (aspirin) for oral use
 - (15) Oral beta blocker

Note: Epinephrine 1:10 000 (can be a dilution of epinephrine 1:1 000).

- (d) The required universal precaution kits shall include at least the following—
- (1) Dry powder that can convert a small liquid spill into a sterile granulated gel
 - (2) Germicidal disinfectant for surface cleaning
 - (3) Skin wipes
 - (4) Face/eye mask (separate or combined)
 - (5) Gloves (disposable)
 - (6) Protective apron
 - (7) Large absorbent towel
 - (8) Pick-up scoop with scraper
 - (9) Bio-hazard disposal waste bag
 - (10) Instructions

Note: The carriage of AEDs will be determined by operators or the Authority on the basis of a risk assessment, taking into account the particular needs of the operation.

IS: 7.1.8.12 OXYGEN STORAGE AND DISPENSING APPARATUS

- (a) The supplemental oxygen supply requirements for non-pressurised aeroplanes are as follows—
- (1) An operator shall not operate a non-pressurised aeroplane at pressure altitudes above 3 000 m (10 000 ft) unless supplemental oxygen equipment, capable of storing and dispensing the oxygen supplies required, is provided.
 - (2) The amount of supplemental oxygen for sustenance required for a particular operation shall be determined on the basis of flight altitudes and flight duration, consistent with the operating procedures, established for each operation in the OM and with the routes to be flown, and with the emergency procedures specified in the OM.

- (3) An aeroplane intended to be operated above 3 000 m (10 000 ft) pressure altitude shall be provided with equipment capable of storing and dispensing the oxygen supplies required.
- (b) OXYGEN SUPPLY REQUIREMENTS.

(1) FLIGHT CREW MEMBERS. Each member of the flight crew on flight deck duty shall be supplied with supplemental oxygen in accordance with table 5. If all occupants of flight deck seats are supplied from the flight crew source of oxygen supply, then they shall be considered as flight crew members on flight deck duty for the purpose of oxygen supply.

(2) CABIN CREW MEMBERS, ADDITIONAL CREW MEMBERS, AND PASSENGERS. Cabin crew members and passengers shall be supplied with oxygen in accordance with table 5. Cabin crew members carried in addition to the minimum number of cabin crew members required, and additional crew members, shall be considered as passengers for the purpose of oxygen supply.

Table 5. Supplemental Oxygen for Non-Pressurised Aeroplanes

(a)	(b)
Supply for:	Duration and Pressure Altitude
1. All occupants of flight deck seats on flight deck duty	Entire flight time at pressure altitudes above 3 000 m (10 000 ft)
2. All required cabin crew members	Entire flight time at pressure altitudes above 4 000 m (13 000 ft) and for any period exceeding 30 minutes at pressure altitudes above 3 000 m (10 000 ft) but not exceeding 4 000 m (13 000 ft)
3. 100% of passengers (see Note)	Entire flight time at pressure altitudes above 4 000 m (13 000 ft)
4. 10% of passengers (see Note)	Entire flight time after 30 minutes at pressure altitudes greater than 3 000 m (10 000 ft) but not exceeding 4 000 m (13 000 ft)

Note: For the purpose of this table, “passengers” means passengers actually carried and includes infants.

- (c) The supplemental oxygen supply requirements for pressurised aeroplanes are as follows—
 - (1) An operator shall not operate a pressurised aeroplane at pressure altitudes above 3 000 m (10 000 ft) unless supplemental oxygen equipment, capable of storing and dispensing the oxygen supplies required by this paragraph, is provided.
 - (2) The amount of supplemental oxygen required shall be determined on the basis of cabin pressure altitude, flight duration, and the assumption that a cabin pressurisation failure will occur at the altitude or point of flight that is most critical from the standpoint of oxygen need, and that, after the failure, the aeroplane will descend in accordance with emergency procedures specified in the AFM to a safe altitude for the route to be flown that will allow continued safe flight and landing.
 - (3) Following a cabin pressurisation failure, the cabin pressure altitude shall be considered the same as the aeroplane pressure altitude, unless it is demonstrated to the Authority that no probable failure of the cabin or pressurisation system will result in a cabin pressure altitude equal to the aeroplane pressure altitude. Under these circumstances, the demonstrated maximum cabin pressure altitude may be used as a basis for determination of oxygen supply.
- (d) OXYGEN EQUIPMENT AND SUPPLY REQUIREMENTS.
 - (1) FLIGHT CREW MEMBERS.
 - (i) Each member of the flight crew on flight deck duty shall be supplied with supplemental oxygen in accordance with table 6. If all occupants of flight deck seats are supplied from the flight crew source of oxygen supply, then they shall be considered as flight crew members on flight deck duty for the purpose of oxygen supply.
 - (ii) Flight deck seat occupants not supplied by the flight crew source are to be considered as passengers for the purpose of oxygen supply.
 - (iii) Oxygen masks shall be located so as to be within the immediate reach of flight crew members whilst at their assigned duty station.

- (iv) Oxygen masks for use by flight crew members in pressurised aeroplanes operating at pressure altitudes above 7 600 m (25 000 ft) shall be a quickdonning type of mask.
- (e) CABIN CREW MEMBERS, ADDITIONAL CREW MEMBERS, AND PASSENGERS.
 - (1) Cabin crew members and passengers shall be supplied with supplemental oxygen in accordance with table 6. Cabin crew members carried in addition to the minimum number of cabin crew members required, and additional crew members, shall be considered as passengers for the purpose of oxygen supply.
 - (2) Aeroplanes intended to be operated at pressure altitudes above 7 600 m (25 000 ft) shall be provided sufficient spare outlets and masks and/or sufficient portable oxygen units with masks for use by all required cabin crew members. The spare outlets and/or portable oxygen units are to be distributed evenly throughout the cabin to ensure immediate availability of oxygen to each required cabin crew member regardless of his or her location at the time of cabin pressurisation failure.
 - (3) Aeroplanes intended to be operated at pressure altitudes above 7 600 m (25 000 ft) shall be provided an oxygen dispensing unit connected to oxygen supply terminals immediately available to each occupant, wherever seated. The total number of dispensing units and outlets shall exceed the number of seats by at least 10 per cent. The extra units shall be evenly distributed throughout the cabin.
 - (4) Aeroplanes to be operated at pressure altitudes above 7 600 m (25 000 ft) or which, if operated at or below 7 600 m (25 000 ft), cannot descend safely within 4 minutes to 4 000 m (13 000 ft), and for which the individual certificate of airworthiness was first issued on or after 09 November 1998, shall be provided with automatically deployable oxygen equipment immediately available to each occupant, wherever seated. The total number of dispensing units and outlets shall exceed the number of seats by at least 10 per cent. The extra units shall be evenly distributed throughout the cabin.
 - (5) The oxygen supply requirements, as specified in table 6, for aeroplanes not certificated to fly at altitudes above 7 600 m

(25 000 ft), may be reduced to the entire flight time between 3 000 m (10 000 ft) and 4 000 m (13 000 ft) cabin pressure altitudes for all required cabin crew members and for at least 10 per cent of the passengers if, at all points along the route to be flown, the aeroplane is able to descend safely within 4 minutes to a cabin pressure altitude of 4 000 m (13 000 ft).

Table 6. Requirements for Supplemental Oxygen for Pressurised Aeroplanes

Supply for:	Duration and Cabin Pressure Altitude
1. All occupants of flight deck seats on flight deck duty	Entire flight time when the cabin pressure altitude exceeds 13 000 ft and entire time when the cabin pressure altitude exceeds 10 000 ft but does not exceed 13 000 ft after the first 30 minutes at those altitudes, but in no case less than: (i) 30 minutes for aeroplanes certificated to fly at altitudes not exceeding 25 000 ft (<i>Note 2</i>) (ii) 2 hours for aeroplanes certificated to fly at altitudes more than 25 000 ft (<i>Note 3</i>)
2. All required cabin crew members	Entire flight time when cabin pressure altitude exceeds 13 000 ft but not less than 30 minutes (<i>Note 2</i>), and entire flight time when cabin pressure altitude is greater than 10 000 ft but does not exceed 13 000 ft after the first 30 minutes at these altitudes
3. 100% of passengers	10 minutes or the entire flight time when the cabin pressure altitude exceeds 13 000 ft, whichever is greater (<i>Note 4</i>)
4. 10% of passengers	Entire flight time when the cabin pressure altitude exceeds 10 000 ft but does not exceed 13 000 ft after the first 30 minutes at these altitudes

Note 1: The supply provided shall take account of the cabin pressure altitude and descent profile for the routes concerned.

Note 2: The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certificated operating altitude to 3 000 m (10 000 ft) in 10 minutes and followed by 20 minutes at 3 000 m (10 000 ft).

Note 3: The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certificated operating altitude to 3 000 m (10 000 ft) in 10 minutes and followed by 110 minutes at 3 000 m (10 000 ft). The oxygen required to meet the crew protective breathing equipment provisions of this part may be included in determining the supply required.

Note 4: The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certificated operating altitude to 15 000 ft.

Note 5: For the purpose of this table, "passengers" means passengers actually carried and includes infants.

- (f) The supplemental oxygen supply requirements for non-pressurised helicopters are as follows—
 - (1) An operator shall not operate a non-pressurised helicopter at pressure altitudes above 3 000 m (10 000 ft) unless supplemental oxygen equipment, capable of storing and dispensing the oxygen supplies required, is provided.
 - (2) The amount of supplemental oxygen for sustenance required for a particular operation shall be determined on the basis of flight altitudes and flight duration, consistent with the operating procedures, established for each operation in the OM and with the routes to be flown, and with the emergency procedures specified in the OM.
 - (3) A helicopter intended to be operated above 3 000 m (10 000 ft) pressure altitude shall be provided with equipment capable of storing and dispensing the oxygen supplies required.
- (h) OXYGEN SUPPLY REQUIREMENTS.
- (i) FLIGHT CREW MEMBERS. Each member of the flight crew on flight deck duty shall be supplied with supplemental oxygen in accordance with table 7. If all occupants of flight deck seats are supplied from the flight crew source of oxygen supply, then they shall be considered as flight crew members on flight deck duty for the purpose of oxygen supply.
- (j) CABIN CREW MEMBERS, ADDITIONAL CREW MEMBERS, AND PASSENGERS. Cabin crew members and passengers shall be supplied with oxygen in accordance with table 7. Cabin crew members carried in addition to the minimum number of cabin crew members required, and additional crew members, shall be considered as passengers for the purpose of oxygen supply.

Table 7. Supplemental Oxygen for Non-Pressurised Helicopters

(a)	(b)
Supply for:	Duration and Pressure Altitude
1. All occupants of flight deck seats on flight deck duty	Entire flight time at pressure altitudes above 3 000 m (10 000 ft)
2. All required cabin crew members	Entire flight time at pressure altitudes above 4 000 m (13 000 ft) and for any period exceeding 30 minutes at pressure altitudes above 3 000 m (10 000 ft) but not exceeding 4 000 m (13 000 ft)
3. 100% of passengers (<i>see Note</i>)	Entire flight time at pressure altitudes above 4 000 m (13 000 ft)
4. 10% of passengers (<i>see Note</i>)	Entire flight time after 30 minutes at pressure altitudes greater than 3 000 m (10 000 ft) but not exceeding 4 000 m (13 000 ft)

Note: For the purpose of this table, “passengers” means passengers actually carried and includes infants.

PART 8 OPERATIONS

8.1 GENERAL

8.1.1 Applicability and Definitions

8.1.1.1 APPLICABILITY

- (a) This part prescribes the requirements for operations—
 - (1) conducted by all airmen certified in Grenada while operating aircraft registered in Grenada;
 - (2) of a foreign registered aircraft by Grenada AOC holders;
 - (3) of an aircraft within Grenada by airmen or AOC holders of a foreign State.
- (b) For operations outside of Grenada, all Grenada pilots and all operators shall comply with these requirements unless compliance would result in a violation of the laws of the foreign State in which the operation is conducted.

Note 1: Where a particular requirement is applicable only to a particular segment of aviation operations, it will be identified by a reference to those particular operations, such as “commercial air transport” or “small non-turbojet or turbofan aeroplanes.”

Note 2: Those specific subsections not applicable to foreign operators will include the phrase “This requirement is not applicable to foreign operators.”

8.1.1.2 DEFINITIONS

- (a) For the purpose of this part, the applicable definitions are contained in Part 1 of these regulations – “General Policies, Procedures and Definitions.”

8.1.1.3 ABBREVIATIONS

- (a) The following acronyms are used in this part—
 - (1) AAC – All Aircraft
 - (2) ACAS – Airborne Collision Avoidance System
 - (3) AD – Airworthiness Directive
 - (4) ADS – Automatic Dependent Surveillance
 - (5) ADS-B – Automatic Dependent Surveillance – Broadcast
 - (6) ADS-C – Automatic Dependent Surveillance – Contract
 - (7) AGL – Above Ground Level
 - (8) AIP – Aeronautical Information Publication
 - (9) AMO – Approved Maintenance Organisation
 - (10) AMSL – Above Mean Sea Level
 - (11) AMT – Aviation Maintenance Technician
 - (12) AOC – Air Operator Certificate
 - (13) APU – Auxiliary Power Unit
 - (14) ATC – Air Traffic Control

- (15) ATPL – Airline Transport Pilot Licence
- (16) ATS – Air Traffic Service
- (17) CAT – Category
- (18) CDL – Configuration Deviation List
- (19) CG – Centre Of Gravity
- (20) CP – Co-Pilot
- (21) CPL – Commercial Pilot Licence
- (22) CRM – Crew Resource Management
- (23) CRT – Cathode Ray Tube
- (24) CVR – Cockpit Voice Recorder
- (25) DH – Decision Height
- (26) EDTO – Extended Diversion Time Operation
- (27) ETA – Estimated Time of Arrival
- (28) FAS – Final Approach Segment
- (29) FDR – Flight Data Recorder
- (30) FE – Flight Engineer
- (31) FL – Flight Level
- (32) FOO – Flight Operations Officer
- (33) FRMS – Fatigue Risk Management System
- (34) FSTD – Flight Simulation Training Device
- (35) GPS – Global Positioning System
- (36) IAP – Instrument Approach Procedure
- (37) ICAO – International Civil Aviation Organization

- (38) IFR – Instrument Flight Rules
- (39) ILS – Instrument Landing System
- (40) IMC – Instrument Meteorological Conditions
- (41) INS – Inertial Navigation System
- (42) IS – Implementing Standards
- (43) LDA – Localiser-Type Directional Aid
- (44) LOC – Localiser
- (45) LORAN – Long-Range Navigation
- (46) LVO – Low Visibility Operations
- (47) LVTO – Low Visibility Take-Off
- (48) MDA – Minimum Descent Altitude
- (49) MDH – Minimum Descent Height
- (50) MEA – Minimum En Route Altitude
- (51) MEL – Minimum Equipment List
- (52) MMEL – Master Minimum Equipment List
- (53) MNPS – Minimum Navigation Performance Specifications
- (54) MOCA – Minimum Obstruction Clearance Altitude
- (55) MSL – Mean Sea Level
- (56) NAT HLA – North Atlantic High Level Airspace
- (57) NM – Nautical Miles
- (58) NOTAM – Notice to Airmen
- (59) NPA – Non-Precision Approach
- (60) OCA – Obstacle Clearance Altitude
- (61) OCA/H – Obstacle Clearance Altitude/Height

- (62) OCH – Obstacle Clearance Height
- (63) OM – Operations Manual
- (64) PA – Precision Approach
- (65) PBN – Performance-Based Navigation
- (66) PIC – Pilot-In-Command
- (67) PBE – Protective Breathing Equipment
- (68) RFFS – Rescue And Fire Fighting Service
- (69) RNAV – Area Navigation
- (70) RP – Remote Pilot
- (71) RPA – Remotely Piloted Aircraft
- (72) RPAS – Remotely Piloted Aircraft System
- (73) RPS – Remote Pilot Station
- (74) RVR – Runway Visual Range
- (75) RVSM – Reduced Vertical Separation Minimum
- (76) SCCM – Senior Cabin Crew Member
- (77) SDF – Simplified Directional Facility
- (78) SM – Statute Miles
- (79) SSR – Secondary Surveillance Radar
- (80) TACAN – Tactical Air Navigation System
- (81) UTC – Coordinated Universal Time
- (82) VFR – Visual Flight Rules
- (83) VMC – Visual Meteorological Conditions
- (84) VSM – Vertical Separation Minimum
- (85) V_1 – Take-Off Decision Speed

(86) V_{mo} – Maximum Operating Speed

(87) VOR – VHF Omnidirectional Radio Range

(88) V_{so} – Stalling speed or The minimum steady flight speed in the landing configuration

8.2 GENERAL OPERATIONS REQUIREMENTS

8.2.1 Aircraft Requirements

8.2.1.1 REGISTRATION MARKINGS

- (a) A person shall not operate an aircraft registered in Grenada unless the aircraft displays the proper markings prescribed in Part 4 of these regulations.

8.2.1.2 CIVIL AIRCRAFT AIRWORTHINESS

- (a) A person shall not operate a civil aircraft unless the civil aircraft is in an airworthy condition.
- (b) A PIC shall—
- (1) determine whether an aircraft is in a condition for safe flight; and
 - (2) discontinue a flight as soon as practicable when an unairworthy mechanical, electrical or structural condition occurs.

8.2.1.3 SPECIAL AIRWORTHINESS CERTIFICATE OPERATIONAL RESTRICTIONS

- (a) A person shall not operate an aircraft with a special airworthiness certificate except as provided in the limitations issued with that certificate.

8.2.1.4 AIRCRAFT INSTRUMENTS AND EQUIPMENT

- (a) A person shall not operate an aircraft unless the aircraft is equipped with the required instruments and navigation equipment appropriate to type of flight operation conducted and the route being flown.

Note: The instrument and equipment required for specific operations are listed in Part 7.

8.2.1.5 INOPERATIVE INSTRUMENTS AND EQUIPMENT

- (a) A person shall not, takeoff in an aircraft with inoperative instruments or equipment installed except as authorised by the Authority.
- (b) An AOC Holder shall not operate an aircraft with inoperative instruments and equipment installed unless the following conditions are met—
 - (1) an approved MEL exists for that aircraft;
 - (2) the Authority has issued the AOC Holder operations specifications authorising operations in accordance with an approved MEL;
 - (3) the flight crew shall have direct access at all times prior to flight to all of the information contained in the approved MEL through printed or other means approved by the Authority in the AOC Holder's operating specifications;
 - (4) the aircraft is operated under all applicable conditions and limitations contained in the MEL and the specific operating provisions authorising use of the MEL;
 - (5) records identifying the inoperative instruments and equipment and the information required by Paragraph 8.2.1.5(c)(2) of this subsection must be available to the pilot.
- (c) For the purposes of this section, an approved "Minimum Equipment List", as authorised by the specific operating provisions, constitutes an approved change to the type design without requiring recertification and shall—
 - (1) be prepared in accordance with the limitations specified in Paragraph 8.2.1.5(d) of this subsection;
 - (2) provide for the operation of the aircraft with certain instruments and equipment in an inoperative condition;
- (d) The following instruments and equipment shall not be included in the MEL—
 - (1) instruments and equipment that are either specifically or otherwise required by the airworthiness requirements under which the aircraft is type certificated and which are essential for safe operations under all operating conditions;

- (2) instruments and equipment required by an AD to be in operable condition unless the AD provides otherwise;
 - (3) instruments and equipment required for specific operations under Part 7, Part 8 and/or Part 9 of these regulations.
- (e) Notwithstanding Paragraphs 8.2.1.5(d)(1) and (d)(3) of this subsection, an aircraft with inoperative instruments or equipment may be operated under a special flight permit under Part 5, Section 5.4.1.11 of these regulations.
- (f) If deactivation of the inoperative instrument or equipment involves maintenance, it shall be accomplished and recorded in accordance with Part 5 of these regulations

8.2.1.6 CIVIL AIRCRAFT FLIGHT MANUAL, MARKING AND PLACARD REQUIREMENTS

- (a) A person shall not operate a civil aircraft registered in Grenada unless there is available in that aircraft—
 - (1) a current, approved AFM or RFM; and
 - (2) an AOM approved by the Authority for the AOC holder.
- (b) A person shall not operate a civil aircraft within or over Grenada unless the person has complied with the operating limitations specified in the approved AFM or RFM, markings and placards, or as otherwise prescribed by the certifying authority for the aircraft's State of Registry.
- (c) An operator of an aircraft shall display in the aircraft all placards, listings, instrument markings or a combination thereof, containing the operating limitations prescribed by the certifying authority for the aircraft's State of Registry for visual presentation.
- (d) Each AFM or RFM shall be updated by implementing changes made mandatory by the State of Registry received from the State of Design.

8.2.1.7 REQUIRED AIRCRAFT AND EQUIPMENT INSPECTIONS

- (a) Unless otherwise authorised by the Authority, a person shall not operate a Grenada-registered civil aircraft unless it has had the appropriate inspections required by Subpart 8.3.

8.2.1.8 DOCUMENTS TO BE CARRIED ON BOARD AIRCRAFT—

- (a) Except as provided in 8.2.1.6, a person shall not operate a civil aircraft, unless the aircraft has within it the following current and approved documents—
- (1) Registration Certificate issued to the owner;
 - (2) Airworthiness Certificate which must be displayed IAW CAR 1.2.1.1(g);
 - (3) Aircraft Radio License;
 - (4) list of passenger names and points of embarkation and destination;
 - (5) cargo manifest including special loads information;
 - (6) Aircraft Technical Log;
 - (7) for international commercial flights, a certified true copy of the Air Operator Certificate;
 - (8) Noise Certificate, if required;
 - (9) AFM or RFM;
 - (10) For commercial operations, part(s) of the Operations Manual relevant to operation(s) conducted;
 - (11) MEL;
 - (12) Category II or III Manual, as applicable;
 - (13) for international commercial flights in excess of 1 hour, Operational Flight Plan;
 - (14) for international flights, filed ATC flight plan;
 - (15) for international flights, NOTAMS briefing documentation;
 - (16) for international flights, meteorological information;
 - (17) mass and balance documentation;
 - (18) roster of special situation passengers;

- (19) for international flights, maps and charts for routes of proposed flight or possibly diverted flights;
- (20) forms for complying with the reporting requirements of the Authority and the AOC holder;
- (21) for international flights, a general declaration for customs;
- (22) any documentation which may be required by the Authority or States concerned with a proposed flight;
- (23) appropriate licences for each member of the flight crew copy of the release to service, if any, in force with respect to the aircraft for international flights search and rescue information;
- (24) aerial work certificate for aerial work operators;
- (25) A certified true copy of the agreement summary of the Article 83 bis agreement entered into between the State of Registry and the State of the Operator, in either an electronic or hard copy format. When the summary is issued in a language other than English, an English translation shall be included.

Implementing Standard: See IS [8.2.1.8](#) for documents to be carried on board aircraft.

Note: "Special situation passengers" includes armed security personnel, deportees, persons in custody, and persons with special medical needs. International flights require all items, domestic flights require only those items not identified for international flights.

8.3 AIRCRAFT CONTINUING AIRWORTHINESS AND INSPECTION REQUIREMENTS

8.3.1.1 APPLICABILITY

- (a) This part prescribes the rules governing the inspection of a civil aircraft registered in Grenada operating within or outside of Grenada.
- (b) Subsections [8.3.1.3](#) and [8.3.1.4](#) shall not apply to an aircraft subject to an approved continuous airworthiness maintenance program approved by the Authority for an AOC holder in Part 9.
- (c) This Subpart applies to—

- (1) all aircraft, as designated below, operated as commercial air transport in Grenada if the operator has not been designated an AOC holder by Grenada;
- (2) all general aviation large, complex aircraft operated in Grenada, whether or not the aircraft is registered in Grenada.
- (d) Where an aircraft that is not registered in Grenada and operating under an inspection program approved or accepted by the State of Registry, does not have the equipment required by Grenada-for operations within Grenada, the owner or the operator of the aircraft shall ensure that such equipment is installed and inspected in accordance with the requirements of the State of Registry, in a manner that is acceptable to the Authority, prior to operation of that aircraft in Grenada.

8.3.1.2 GENERAL

- (a) The registered owner or operator of an aircraft shall maintaining that aircraft in an airworthy condition and complying with all ADs.
- (b) A person shall not perform maintenance, preventive maintenance, or alterations on an aircraft other than as prescribed in this subpart, Part 5 and any other applicable regulations.
- (c) A person shall not operate an aircraft for which a manufacturer's maintenance manual or instructions for continuing airworthiness has been issued, that contains an airworthiness limitations section unless the mandatory replacement times, inspection intervals and related procedures set forth in specific operating provisions are approved by the Authority under Part 9 of these regulations or in accordance with an inspection program approved under Section 8.3.1.4(c) of this part.

8.3.1.3 MAINTENANCE REQUIRED

- (a) An owner or operator of an aircraft shall—
 - (1) ensure that the aircraft is inspected as prescribed in Subpart 8.3 and discrepancies repaired as prescribed in the Performance Rules of Part 5 of these regulations;
 - (2) repair, replace, remove, or inspect any inoperative instruments or items of equipment at the next required inspection, except when permitted under the provisions of a Minimum Equipment List (MEL);

- (3) ensure that a placard has been installed on the aircraft when listed discrepancies include inoperative instruments or equipment; and
- (4) ensure that maintenance personnel make appropriate entries in the aircraft maintenance records indicating the aircraft has been approved for return to service.

8.3.1.4 INSPECTIONS

- (a) Except as provided in Paragraph 8.3.1.4(c) of this subsection, a person shall not operate an aircraft unless, within the preceding 12 calendar months, the aircraft has had—
 - (1) an annual inspection in accordance with Part 5 of these regulations and has been approved for return to service by a person authorised by Part 5, Section 5.6.1.4 of these regulations; or
 - (2) an inspection for the issuance of an airworthiness certificate in accordance with Part 5 of these regulations.

Note: No inspection performed under Paragraph 8.3.1.4(b) of this subsection may be substituted for any inspection required by this paragraph unless it is performed by a person authorised to perform annual inspections and is entered as an “annual” inspection in the required maintenance record.

- (b) Except as provided in Paragraph 8.3.1.4(c) of this subsection, a person shall not—
 - (1) operate an aircraft carrying any person (other than a crew member) for hire; or
 - (2) give flight instruction for hire in an aircraft which that person provides; unless within the preceding 100 hours or six months of time in service the aircraft has received an annual or 100-hour inspection and been approved for return to service in accordance with Part 5 of this schedule or has received an inspection for the issuance of an airworthiness certificate in accordance with Part 5 of this schedule. The 100-hour or six months limitation may be exceeded by not more than 10 hours or 18 days while en route to reach a place where the inspection can be done. The excess time used to reach a place where the inspection can be done must be included in computing the next 100 hours of time in service.
- (c) Paragraphs 8.3.1.4(a) and (b) of this subsection shall not apply to—
 - (1) an aircraft that carries a flight permit;
 - (2) an aircraft which is subject to the requirements of Paragraphs 8.3.1.4(d) or (e) of this subsection; or

- (3) a turbine-powered rotorcraft when the operator elects to inspect that rotorcraft in accordance with Paragraph 8.3.1.4(e) of this subsection.
- (d) A registered owner or operator of an aircraft desiring to use a progressive inspection program shall submit a written request to the Authority, and shall provide the following—
 - (1) an AMT, appropriately Type rated in accordance with Part 2 of these regulations, an AMO appropriately rated in accordance with Part 6 of these regulations, or the manufacturer of the aircraft to supervise or conduct the progressive inspection;
 - (2) a current inspection procedures manual available and readily understandable to pilot and maintenance personnel containing, in detail—
 - (i) an explanation of the progressive inspection, including the continuity of inspection responsibility, the making of reports, and the keeping of records and technical reference material;
 - (ii) an inspection schedule, specifying the intervals in hours or days when routine and detailed inspections will be performed and including instructions for exceeding an inspection interval by not more than 10 hours while en-route and for changing an inspection interval because of service experience;
 - (iii) sample routine and detailed inspection forms and instructions for their use; and
 - (iv) sample reports and records and instructions for their use;
 - (3) enough housing and equipment for necessary disassembly and proper inspection of the aircraft; and
 - (4) appropriate current technical information for the aircraft.

Note: The frequency and detail of the progressive inspection shall provide for the complete inspection of the aircraft within each 12 calendar months and be consistent with the current manufacturer's recommendations, field service experience, and the kind of operation in which the aircraft is engaged. The

progressive inspection schedule shall ensure that the aircraft, at all times, will be airworthy and will conform to all applicable aircraft specifications, type certificate data sheets, airworthiness directives, and other approved data acceptable to the Authority. If the progressive inspection is discontinued, the owner or operator shall immediately notify the Authority, in writing, of the discontinuance. After the discontinuance, the first annual inspection under Part 8 is due within 12 calendar months after the last complete inspection of the aircraft under the progressive inspection. The 100-hour inspection under Paragraph Error! Reference source not found. is due within 100 hours or six months after that complete inspection. A complete inspection of the aircraft, for the purpose of determining when the annual and 100 hour inspections are due, requires a detailed inspection of the aircraft and all its components in accordance with the progressive inspection. A routine inspection of the aircraft and a detailed inspection of several components is not considered to be a complete inspection.

- (e) A registered owner or operator of a large aeroplane, a turbojet multi-engine aeroplane, a turbo propeller powered multi-engine aeroplane and a turbine-powered rotorcraft shall select and identify in the aircraft maintenance records, and use one of the following programs for the inspection of the aircraft—
 - (1) a current inspection program recommended by the manufacturer and approved by the Authority;
 - (2) a continuous maintenance program that is part of a continuous maintenance program for that make and model of aircraft currently approved by the Authority for use by an AOC holder; or
 - (3) any other inspection program established by the registered owner or operator of that aircraft and approved by the Authority.
- (f) An owner or an operator shall include in the program he selected above, the name and address of the person responsible for the scheduling of the inspections required by the programme and shall provide a copy of the program to the person performing inspection on the aircraft.
- (g) An aircraft shall not be approved for return to service unless the replacement times for life-limited parts specified in the aircraft

specification-type data sheets are complied with and the aircraft, including airframe, engines, propellers, rotors, appliances and survival and emergency equipment, is inspected in accordance with the inspection programme selected.

- (h) A person who wishes to establish or change an approved inspection program shall submit the programme to the Authority for approval and shall include in writing—
 - (1) instructions and procedures for the conduct of inspections for the particular make and model aircraft, including necessary tests and checks. The instructions shall set forth in detail the parts and areas of the aeronautical products, including survival and emergency equipment required to be inspected; and
 - (2) a schedule for the inspections that shall be performed, expressed in terms of time in service, calendar time, number of system operations or any combination of these.
- (i) When an owner or an operator changes from one inspection program to another, the owner or operator shall apply the time in service, calendar times, or cycles of operation accumulated under the previous program, in determining time the inspection is due under the new program.

8.3.1.5 CHANGES TO AIRCRAFT MAINTENANCE PROGRAMS

- (a) Where the Authority finds that revisions to an approved inspection program are necessary for the continued adequacy of the program, the Authority shall notify the owner or operator of the aircraft to make the changes to the program deemed to be necessary.
- (b) The owner or operator may within thirty days after receipt of the notice, petition the Authority to reconsider the notice.
- (c) Except in the case of an emergency requiring immediate action in the interest of safety, the filing of the petition stays the notice pending a decision by the Authority.

8.3.1.6 INSPECTIONS: ALL OTHER AIRCRAFT

- (a) A person shall not operate other aircraft unless within the preceding 12 calendar months the aircraft has—

- (1) been inspected in accordance with the Performance Rules of Part 5 and approved for return to service by an authorised person; and
 - (2) been issued an Airworthiness Certificate by a representative of the Authority.
- (b) A person shall not operate an aircraft for flight instruction, or for compensation or hire, unless within the preceding 100 hours or 6 months of time in service the aircraft has been inspected in accordance with the Performance Rules of Part 5 and approved for return to service by an authorised person as identified in Part 5.

8.3.1.7 CONTENT, FORM, AND DISPOSITION OF MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING AND MODIFICATION RECORDS

- (a) An owner or operator of an aircraft shall keep a maintenance record of—
 - (1) the entire aircraft to include—
 - (i) total time in service (hours, calendar time and cycles, as appropriate) of the aircraft and all life limited parts;
 - (ii) current inspection status of the aircraft, including the time since required or approved inspections were last performed;
 - (iii) current empty mass and the location of the centre of gravity when empty;
 - (iv) addition or removal of equipment;
 - (v) type and extent of maintenance and alteration, including the time in service and date;
 - (vi) when work was performed; and
 - (vii) a chronological list of compliance with Airworthiness Directives, including methods of compliance.
 - (2) life limited products—
 - (i) total time in service;

- (ii) date of the last overhaul;
 - (iii) time in service since the last overhaul; and (iv) date of the last inspection.
- (3) instruments and equipment, the serviceability and operating life of which are determined by their time in service including—
 - (i) records of the time in service as are necessary to determine their serviceability or to compute their operating life; and
 - (ii) date of last inspection.

8.3.1.8 CONTINUING AIRWORTHINESS RECORDS RETENTION

- (a) Except for records maintained by an AOC holder, a registered owner or operator of an aircraft shall retain the following records until the work is repeated or superseded by other work of equivalent scope and detail—
 - (1) records of the maintenance, preventive maintenance, minor modifications and records of the 100hour, annual, and other required or approved inspections, as appropriate, for each aircraft (including the airframe) and each engine, propeller, rotor and appliance of an aircraft to include—
 - (i) a description (or reference to data acceptable to the Authority) of the work performed;
 - (ii) the date of completion of the work performed; and
 - (iii) the signature and certificate number of the person approving the aircraft for return to service.
 - (2) records containing the following information—
 - (i) the total time-in-service of the airframe, each engine, each propeller, and each rotor.
 - (ii) the current status of all life-limited aeronautical products;

- (iii) the time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis;
 - (iv) the current inspection status of the aircraft, including the time since the last inspection required by the inspection program under which the aircraft and its appliances are maintained.
 - (v) the current status of applicable Airworthiness Directives including, for each, the method of compliance, the Airworthiness Directive number, and revision date. If the Airworthiness Directive involves recurring action, the time and date when the next action is required;
 - (vi) copies of the forms prescribed by this chapter for each major modification to the airframe and currently installed engines, rotors, propellers, and appliances.
- (b) The records specified in Paragraph 8.3.1.8(a) of this subsection shall be retained and transferred with the aircraft at the time the aircraft is sold or leased.
- (c) A list of defects shall be retained until the defects are repaired and the aircraft is approved for return to service.
- (d) The owner or operator of an aircraft shall make all maintenance records required by this subsection available for inspection by the Authority.

8.3.1.9 TRANSFER OF MAINTENANCE RECORDS

- (a) An owner or operator of an aircraft who sells or leases an aircraft registered in Grenada shall transfer to the purchaser or to the lessor, at the time of sale or lease, the records identified in Section 8.3.1.8 of this subsection of that aircraft, in plain language form or in coded form at the election of the purchaser or the lessor;
- (b) Pursuant to Paragraph 8.3.1.9(a) of this subsection, if the coded form is requested by the purchaser or the lessor, it shall provide for the preservation and retrieval of information in a manner that is acceptable to the Authority.

8.4 FLIGHT CREW REQUIREMENTS**8.4.1.1 COMPOSITION OF THE FLIGHT CREW**

- (a) The number and composition of a flight crew shall not be less than that specified in the flight manual, or all other documents associated with the airworthiness certificate.
- (b) For operations under IFR an operator shall ensure that for all turbo-propeller aeroplanes with a maximum approved passenger seating configuration of more than 9 and, for all turbojet aeroplanes, the minimum flight crew is 2 pilots.
- (c) Aeroplanes other than those covered in (b) above, can be operated by a single pilot provided that the requirements of 8.8.1.30 are satisfied. If the requirements of 8.8.1.30 are not satisfied, the minimum flight crew shall be 2 pilots.
- (d) A CP is required for IFR commercial air transport operations unless the Authority has issued an exemption, in accordance with the exemption process in Part 1 of these regulations, for the use of an autopilot in lieu of a CP. This exemption shall be for aeroplanes with a maximum certificated take-off mass of 5 700 kg (12 566 lb) or less or helicopters with a maximum certificated take-off mass of 3 175 kg or less.
- (e) When a separate flight engineer's station is incorporated in the design of an aeroplane, the flight crew shall include at least one flight engineer especially assigned to that station, unless the duties associated with that station can be satisfactorily performed by another flight crew member, holding a flight engineer licence, without interference with regular duties.

Implementing Standard: IS 8.4.1.1 for single pilot operations under the instrument flight rules (IFR).

8.4.1.2 FLIGHT CREW QUALIFICATIONS

- (a) The operator shall ensure that the licenses of each flight crew member have been issued or rendered valid by the State of Registry, contain the proper ratings, and that all that the flight crew members have maintained recency of experience.
- (b) The PIC shall ensure that the licenses of each flight crew member have been issued or rendered valid by the State of Registry, contain

the proper ratings, and that all that the flight crew members have maintained recency of experience.

- (c) A person shall not operate a civil aircraft in commercial air transport or aerial work unless the person is qualified for the specific operation and in the specific type of aircraft to be used.
- (d) The owner or operator of an aircraft shall ensure that the flight crew members demonstrate the ability to speak and understand the language used for radiotelephony communications and for international operations.

8.4.1.3 (RESERVED)

8.4.1.4 LICENCES REQUIRED

- (a) A person shall not act as a PIC or in any other capacity as a required flight crew member of a civil aircraft—
 - (1) registered in Grenada, unless the person carries in his or her personal possession the appropriate and current licence for that flight crew position for that type of aircraft and a valid medical certificate;
 - (2) of a foreign registry, unless the person carries in his or her personal possession a valid and current licence for that type of aircraft issued to them by the State in which the aircraft is registered.

8.4.1.5 AIRMAN: LIMITATIONS ON USE OF SERVICES FOR COMMERCIAL AIR TRANSPORT

- (a) A person shall not serve as an airman, nor shall an AOC holder use an airman in any commercial air transport unless the person is otherwise qualified for the operations for which he or she is to be used.

Note: The qualifications for airman engaged in commercial air transport are provided in Subpart 8.10.

8.4.1.6 RATING REQUIRED FOR IFR OPERATIONS

- (a) A person shall not act as PIC or co-pilot of a civil aircraft under IFR or in weather conditions less than the minimums prescribed for VFR flight unless, in the case of—

- (1) an aeroplane, the person holds an instrument rating and a commercial or an ATP licence with an appropriate aeroplane category, class, and type rating for the aeroplane being flown;
- (2) a helicopter, the person holds a helicopter instrument rating and a commercial or an ATP licence for helicopters not limited to VFR operations.

8.4.1.7 SPECIAL AUTHORISATION REQUIRED FOR CATEGORY II / III OPERATIONS

- (a) Except as stated in Paragraph 8.4.1.7(b) of this subsection, a person shall not act as a pilot crew member of a civil aircraft in a Category II/III operation unless in the case of—
 - (1) a PIC, he or she holds a current Category II or III pilot authorisation for that type aircraft; or
 - (2) a co-pilot, he or she is authorised by the State of Registry to act as co-pilot in that aircraft in Category II/III operations.
- (b) An authorisation shall not be required for individual pilots of an AOC holder which has operations specifications approving Category II or III operations.

8.4.1.8 PILOT LOGBOOKS

- (a) A pilot shall show the aeronautical training and experience used to meet the requirements for a licence or rating, or recency of experience, by a reliable record.
- (b) A PIC shall carry his or her logbook on all general aviation international flights.
- (c) A student pilot shall carry his or her logbook, including the proper flight instructor endorsements, on all solo cross-country flights.

Note: The acceptable methods of logging experience are outlined in Part 2 - Personnel Licensing.

8.4.1.9 PILOT CURRENCY: TAKEOFF AND LANDINGS

- (a) A person shall not act as a PIC or as a co-pilot of an aircraft carrying passengers unless, within the preceding 90 days he or she has—

- (1) made 3 takeoffs and landings as the sole manipulator of the flight controls in an aircraft of the same category and class and if a type rating is required, of the same type or in an FSTD approved for the purpose. ;
 - (2) for a tailwheel aeroplane, made the 3 takeoffs and landings in a tailwheel aeroplane with each landing to a full stop;
 - (3) for night operations, made the 3 takeoffs and landings required by Paragraph 8.4.1.9(a)(1) of this subsection at night with each landing to a full stop.
- (b) A person who has not met the recency of experience for takeoffs and landings shall satisfactorily complete a requalification curriculum acceptable to the Authority.
- (c) An AOC holder shall not assign a pilot to act in the capacity of cruise relief pilot in a type or variant of a type of an aeroplane unless, within the preceding 90 days that pilot has either—
 - (1) operated as a pilot-in-command, co-pilot or cruise relief pilot on the same type of aeroplane; or
 - (2) carried out flying skill refresher training including normal, abnormal and emergency procedures specific to cruise flight on the same type of aeroplane and has practised approach and landing procedures, where the approach and landing procedure practice may be performed as the pilot who is not flying the aeroplane.
- (d) The requirements of Paragraphs 8.4.1.9(a), (b) and (c) may be satisfied in a flight simulator approved by the Authority.

Note: When a PIC, a co-pilot or a cruise relief pilot is flying several variants of the same type of aeroplane or different types of aeroplane with similar characteristics in terms of operating procedures, systems and handling, the Authority shall decide under which conditions the requirements for each variant or each type of aeroplane can be combined

8.4.1.10 PILOT CURRENCY: IFR OPERATIONS

- (a) A person shall not act as a PIC or as a co-pilot under IFR, nor in IMC, unless he or she has, within the past 6 calendar months—

- (1) logged at least 6 hours of instrument flight time including at least 3 hours in flight in the category of aircraft; and
- (2) completed at least 6 instrument approaches.
- (b) A pilot who has completed an instrument proficiency check with an authorised representative of the Authority shall be deemed to have retained currency for IFR operations for 6 calendar months following that check.

8.4.1.11 PILOT CURRENCY: GENERAL AVIATION OPERATIONS

- (a) A person shall not act as a PIC or as a co-pilot of an aircraft type certified for more than one pilot unless, since the beginning of the past 12 calendar months, he or she has passed a proficiency check with an authorised representative of the Authority, in an aircraft requiring more than one pilot.
- (b) A person shall not act as a PIC or as a co-pilot of an aircraft type certified for more than one pilot unless, since the beginning of the past 24 calendar months, he or she has passed a proficiency check in the type aircraft to be operated.
- (c) A person shall not act as a PIC of an aircraft type certified for a single pilot unless, since the beginning of the past 24 calendar months, he or she has passed a proficiency check with an authorised representative of the Authority.
- (d) The person conducting the proficiency checks shall ensure that each check duplicates the manoeuvres of the type rating practical test.

Note: Subsection [8.4.1.11](#) does not apply to pilots engaged in commercial air transport operations. Those requirements are outlined in [8.10.1.21](#).

8.4.1.12 PILOT PRIVILEGES AND LIMITATIONS

- (a) A pilot shall conduct operations only within the general privileges and limitations of each licence as specified in Part 2.

8.4.1.13 PILOT CURRENCY – NIGHT VISION GOGGLES

- (a) A person shall not act as PIC in a night vision goggle operation unless that person has completed the required training prescribed in 2.3.2.9 of these regulations and has performed and logged the following tasks as the sole manipulator of the controls on a flight

during a night vision goggle operation, within the preceding 60 days to act as PIC with passengers on board, or within the preceding 120 days to act as PIC without passengers on board—

- (1) Three take-offs and landings, with each take-off and landing including a climbout, cruise, descent, and approach phase of flight, if the pilot intends to use night vision goggles during the take-off and landing phase of flight;
 - (2) Three hovering tasks, if the pilot intends to use night vision goggles when operating helicopters or powered-lifts during the hovering phase;
 - (3) Three area departure and area arrival tasks;
 - (4) Three tasks of transitioning from aided night flight to unaided night flight and back to aided night flight; or
 - (5) Three night vision goggle operations or, when operating helicopters or powered-lifts, six night vision goggle operations.
- (b) A person shall not act as PIC in a night vision goggle operation unless that person has successfully completed the night vision goggles proficiency check required in 2.3.2.9 of these regulations, with the Authority or an authorised representative of the Authority.

8.5 CREW MEMBER DUTIES AND RESPONSIBILITIES

8.5.1.1 AUTHORITY AND RESPONSIBILITY OF THE PIC

- (a) A PIC shall be responsible for the safety of all crew members, passengers and cargo on board when the doors are closed. The pilot-in-command shall also be responsible for the operation and safety of the aircraft from the moment it is ready to move for the purpose of taking off until the moment it finally comes to rest at the end of the flight and the engine(s) used as primary propulsion units are shut down.
- (b) A PIC of an aircraft shall have the final authority as to the operation of the aircraft while he or she is in command.
- (c) A PIC of an aircraft shall, whether manipulating the controls or not, be responsible for the operation of the aircraft in accordance with the rules of the air, except that the PIC may depart from these rules in emergency circumstances that render such departure absolutely necessary in the interests of safety.

- (d) A PIC that exercises his or her emergency authority shall notify the authority in writing within 10 days of the occurrence.
- (e) A PIC shall not conduct general aviation operations for which a specific approval is required unless such approval has been issued by the State of Registry.
- (f) The pilot-in-command shall be familiar with the laws, regulations and procedures, pertinent to the performance of his or her duties, prescribed for the areas to be traversed, the aerodromes to be used and the air navigation facilities relating thereto. The pilot-in-command shall ensure that other members of the flight crew are familiar with such of these laws, regulations and procedures as are pertinent to the performance of their respective duties in the operation of the aircraft.

8.5.1.2 COMPLIANCE WITH LOCAL REGULATIONS

- (a) A PIC shall comply with the relevant laws, regulations and procedures of the States in which the aircraft is operated.
- (b) If an emergency situation which endangers the safety of the aircraft or persons necessitates the taking of action which involves a violation of local regulations or procedures, the PIC shall—
 - (1) notify the appropriate local authority without delay;
 - (2) submit a report of the circumstances, if required by the State in which the incident occurs; and
 - (3) submit a copy of this report to the State of the Operator of the AOC or to the State of Registry, if in general aviation.
- (c) A PIC shall submit reports specified in Paragraph 8.5.1.2(b) to the Authority within 10 days in the form prescribed.

8.5.1.3 NEGLIGENCE OR RECKLESS OPERATIONS OF THE AIRCRAFT

- (a) A person shall not operate an aircraft in a negligent or reckless manner so as to endanger the life or property of others.

8.5.1.4 FITNESS OF FLIGHT CREW MEMBERS

- (a) A person shall not act as a PIC or in any other capacity as a required flight crew member if the person is aware of any decrease in his or

her medical fitness which might render him or her unable to safely exercise the privileges of his or her licence.

- (b) A PIC shall be responsible for ensuring that a flight is not—
 - (1) commenced if any flight crew member is incapacitated from performing duties by any cause such as injury, sickness, fatigue, the effects of alcohol or drugs; or
 - (2) continued beyond the nearest suitable aerodrome if a flight crew members' capacity to perform functions is significantly reduced by impairment of faculties from causes such as fatigue, sickness or lack of oxygen.

8.5.1.5 PROHIBITION ON USE OF PSYCHOACTIVE SUBSTANCES, INCLUDING NARCOTICS, DRUGS, OR ALCOHOL

- (a) A person shall not act or attempt to act as a crew member of a civil aircraft—
 - (1) within 8 hours after the consumption of any alcoholic beverage;
 - (2) while under the influence of alcohol; or
 - (3) while using any psychoactive substance that affects the person's faculties in any way contrary to the safety requirements.
- (b) A crew member shall, up to 8 hours before or immediately after acting or attempting to act as a crew member, on the request of a law enforcement officer or the Authority, submit to a test to indicate the presence of alcohol or psychoactive substance in the blood.
- (c) Whenever there is a reasonable basis to believe that a person may not be in compliance with this subsection and upon the request of the Authority, that person shall furnish the Authority, or shall authorize any clinic, doctor, or other person to release to the Authority, the results of each blood test taken for the presence of alcohol or narcotic substances up to 8 hours before or immediately after acting or attempting to act as a crew member.
- (d) Any test information provided to the Authority under the provisions of this section may be used as evidence in any legal proceeding.

8.5.1.6 CREW MEMBER USE OF SEAT BELTS AND SHOULDER HARNESSSES

- (a) A crew member shall have his or her seat belts fastened during takeoff and landing and at all other times when seated at his or her station.
- (b) A crew member occupying a station equipped with a shoulder harness shall fasten that harness during takeoff and landing, except in the circumstances where the crew member cannot perform the required duties with the shoulder harness fastened.
- (c) A crew member occupying a seat equipped with a combined safety belt and shoulder harness shall have the combined safety belt and shoulder harness properly secured about that crew member during takeoff and landing except in the circumstances where the crew member cannot perform the required duties with the combined safety belt and shoulder harness fastened.
- (d) A crew member shall ensure that the safety belt and shoulder harness of an unoccupied seat, if installed, shall be secured so as not to interfere with crew members in the performance of their duties or with the rapid egress of occupants in an emergency.

8.5.1.7 FLIGHT CREW MEMBERS AT DUTY STATIONS

- (a) A required flight crew member shall remain at the assigned duty station during take-off and landing and at the critical phases of flight.
- (b) A flight crew member shall remain at his or her station during all phases of flight unless—
- (c) absence is necessary for the performance of his or her duties in connection with the operation;
 - (1) absence is necessary for physiological needs, provided one qualified pilot remains at the controls at all times; or
 - (2) the crew member is taking a rest period and a qualified relief crew member replaces him or her at the duty station.
 - (i) For the assigned PIC during the en route cruise portion of the flight, by a pilot who holds an ATPL and an appropriate type rating, is currently qualified as PIC or

CP, and is qualified as PIC of that aircraft during the en route cruise portion of the flight; and

- (ii) In the case of the assigned CP, by a pilot qualified to act as PIC or CP of that aircraft during en route operations.

8.5.1.8 REQUIRED CREW MEMBER EQUIPMENT

- (a) A crew member involved in night operations shall have a flashlight at his or her station.
- (b) A pilot crew member shall have at his or her station an aircraft checklist containing the normal, abnormal, and emergency procedures relating to the operation of that type of aircraft.
- (c) A pilot crew member shall have at his or her station current and suitable charts to cover the route of the proposed flight and any route along which it is reasonable to expect that the flight may be diverted.
- (d) A flight crew member assessed as fit to exercise the privileges of a license, subject to the use of suitable correcting lenses, shall have a spare set of the correcting lenses readily available when performing as a required crew member in commercial air transport.

8.5.1.9 COMPLIANCE WITH CHECKLISTS

- (a) A PIC shall when operating an aircraft, ensure that the flight crew follows the approved checklist procedures.

8.5.1.10 SEARCH AND RESCUE INFORMATION

- (a) A PIC of all international flights shall have on board the aircraft essential information concerning the search and rescue services in the areas over which they intend to operate the aircraft.

8.5.1.11 PRODUCTION OF AIRCRAFT AND FLIGHT DOCUMENTATION

- (a) A PIC shall, within a reasonable time of being requested to do so by a person authorised by the Authority, produce to that person the documentation required to be carried on the aircraft.

**8.5.1.12 LOCKING OF FLIGHT DECK COMPARTMENT DOOR—
COMMERCIAL AIR TRANSPORT**

- (a) A PIC shall ensure that the flight deck compartment door (if installed) is closed and locked at all times during passenger-carrying commercial air transport operations, except as necessary to accomplish approved operations or to provide for emergency evacuation and as listed below—
- (1) From the time all external doors are closed following embarkation, until
 - (2) Any such door is opened for disembarkation, except
 - (3) When necessary to permit access and egress by authorised persons.
- (b) A person shall not operate a passenger-carrying aeroplane unless it is equipped with an approved flight crew compartment door that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorised persons; this door shall be capable of being locked and unlocked from either pilot's station, for aeroplanes with a maximum certificated take-off mass in excess of—
- (1) 54 500 kg;
 - (2) 45 000 kg and with a passenger seating capacity greater than 19; or
 - (3) With a passenger seating capacity greater than 60.

**8.5.1.13 ADMISSION TO THE FLIGHT DECK: COMMERCIAL AIR
TRANSPORT**

- (a) A person shall not admit any person to the flight deck of an aircraft engaged in commercial air transport operations unless the person being admitted is—
- (1) an operating crew member;
 - (2) a representative of the authority responsible for certification, licensing or inspection, if this is required for the performance of his or her official duties; or

- (3) permitted by and carried out in accordance with instructions contained in the Operations Manual.
- (b) A PIC shall ensure that—
 - (1) in the interest of safety, admission on the flight deck does not cause distraction and/or interference with the flight's operations; and
 - (2) all persons carried on the flight deck are made familiar with the relevant safety procedures.

8.5.1.14 ADMISSION OF INSPECTOR TO THE FLIGHT DECK

- (a) Whenever, in performing the duties of conducting an inspection, an inspector from the Authority presents his Inspector's Credential to the PIC, the PIC shall give the inspector free and uninterrupted access to the flight deck of the aircraft.

8.5.1.15 DUTIES DURING CRITICAL PHASES OF FLIGHT: COMMERCIAL AIR TRANSPORT

- (a) A flight crew member shall not perform any duties during a critical phase of flight except those required for the safe operation of the aircraft.
- (b) A PIC shall not permit a flight crew member to engage in any activity during a critical phase of flight which could distract or interfere with the performance of their assigned duties.

8.5.1.16 MANIPULATION OF THE CONTROLS: COMMERCIAL AIR TRANSPORT

- (a) A PIC shall not allow an unqualified person to manipulate the controls of an aircraft during commercial air transport operations.
- (b) A person shall not manipulate the controls of an aircraft during commercial air transport operations unless he or she is qualified to perform the applicable crew member functions and is authorised by the AOC holder.

8.5.1.17 SIMULATED ABNORMAL SITUATIONS IN FLIGHT—COMMERCIAL AIR TRANSPORT

- (a) A person shall not cause or engage in simulated abnormal or emergency situations or the simulation of IMC by artificial means during commercial air transport operations.

8.5.1.18 COMPLETION OF THE TECHNICAL LOGBOOK: COMMERCIAL AIR TRANSPORT

- (a) A PIC shall ensure that all portions of the technical logbook are handwritten in ink, at the appropriate points before, during and after flight operations including—
 - (1) the journey records section; and
 - (2) the continuing airworthiness records section.

8.5.1.19 REPORTING MECHANICAL IRREGULARITIES

- (a) A PIC shall ensure that all known or suspected defects in the aircraft are—
 - (1) for general aviation operations—
 - (i) entered in the aircraft logbook and disposed of in accordance with the MEL or other approved or prescribed procedure;
 - (ii) A Mandatory Occurrence Report shall be submitted to the Authority within 3 days if the failure, malfunction or defect is listed in CAR 5.5.1.4
 - (3) for commercial air transport operations—
 - (i) entered in the technical log of the aircraft at the end of that sector;
 - (ii) A Mandatory Occurrence Report shall be submitted to the Operator, without delay, if the failure, malfunction or defect is listed in CAR 5.5.1.4.

8.5.1.20 REPORTING OF FACILITY AND NAVIGATION AID INADEQUACIES

- (a) A crew member shall report, without delay, any inadequacy or irregularity of a facility or navigational aid observed in the course of operations to the person responsible for that facility or navigational aid.

8.5.1.21 REPORTING OF HAZARDOUS CONDITIONS

- (a) A PIC shall report to the appropriate ATC facility, without delay and with enough detail to be pertinent to the safety of other aircraft, any hazardous flight conditions encountered en route, including those

associated with meteorological conditions, volcanic ash and any other special or non routine observations;

- (b) A PIC shall report the runway braking action special air-report when the runway braking action encountered is not as good as reported.

8.5.1.22 REPORTING OF INCIDENTS

- (a) **AIR TRAFFIC INCIDENT REPORT.** A PIC shall submit, without delay, an air traffic incident report whenever an aircraft in flight has been endangered by—
 - (1) a near collision with another aircraft or object;
 - (2) faulty air traffic procedures or lack of compliance with applicable procedures by ATC or by the flight crew; or
 - (3) a failure of ATC facilities.
 - (4) **BIRDS.** In the event a bird constitutes an in-flight hazard or an actual bird strike a PIC shall, without delay—
 - (5) inform the appropriate ground station whenever a potential bird hazard is observed; and
 - (6) submit a written bird strike report after landing.
- (b) **DANGEROUS GOODS.** A PIC shall inform the appropriate ATC facility, if the situation permits, when an in-flight emergency occurs involving dangerous goods on board.
- (c) **UNLAWFUL INTERFERENCE.** A PIC shall submit a report to the local authorities and to the Authority, without delay, following an act of unlawful interference with the crew members on board an aircraft.

8.5.1.23 ACCIDENT NOTIFICATION

- (a) A PIC shall notify the nearest appropriate authority, by the quickest available means, of any accident involving his or her aircraft that results in serious injury or death of any person, or substantial damage to the aircraft or property.
- (b) A PIC shall submit a report to the Authority, by the quickest available means, of any accident which occurred while he or she was responsible for the flight.

8.5.1.24 OPERATION OF FLIGHT DECK VOICE AND FLIGHT DATA RECORDERS

- (a) A PIC shall ensure that whenever an aircraft has flight recorders installed, those recorders are operated continuously from the instant—
 - (1) for a flight data recorder, the aircraft begins its takeoff roll until it has completed the landing roll, and
 - (2) for a flight deck voice recorder, the initiation of the pre-start checklist until the end of the securing aircraft checklist.
- (b) A PIC shall not permit a flight data recorder or flight deck voice recorder to be disabled, switched off or erased during flight, unless necessary to preserve the data for an accident or incident investigation.
- (c) In the event of an accident or incident on an aircraft, a PIC shall act to preserve the recorded data for subsequent investigation upon completion of the flight.

8.5.1.25 CREW MEMBER OXYGEN: MINIMUM SUPPLY AND USE

- (a) A PIC shall ensure that breathing oxygen and masks are available to crew members in sufficient quantities for all flights at such altitudes where a lack of oxygen might result in impairment of the faculties of crew members.
- (b) In no case shall the minimum supply of oxygen on board the aircraft be less than that prescribed by the Authority.

Note: The requirements for oxygen supply and use are prescribed in Part 7, [7.1.8.12](#), Required Instruments and Equipment.

- (c) A PIC shall ensure that all flight crew members, when engaged in performing duties essential to the safe operation of an aircraft in flight, use breathing oxygen continuously at cabin altitudes exceeding 10,000 ft for a period in excess of 30 minutes and whenever the cabin altitude exceeds 13,000 ft.
- (d) At least one pilot at the controls of a pressurised aircraft in flight shall wear and use an oxygen mask—

- (1) for general aviation operations, at flight levels above 350, if there is no other pilot at their duty station; and;
- (2) for commercial air transport operations, at flight levels above 250, if there is no other pilot at their duty station.

8.5.1.26 PORTABLE ELECTRONIC DEVICES

- (a) A PIC or SCA shall not permit a person to use and a person shall not use a portable electronic device on board an aircraft that may adversely affect the performance of aircraft systems and equipment unless—
 - (1) for IFR operations other than commercial air transport, the PIC allows such a device prior to its use;
 - (2) for commercial air transport operations, the AOC holder makes a determination of acceptable devices and publishes that information in the Operations Manual for the crew members use; and
 - (3) the PIC informs passengers of the permitted use.

8.5.1.27 CARRIAGE OF DANGEROUS GOODS

- (a) No person shall carry dangerous goods in an aircraft registered in Grenada or operated in Grenada except—
 - (1) With the written permission of the Authority and subject to any condition the Authority may impose in granting such permission; and
 - (2) In accordance with ICAO Doc 9284, Technical Instructions for the Safe Transport of Dangerous Goods by Air, and any variations to those instructions that the Authority may from time to time mandate and provide notification of to ICAO.

8.5.1.28 MICROPHONES

- (a) For AOC holders operating aircraft, a required flight crew member shall use a boom or throat microphone to communicate with another flight crew member and ATS below FL 150.
- (b) For general aviation operations in an aeroplane, helicopter, or powered-lift aircraft, a required flight crew member shall use a boom or throat microphone to communicate with another flight crew member and ATS below FL 150.

- (c) For aerial work operations, a required flight crew member shall use a boom or throat microphone to communicate with another flight crew member and ATS below FL 150, as applicable to the mission.

8.6 FLIGHT PLANNING AND SUPERVISION

8.6.1 Flight Plans

8.6.1.1 SUBMISSION OF A FLIGHT PLAN

- (a) A pilot shall file a VFR or IFR flight plan as applicable, prior to operating one of the following—
 - (1) any flight (or portion thereof) to be provided with air traffic control service;
 - (2) any IFR flight within advisory airspace;
 - (3) any flight within or into designated areas, or along designated routes, when so required by the appropriate ATC authority to facilitate the provision of flight information, alerting and search and rescue services;
 - (4) any flight within or into designated areas, or along designated routes, when so required by the appropriate ATC authority to facilitate co-ordination with appropriate military units or with ATC facilities in adjacent states, in order to avoid the possible need for interception for the purpose of identification; and
 - (5) any flight across international borders.
- (b) A PIC shall submit a flight plan before departure or during flight, to the appropriate ATC facility, unless arrangements have been made for submission of repetitive flight plans.
- (c) Unless otherwise prescribed by the appropriate ATC authority, a pilot shall submit a flight plan to the appropriate ATC facility—
 - (1) at least sixty minutes before departure; or
 - (2) if submitted during flight, at a time which will ensure its receipt by the appropriate ATC facility at least ten minutes before the aircraft is estimated to reach—
 - (i) the intended point of entry into a control area or advisory area; or

- (ii) the point of crossing an airway or advisory route.

8.6.1.2 AIR TRAFFIC CONTROL FLIGHT PLAN: COMMERCIAL AIR TRANSPORT

- (a) A person shall not takeoff an aircraft in commercial air transport if an ATC flight plan has not been filed, except as authorised by the Authority.

8.6.1.3 CONTENTS OF A FLIGHT PLAN

- (a) A person filing an IFR or VFR flight plan shall include in it the following information—
 - (1) aircraft identification;
 - (2) flight rules and type of flight;
 - (3) number and type(s) of aircraft and wake turbulence category;
 - (4) equipment;
 - (5) departure aerodrome and alternate (if required);
 - (6) estimated off-block time;
 - (7) cruising speed(s);
 - (8) cruising level(s);
 - (9) route to be followed;
 - (10) en route alternate (if required)
 - (11) destination aerodrome and alternate (if required);
 - (12) fuel endurance;
 - (13) total number of persons on board;
 - (14) emergency and survival equipment; and
 - (15) any other information.

Note: Whatever the purpose for which it is submitted, a flight plan shall contain information, as applicable, on relevant items up to and including “alternate aerodrome(s)” regarding the whole route or the portion thereof for which the flight plan is submitted.

8.6.1.4 PLANNED RECLEARANCE

- (a) If a person determines during flight planning that there is a possibility, depending on fuel endurance, that a flight may be able to change destinations and still comply with minimum fuel supply planning requirements, that person shall notify the appropriate ATC facility of this possibility when the flight plan is submitted.

Note: The intent of this provision is to facilitate a new clearance to a revised destination, normally beyond the filed destination aerodrome.

8.6.1.5 CHANGES TO A FLIGHT PLAN

- (a) A pilot shall report as soon as practicable to the appropriate ATC Facility any change which occurs to a flight plan submitted for an IFR flight or a VFR flight operated as a controlled flight.
- (b) A pilot shall report as soon as practicable to the appropriate ATC Facility any significant changes for VFR flights other than those operated as controlled flight.
- (c) Operational instructions involving a change to the ATC flight plan shall be, when practicable, coordinated with the appropriate ATC facility before transmission to the aircraft.

Note: Information submitted prior to departure regarding fuel endurance or total number of persons carried on board, if incorrect at time of departure, constitutes a significant change and shall be reported.

8.6.1.6 CLOSING A FLIGHT PLAN

- (a) A PIC shall make a report of arrival either in person or by radio to the appropriate ATC facility at the earliest possible moment after landing at the destination aerodrome, unless ATC automatically closes a flight plan.
- (b) When a flight plan has been submitted for a portion of a flight, but not the arrival at destination, the pilot shall close that flight plan en route with the appropriate ATC facility.

- (c) When no ATC facility exists at the arrival aerodrome, the pilot shall contact the nearest ATC facility to close the flight plan as soon as practicable after landing and by the quickest means available.
- (d) A Pilot shall include the following elements of information in his or her arrival reports—
 - (1) aircraft identification;
 - (2) departure aerodrome;
 - (3) destination aerodrome (only in the case of a diversionary landing);
 - (4) arrival aerodrome; and
 - (5) time of arrival.

8.6.2 Flight Planning and Preparation

8.6.2.1 AIRCRAFT AIRWORTHINESS AND SAFETY PRECAUTIONS

- (a) A PIC shall not operate a civil aircraft in flight until he or she is satisfied that—
 - (1) the aircraft is airworthy, duly registered and that appropriate certificates are aboard the aircraft;
 - (2) the instruments and equipment installed in the aircraft are appropriate, taking into account the expected flight conditions; and
 - (3) any necessary maintenance has been performed and a maintenance release, if applicable, has been issued in respect to the aircraft.
- (b) For commercial air transport operations, a PIC shall certify by signing the aircraft technical log that he or she is satisfied that the requirements of Paragraph 8.6.2.1(a) of this subsection have been met for a particular flight.
- (c) An AOC holder shall, at all times, have available in the Operations Department, for immediate communication to rescue coordination centres, lists containing information on the emergency and survival equipment carried on board any of their aircraft engaged in

international air navigation. The information shall include, as applicable, the number, colour and type of life rafts and pyrotechnics, details of emergency medical supplies, water supplies and the type and frequencies of the emergency portable radio equipment.

8.6.2.2 ADEQUACY OF OPERATING FACILITIES

- (a) A person shall not commence a flight unless it has been determined by every reasonable means available that the ground and/or water areas and facilities available and communication facilities and navigation aids directly required for such flight and for the safe operation of the aircraft, are adequate.

Note: "Reasonable means" denotes use, at the point of departure, of information available to the PIC either through official information published by the aeronautical information services or readily obtainable in other sources.

- (b) An operator shall ensure that a flight will not commence or continue as planned unless it has been ascertained by every reasonable means available that the airspace containing the intended route from aerodrome of departure to aerodrome of arrival, including the intended take-off, destination, and en route alternate aerodromes, can be safely used for the planned operation. When intending to operate over or near conflict zones, a risk assessment shall be conducted and appropriate risk mitigation measures taken to ensure a safe flight.
- (c) An operator shall ensure that any inadequacy of facilities observed in the course of operations is reported to the Authority responsible for those facilities, without undue delay.
- (d) Subject to their published conditions of use, aerodromes and their facilities shall be kept continuously available for flight operations during their published hours of operations, irrespective of meteorological conditions.
- (e) An operator shall, as part of its safety management system, assess the level of RFFS protection available at any aerodrome intended to be specified in the operational flight plan in order to ensure that an acceptable level of protection is available for the aeroplane intended to be used.

- (f) Information related to the level of RFFS protection that is deemed acceptable by the operator shall be contained in the Operations Manual.

Note: It is not intended that this guidance limit or regulate the operation of an aerodrome. The assessment performed by the operator does not in any way affect the RFFS requirements of ICAO Annex 14, Volume I, for aerodromes.

8.6.2.3 METEOROLOGICAL REPORTS AND FORECASTS

- (a) A PIC shall before commencing a flight, ensure that he is familiar with all available meteorological information appropriate to the intended flight.
- (b) A PIC shall include, during preparation for a flight away from the vicinity of the place of departure, and for every flight under the instrument flight rules—
 - (1) a study of available current meteorological reports and forecasts; and
 - (2) the planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of adverse meteorological conditions.

8.6.2.4 LIMITATIONS FOR VFR FLIGHTS

- (a) A person shall not commence a flight to be conducted in accordance with VFR unless available current meteorological reports, or a combination of current reports and forecasts, indicate that the meteorological conditions along the route, or that part of the route to be flown under VFR, will, at the appropriate time, allow VFR operations.
- (b) A person shall not conduct a flight in accordance with VFR during the period of darkness between half an hour after sunset and half an hour before sunrise, unless further restricted by the relevant Authority.

8.6.2.5 IFR DESTINATION AERODROMES

- (a) A person shall not commence an IFR flight unless—

- (1) at the time of take-off, the meteorological conditions at the departure aerodrome are at or above the operator's established aerodrome operating minima for that operation;
 - (2) at the time of take-off or point of in-flight re-planning, current meteorological reports or a combination of current reports and forecasts indicate that the meteorological conditions at the aerodrome of intended landing or at each alternate aerodrome will be, at the estimated time of use, at or above the operator's established aerodrome operating minima for that operation; and
 - (3) the available information indicates that the meteorological conditions at the aerodrome of intended landing and, if required, at least one suitable alternate at the estimated time of arrival, will be at or above the minimum operating altitude, if no instrument approach procedure is to be used, that would allow a VMC descent to the aerodrome.
- (b) The estimated time of use is defined as 1 hour before and after the ETA.

Note: A partial exception is granted for commercial air transport IFR flight planning, to the effect that the weather at the destination does not have to be at or above the approach minima to release and commence a flight, as long as the designated alternate aerodrome meets the IFR weather selection criteria.

8.6.2.6 IFR DESTINATION ALTERNATE REQUIREMENT

- (a) [AAC] A person shall not commence an IFR flight in an aircraft without at least one destination alternate aerodrome listed in the flight plan unless—
- (1) The duration of the flight from the departure aerodrome, or from the point of in-flight re-planning, to the destination aerodrome is such that, taking into account all meteorological conditions and operational information relevant to the flight, at the estimated time of use, a reasonable certainty exists—
 - (i) that, at the ETA at the aerodrome of intended landing, and for a reasonable period before and after such time, the approach and landing may be made under VMC; and

- (ii) separate runways are usable at the estimated time of use of the destination aerodrome with at least one runway having an operational instrument approach procedure or
- (2) The aerodrome of intended landing is isolated and there is no suitable destination alternate aerodrome, and—
 - (i) There is a standard instrument approach procedure prescribed for the aerodrome of intended landing by the jurisdictional authorities;
 - (ii) A point of no return has been determined; and
 - (iii) A flight shall not be continued past the point of no return unless available current meteorological information indicates that the following meteorological conditions will exist at the estimated time of use—
 - (A) A cloud base of at least 600 m (2 000 ft) above the aerodrome elevation; and
 - (B) Visibility of at least 5.5 km (3 NM) or of 4 km (2 NM) more than the minimum associated with the IAP.
- (b) [AOC] No person shall commence an IFR flight in an aeroplane—
 - (1) Without at least one destination alternate aerodrome listed in the flight plan, unless—
 - (i) The duration of the flight from the departure aerodrome, or from the point of inflight re-planning, to the destination aerodrome is such that, taking into account all meteorological conditions and operational information relevant to the flight, at the estimated time of use there is a reasonable certainty that—
 - (A) The approach and landing may be made under VMC; and
 - (B) Separate runways are usable at the estimated time of use of the destination aerodrome with at least one runway having an operational IAP; or
 - (ii) The aerodrome of intended landing is isolated, and—

- (A) For each flight into an isolated aerodrome a point of no return shall be determined;
 - (B) A flight to be conducted to an isolated aerodrome shall not be continued past the point of no return unless a current assessment of meteorological conditions, traffic, and other operational conditions indicate that a safe landing can be made at the estimated time of use; and
 - (C) The fuel requirements of Paragraph 8.6.2.15(b)(4)(iv) of this part are met;
- (2) Without at least two destination alternate aerodromes listed in the operational and ATC flight plan when, for the destination aerodrome—
 - (i) Meteorological conditions at the estimated time of use will be below the operator's established aerodrome operating minima for that operation; or
 - (ii) Meteorological information is not available
- (c) [AAC] No person shall commence an IFR flight in a helicopter—
 - (1) Where no alternate aerodrome is required unless—
 - (i) The operation is conducted as general aviation; and
 - (ii) Available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the ETA—
 - (A) A cloud base of at least 300 m (1 000 ft) above the aerodrome elevation, or at least 120 m (400 ft) above the lowest applicable approach minimum, whichever is higher; and
 - (B) Visibility of at least 3 km (2 SM).

Note: These may be considered as minimum values where a reliable and continuous meteorological watch is maintained. When only an “area” type forecast is available, these values may be increased accordingly.

- (2) Without at least one destination alternate heliport listed in the flight plan, unless the available information indicates that conditions at the heliport of intended landing and at least one alternate heliport will, at the ETA, be at or above the heliport operating minima.
- (d) [AOC] No person shall commence an IFR flight in a helicopter—
 - (1) Without at least one destination alternate heliport or landing location listed in the flight plan, unless the available information indicates that conditions at the heliport of intended landing will, at the estimated time of arrival, be at or above the heliport operating minima;
 - (2) Without at least two destination alternate heliports, forecast to be at or above the helicopter operating minima, listed in the operational and ATC flight plan when, at the time of flight departure, the intended heliport destination is forecast to be below the helicopter operating minima;
 - (3) If the heliport of intended landing is isolated and no alternate heliport or landing location is available, in which case a point of no return shall be determined; or
 - (4) Unless the operator has been approved by the Authority to specify appropriate incremental values for height of cloud base and visibility to be added to the operator's established heliport or landing location operating minima.
- (e) The ceiling and visibility requirements of Paragraphs 8.6.2.6(a) to (d) of this subsection may be reduced upon approval of the Authority for—
 - (1) other categories of aircraft, such as powered-lift and airships; and
 - (2) commercial air transport where the Authority has approved alternate minima as an equivalent level of safety based on the results of a specific safety risk assessment demonstrated by the operator, that contains the following—
 - (i) Capabilities of the operator;
 - (ii) Overall capability of the aeroplane and its systems;

- (iii) Available aerodrome technologies, capabilities, and infrastructure;
- (iv) Quality and reliability of meteorological information;
- (v) Identified hazards and safety risks associated with each alternate aerodrome variation; and
- (vi) Specific mitigation measures.

8.6.2.7 IFR ALTERNATE AERODROME SELECTION CRITERIA

- (a) If alternate minimums are published, a PIC shall not designate an alternate aerodrome in an IFR flight plan unless the current available forecast indicates that the meteorological conditions at that alternate at the ETA will be at or above those published alternate minimums upon takeoff from departure aerodrome or the point of in-flight re-planning.
- (b) If alternate minimums are not published, and if there is no prohibition against using the aerodrome as an IFR planning alternate, a PIC shall ensure that the meteorological conditions at that alternate at the ETA will be at or above—
 - (1) For aeroplanes—
 - (i) For a PA procedure, a ceiling of at least 180 m (600 ft) and visibility of not less than 3 km (2 SM); or
 - (ii) For an NPA procedure, a ceiling of at least 240 m (800 ft) and visibility of not less than 5 km (3 SM).
 - (2) For helicopters
 - (i) A ceiling 60 m (200 ft) above the minimum for the approach to be flown, and visibility at least 1 SM but never less than the minimum visibility for the approach to be flown; or
 - (ii) If no IAP has been published and no special IAP has been issued by the Authority to the operator for the alternate aerodrome, the ceiling and visibility minima are those allowing descent from the MEA, approach, and landing under basic VFR.

- (c) Planning Minima Table will be used in selecting IFR alternate aerodromes.

Planning Minima (Ceiling & RVR/visibility required, if applicable)		
Type of Aerodrome With Approach		
	At least two separate approach procedures based on two separate aids serving two separate runways (see note below)	At least two separate approach procedures based on two separate aids serving one runway or at least one approach procedure based on one aid serving one runway
Precision Approach CAT I, III (ILS,M LS)	PA CAT I minima	NPA minima
Precision Approach CAT I (ILS, MLS)	NPA minima	Circling minima or, if not available, NPA minima plus 60m (200ft) / 1000m (3 300 ft)
Non-Precision Approach	The lower of NPA minima plus 60 m (200 ft)/1 000 m (3 300 ft) or circling minima	The higher of NPA minima plus 60 m (200 ft)/1 000 m (3 300 ft) or circling minima
Circling Approach	Circling minima	Circling minima

Note: Runways on the same aerodrome are considered to be separate runways when they are separate landing surfaces that may overlay or cross, such that if one of the runways is blocked it will not prevent the planned type of operations on the other runway, and each of the landing surfaces has a separate approach based on a separate aid.

8.6.2.8 OFF-SHORE ALTERNATES FOR HELICOPTER OPERATIONS

- (a) A person shall not designate an offshore alternate landing site
- (1) when it is possible to carry enough fuel to have an on-shore alternate landing site;

(2) when the environment around the offshore alternate is hostile.
Note: The selection of offshore alternates shall be exceptional cases, the details of which have been approved by the Authority, and shall not include payload enhancement in IMC.

(b) A person selecting an off-shore alternate landing site shall consider the following—

- (1) until the point of no return, using an on-shore alternate. The offshore alternate may be used only after a point of no return;
- (2) attaining one engine inoperative performance capability prior to arrival at the alternate;
- (3) guaranteeing helideck availability;
- (4) the meteorological information at the helideck shall be available from a source approved by the Authority;
- (5) for IFR operations, an instrument approach procedure shall be prescribed and available;
- (6) attaining mechanical reliability of critical control systems and critical components when determining the suitability of the alternate.

Note: The landing technique specified in the flight manual following control system failure may preclude the selection of certain helidecks as alternate aerodromes. The mechanical reliability of critical control systems shall be taken into account when determining the suitability and necessity for an offshore alternate.

8.6.2.9 TAKEOFF ALTERNATE AERODROMES: COMMERCIAL AIR TRANSPORT OPERATIONS

(a) A person shall not release or takeoff an aircraft without a suitable takeoff alternate specified in the flight release if either—

- (1) It would not be possible to return to the aerodrome of departure; or
- (2) Meteorological conditions at the aerodrome of departure are below the operator's established aerodrome landing minima for that operation.

- (b) An operator shall ensure that each takeoff alternate specified shall be located within—
 - (1) For aeroplanes with two engines, 1 hour flight time at a one-engine-inoperative cruising speed, determined from the Aircraft Operating Manual, calculated in ISA and still-air conditions using the actual take-off mass;
 - (2) for three or four-engine aircraft, two hours flight time based on the one-engine-inoperative cruising speed;
 - (3) for aeroplanes engaged in EDTO where an alternate aerodrome meeting the distance criteria of Paragraph 8.6.2.9(b)(1) or (b)(2) of this section is not available, the first available alternate aerodrome located within the distance of the operator's approved maximum diversion time considering the actual take-off mass.
- (b) The ceiling and visibility requirements for operations conducted in accordance with Paragraphs 8.6.2.9(a) and (b) of this section may be reduced upon approval of the Authority for—
 - (1) commercial air transport where the Authority has approved alternate minima as an equivalent level of safety based on the results of a specific safety risk assessment demonstrated by the operator, that contains the following—
 - (i) Capabilities of the operator;
 - (ii) Overall capability of the aeroplane and its systems;
 - (iii) Available aerodrome technologies, capabilities, and infrastructure;
 - (iv) Quality and reliability of meteorological information;
 - (v) Identified hazards and safety risks associated with each alternate aerodrome variation; and
 - (vi) Specific mitigation measures.

8.6.2.10 MAXIMUM DISTANCE FROM AN ADEQUATE AERODROME FOR AEROPLANES WITHOUT AN EDTO APPROVAL

- (a) Unless the State of the Operator has issued a specific approval for EDTO, an AOC holder shall not operate an aeroplane with two or

more engines over a route that contains a point further from an adequate aerodrome than, in the case of—

- (1) Turbine-powered aeroplanes, the distance flown in 60 minutes at the one-engine-inoperative cruise speed determined in accordance with Paragraph 8.6.2.10(b) of this section; or
 - (2) Reciprocating-engine aeroplanes—
 - (i) The distance flown in 120 minutes at the one-engine-inoperative cruise speed determined in accordance with Paragraph 8.6.2.10(b) of this section; or
 - (ii) 555 km (300 NM), whichever is less.
- (b) An AOC holder shall determine a speed for the calculation of the maximum distance to an adequate aerodrome for each aeroplane with two or more engines operating, not exceeding V_{mo} based upon the true airspeed that the aeroplane can maintain with one engine inoperative under the following conditions—
- (1) International Standard Atmosphere;
 - (2) Level flight—
 - (i) For turbine-powered aeroplanes, at—
 - (A) FL 170; or
 - (B) The maximum FL to which the aeroplane, with one engine inoperative, can climb and maintain, using the gross rate of climb specified in the Aircraft Flight Manual, whichever is less;
 - (ii) For reciprocating-engine aeroplanes, at—
 - (A) FL 80; or
 - (B) The maximum FL to which the aeroplane, with one engine inoperative, can climb and maintain, using the gross rate of climb specified in the Aircraft Flight Manual, whichever is less;
 - (3) Maximum continuous thrust or power on the remaining operating engine;

- (4) An aeroplane mass not less than that resulting from—
 - (i) Take-off at sea level at maximum certificated take-off mass until the time elapsed since take-off is equal to the applicable threshold prescribed in Paragraph 8.6.2.10(a) of this section;
 - (ii) All engines climb to the optimum long-range cruise altitude until the time elapsed since take-off is equal to the applicable threshold prescribed in Paragraph 8.6.2.10(a) of this section; and
 - (iii) All engines cruise at the long-range cruise speed at this altitude until the time elapsed since take-off is equal to the applicable threshold prescribed in Paragraph 8.6.2.10(a) of this section
- (c) An AOC holder shall ensure that the following data, specific to each type or variant, is included in the OM—
 - (1) The one-engine-inoperative cruise speed determined in accordance with Paragraph 8.6.2.10(b) of this section; and
 - (2) The maximum distance from an adequate aerodrome determined in accordance with Paragraphs 8.6.2.10(a) and (b) of this section.
- (d) An AOC holder shall ensure that his maintenance procedures, operating practices, flight dispatch procedures and crew training programmes provide the overall level of safety intended by the provisions of Annexes 6 and 8, taking into account the routes to be flown, the anticipated operating conditions and the location of adequate en-route alternate aerodromes.

Note: The speeds and altitudes (flight levels) specified above are only intended to be used for establishing the maximum distance from an adequate aerodrome.

8.6.2.11 EXTENDED DIVERSION TIME OPERATIONS - AEROPLANES (AOC)

- (a) An AOC holder shall not conduct operations beyond the threshold distance determined in accordance with Section 8.6.2.10 of this part unless approved to do so by the Authority. The specific approval shall identify the applicable threshold time established for each particular aeroplane and engine combination.

- (b) In requesting EDTO approval, each AOC holder shall show to the satisfaction of the Authority that—
 - (1) FOR AEROPLANES.
 - (i) For all aeroplanes—
 - (A) The most limiting EDTO significant system time limitation, if any, indicated in the Aircraft Flight Manual (directly or by reference) and relevant to that particular operation is not exceeded; and
 - (B) The additional fuel required by Section 8.6.2.15 of this part shall include the fuel necessary to comply with the EDTO critical fuel scenario as established by the Authority.
 - (ii) For aeroplanes with two turbine engines, the aeroplane is EDTO certificated and the Authority has verified the—
 - (A) reliability of the propulsion system;
 - (B) airworthiness certification for EDTO of the aeroplane type;
 - (C) EDTO maintenance programme; and
 - (D) maintenance control manual or EDTO manual.
- (c) It has conducted a safety risk assessment that demonstrates how an equivalent level of safety will be maintained, taking into account the following—
 - (1) capabilities of the operator;
 - (2) overall reliability of the aeroplane;
 - (3) reliability of each time-limited system;
 - (4) relevant information from the aeroplane manufacturer; and
 - (5) specific mitigation measures
- (d) Before conducting an EDTO flight, an AOC holder shall ensure that a suitable EDTO en route alternate is available, within either the

approved diversion time or a diversion time based on MEL generated serviceability status of the aeroplane, whichever is shorter.

- (e) An AOC holder shall not commence a flight unless, during the possible period of arrival, the required en route alternate aerodrome will be available and the available information indicates that conditions at the aerodrome will be at or above the aerodrome operating minima approved for the operation.
- (f) An AOC holder shall not conduct operations beyond 60 minutes from a point on a route to an en route alternate aerodrome unless it ensures that—
 - (1) For all aeroplanes—
 - (i) en route alternate aerodromes are identified; and
 - (ii) the most up-to-date information is provided to the flight crew on identified en route alternate aerodromes, including operational status and meteorological conditions;
 - (2) For aeroplanes with two turbine engines, the most up-to-date information provided to the flight crew indicates that conditions at identified en route alternate aerodromes will be at or above the operator's established aerodrome operating minima for the operation at the estimated time of use; and
 - (3) These requirements are incorporated into the operator's—
 - (i) operational control and flight dispatch procedures;
 - (ii) operating procedures; and
 - (iii) training programmes.
- (g) No AOC holder shall proceed beyond the threshold time approved by the Authority unless—
 - (1) The identified en route alternate aerodromes have been re-evaluated for availability; and
 - (2) The most up-to-date information indicates that, during the estimated time of use, conditions at those aerodromes will be at or above the operator's established aerodrome operating minima for that operation; or

- (3) Conditions are identified that would preclude a safe approach and landing at that aerodrome during the estimated time of use and an alternative course of action has been determined.

8.6.2.12 EN ROUTE ALTERNATE AERODROMES: EDTO OPERATIONS

- (a) A PIC shall ensure that the required en route alternates for EDTO are selected and specified in ATC and operational flight plans in accordance with the EDTO diversion time approved by the Authority.
- (b) A person shall not select an aerodrome as an EDTO en-route alternate aerodrome unless the appropriate meteorological reports or forecasts, or any combination thereof, indicate that during a period commencing 1 hour before and ending 1 hour after the expected time of arrival at the aerodrome, the weather conditions will be at or above the planning minima prescribed in the table below, and in accordance with the operator's EDTO approval.
- (c) The ceiling and visibility requirements for operations conducted in accordance with Paragraphs 8.6.2.12(a) and (b) of this section may be reduced upon approval of the Authority for—
 - (1) Commercial air transport where the Authority has approved alternate minima as an equivalent level of safety based on the results of a specific safety risk assessment demonstrated by the operator, that contains the following—
 - (i) Capabilities of the operator;
 - (ii) Overall capability of the aeroplane and its systems;
 - (iii) Available aerodrome technologies, capabilities, and infrastructure;
 - (iv) Quality and reliability of meteorological information;
 - (v) Identified hazards and safety risks associated with each alternate aerodrome variation; and
 - (vi) Specific mitigation measures.

Note: The forecast weather criteria used in the selection of alternate aerodromes for IFR flight will also be used for the selection of EDTO alternates.

8.6.2.13 FUEL, OIL, AND OXYGEN PLANNING AND CONTINGENCY FACTORS

- (a) A person shall not commence a flight unless he or she takes into account the fuel, oil, and oxygen needed to ensure the safe completion of the flight including any reserves to be carried for contingencies.
- (b) For aeroplanes in AOC operations, the amount of usable fuel to be carried shall, as a minimum, be based on—
 - (1) the following data—
 - (i) current aeroplane-specific data derived from a fuel consumption monitoring system, if available; or
 - (ii) if current aeroplane-specific data is not available, data provided by the aeroplane manufacturer; and
 - (2) the operating conditions for the planned flight, including—
 - (i) Anticipated aeroplane mass;
 - (ii) NOTAMs;
 - (iii) current meteorological reports, SNOWTAMS, and/or a combination of current reports and forecasts;
 - (iv) ATC procedures, restrictions, and anticipated delays;
 - (v) the effects of deferred maintenance items and/or configuration deviations; and
 - (vi) any other conditions that may delay the landing of the aeroplane or increase fuel, oil, and/or oxygen consumption
- (c) The pre-flight calculations of usable fuel shall include—
 - (1) TAXI FUEL. Which shall be the amount of fuel expected to be consumed before take-off, taking into account local conditions at the departure aerodrome and APU fuel consumption;
 - (2) TRIP FUEL. Which shall be the amount of fuel required to enable the aeroplane to fly from take-off until landing at the

destination aerodrome, taking into account the operating conditions in Paragraph 8.6.2.13(b)(2) of this section;

- (3) CONTINGENCY FUEL. Which shall be the amount of fuel required to compensate for unforeseen factors. It shall not be less than 5 per cent of the planned trip fuel or of the fuel required from the point of in-flight re-planning based on the consumption rate used to plan the trip fuel but, in any case, shall not be lower than the amount required to fly for 5 minutes at holding speed at 450 m (1,500 ft) above the destination aerodrome in standard conditions;

Note: Unforeseen factors are those factors that could have an influence on the fuel consumption to the destination aerodrome, such as deviations of an individual aeroplane from the expected fuel consumption data, deviations from forecast meteorological conditions, extended delays, and deviations from planned routings and/or cruising levels.

- (4) DESTINATION ALTERNATE FUEL. Which shall be—

- (i) Where a destination alternate aerodrome is required, the amount of fuel required to enable the aeroplane to—
- (A) perform a missed approach at the destination aerodrome;
 - (B) climb to the expected cruising altitude;
 - (C) fly the expected routing;
 - (E) descend to the point where the expected approach is initiated; and
 - (F) conduct the approach and landing at the destination alternate aerodrome; or
- (ii) Where two destination alternate aerodromes are required, the amount of fuel, as calculated in Paragraph 8.6.2.13(c)(4)(i) of this subsection, required to enable the aeroplane to proceed to the destination alternate aerodrome which requires the greater amount of alternate fuel; or
- (iii) Where a flight is operated without a destination alternate aerodrome, the amount of fuel required to

enable the aeroplane to fly for 15 minutes at holding speed at 450 m (1,500 ft) above destination aerodrome elevation in standard conditions; or

- (iv) Where the aerodrome of intended landing is an isolated aerodrome—
 - (A) for a reciprocating-engine aeroplane, the amount of fuel required to fly for 45 minutes plus 15 per cent of the flight time planned to be spent at cruising level, including final reserve fuel, or 2 hours, whichever is less; or
 - (B) for a turbine-engined aeroplane, the amount of fuel required to fly for 2 hours at normal cruise consumption above the destination aerodrome, including final reserve fuel;
- (5) FINAL RESERVE FUEL. Which shall be the amount of fuel on arrival at the destination alternate aerodrome, or the destination aerodrome when no destination alternate aerodrome is required—
 - (i) for a reciprocating-engine aeroplane, the amount of fuel required to fly for 45 minutes; or
 - (ii) for a turbine-engined aeroplane, the amount of fuel required to fly for 30 minutes at holding speed at 450 m (1,500 ft) above aerodrome elevation in standard conditions;
- (6) ADDITIONAL FUEL. Which shall be the supplementary amount of fuel required to enable the aeroplane to descend as necessary and proceed to land at an alternate aerodrome in the event of engine failure or loss of pressurisation based on the assumption that such a failure occurs at the most critical point along the route; and
- (7) DISCRETIONARY FUEL. Which shall be the extra amount of fuel to be carried at the discretion of the PIC.
- (d) Operators shall determine one final reserve fuel value for each aeroplane type and variant in their fleet rounded up to an easily recalled figure.

- (e) The use of fuel after flight commencement for purposes other than originally intended during pre-flight planning shall require a re-analysis and, if applicable, an adjustment of the planned operation.

Note: Nothing in this subsection precludes the in-flight amendment of a flight plan to re-plan that flight to another aerodrome, provided the requirements of this subsection can be complied with from the point where the flight is replanned.

- (f) For helicopters, each person computing the required minimum fuel and oil supply shall ensure that additional fuel and oil are carried to provide for the increased consumption that would result from any additional operating conditions in Paragraph 8.6.2.13(b)(2) of this section, as applied to helicopters, and any of the following contingencies—
 - (1) Expected winds or other meteorological conditions;
 - (2) Possible variations in ATC routings;
 - (3) Anticipated traffic delays;
 - (4) A complete IAP and possible missed approach at destination;
 - (5) Loss of pressurisation en route, if applicable;
 - (6) Loss of one power unit en route; and
 - (7) Any other conditions that may delay the landing of the helicopter or increase fuel, oil, and/or oxygen (if applicable) consumption.
- (g) IN-FLIGHT FUEL MANAGEMENT—
 - (1) The operator shall establish policies and procedures, approved by the State of the Operator, to ensure that in-flight fuel checks and fuel management are performed;
 - (2) The PIC shall—
 - (i) continually ensure that the amount of usable fuel remaining on board is not less than the fuel required to proceed to an aerodrome or heliport where a safe landing can be made with the planned final reserve fuel remaining upon landing;

- (ii) request delay information from ATC when unanticipated circumstances may result in landing at the destination aerodrome or heliport with less than the final reserve fuel plus any fuel required to proceed to an alternate aerodrome or heliport, or the fuel required to operate to an isolated aerodrome/heliport;
- (iii) advise ATC of a minimum fuel state by declaring MINIMUM FUEL when, having committed to land at a specific aerodrome, the pilot calculates that any change to the existing clearance to that aerodrome or heliport may result in landing with less than the planned final reserve fuel; and
- (iv) declare a situation of fuel emergency by broadcasting MAYDAY MAYDAY MAYDAY FUEL when the calculated usable fuel predicted to be available upon landing at the nearest aerodrome or heliport where a safe landing can be made is less than the planned final reserve fuel.

Note 1: The protection of final reserve fuel is intended to ensure a safe landing at any aerodrome when unforeseen occurrences may not permit safe completion of an operation as originally planned.

Note 2: The declaration of MINIMUM FUEL informs ATC that all planned landing site options have been reduced to a specific landing site of intended landing, that no precautionary landing site is available, and that any change to the existing clearance, or any air traffic delays, may result in landing with less than the planned final reserve fuel. This is not an emergency situation but an indication that an emergency situation is possible should any additional delay occur.

Note 3: A precautionary landing site refers to a landing site, other than the site of intended landing, where it is expected that a safe landing can be made prior to the consumption of the planned final reserve fuel.

Note 4: The planned final reserve fuel refers to the value calculated in Paragraph 8.6.2.13(c)(5) of this section and is the minimum amount of fuel required upon landing at any landing site. The declaration of MAYDAY MAYDAY MAYDAY FUEL informs ATC that all available landing options have been reduced to a specific site and a portion of the final reserve fuel may be consumed prior to landing.

Note 5: The pilot estimates with reasonable certainty that the fuel remaining upon landing at the nearest safe landing site will be less than the final reserve fuel taking into consideration the latest information available to the pilot, the area to be overflowed (i.e., with respect to the availability of precautionary landing areas), meteorological conditions, and other reasonable contingencies.

Note 6: The words “MAYDAY FUEL” describe the nature of the distress conditions as required in ICAO.

- (h) When conducting operations beyond 60 minutes from a point on a route to an en route alternate aerodrome, each operator shall ensure that—
 - (1) En route alternate aerodromes are identified; and
 - (2) The PIC has access to current information on the identified en route alternate aerodromes, including operational status and meteorological conditions.

Note: If the Authority requires that fuel, in addition to any other requirement herein, is necessary on a particular route or flight operation in the interest of safety, this additional fuel will be included in the minimum fuel supply for that route.

8.6.2.14 MINIMUM FUEL REQUIREMENTS FOR VFR FLIGHTS

- (a) A person shall not commence a flight in an aeroplane under VFR unless, considering the wind and forecast weather conditions, there is enough fuel to fly to the first point of intended landing and, thereafter for 45 minutes, assuming normal cruising speed—
- (b) A person shall not commence a flight in a helicopter under VFR unless (considering the wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed—
 - (1) for 20 minutes thereafter; or
 - (2) have an additional amount of fuel to provide for the increased consumption on the occurrence of any of the potential contingencies specified by the operator to the satisfaction of the Authority.

8.6.2.15 MINIMUM FUEL REQUIREMENTS FOR IFR FLIGHTS

- (a) [AAC] A person shall not commence a flight under IFR unless there is enough fuel supply, considering meteorological conditions and any delays to—
 - (1) When a destination alternate aerodrome is required, execute an approach and a missed approach at the destination aerodrome then fly from the aerodrome of intended landing to an alternate aerodrome and thereafter, for at least 45 minutes at normal cruising altitude.
 - (2) When a destination alternate aerodrome is not required, fly to the aerodrome of intended landing and after that for at least 45 minutes at normal cruising altitude.
- (b) [AOC] AEROPLANES. A person shall not commence a flight under IFR, or continue past the point of inflight re-planning, unless there is enough fuel supply, considering meteorological conditions and any delays that are expected in-flight, to include the following—
- (c) TAXI FUEL. Which shall be the amount of fuel expected to be consumed before take-off, taking into account local conditions at the departure aerodrome and APU fuel consumption;
 - (1) TRIP FUEL. Which shall be the amount of fuel required to enable the aeroplane to fly from take-off, or the point of in-flight re-planning, until landing at the destination aerodrome, taking into account the operating conditions in the data provided by the manufacturer;
 - (2) CONTINGENCY FUEL. Which shall be the amount of fuel required to compensate for unforeseen factors. It shall be 5 per cent of the planned trip fuel or of the fuel required from the point of in-flight re-planning based on the consumption rate used to plan the trip fuel, but, in any case, shall not be lower than the amount required to fly for 5 minutes at holding speed at 450 m (1 500 ft) above the destination aerodrome in standard conditions;
 - (3) DESTINATION ALTERNATE FUEL. Which shall be—
 - (i) Where a destination alternate aerodrome is required, the amount of fuel required to enable the aeroplane to—
 - (A) perform a missed approach at the destination aerodrome;

- (B) climb to the expected cruising altitude;
 - (C) fly the expecting routing;
 - (D) descend to the point where the expected approach is initiated;
 - (E) conduct the approach and landing at the destination alternate aerodrome;
- (ii) Where two destination alternate aerodromes are required, the amount of fuel, as calculated in Paragraph 8.6.2.15(4)(i) of this section, required to enable the aeroplane to proceed to the destination alternate aerodrome that requires the greater amount of alternate fuel;
 - (iii) Where a flight is operated without a destination alternate aerodrome, the amount of fuel required to enable the aeroplane to fly for 15 minutes at holding speed at 450 m (1,500 ft) above destination aerodrome elevation in standard conditions; or
 - (iv) Where the aerodrome of intended landing is an isolated aerodrome—
 - (A) For a reciprocating-engine aeroplane, the amount of fuel required to fly for 45 minutes plus 15 per cent of the flight time planned to be spent at cruising level, including final reserve fuel, or 2 hours, whichever is less; or
 - (B) For a turbine-engined aeroplane, the amount of fuel required to fly for 2 hours at normal cruise consumption above the destination aerodrome, including final reserve fuel.
- (4) FINAL RESERVE FUEL. Which shall be the amount of fuel calculated using the estimated mass on arrival at the destination alternate aerodrome, or the destination aerodrome when no destination alternate aerodrome is required, or a precalculated value for each aeroplane type and variant in the fleet rounded up to an easily recalled figure—

- (i) For a reciprocating-engine aeroplane, the amount of fuel required to fly for 45 minutes under speed and altitude conditions specified by the Authority; or
 - (ii) For a turbine-engined aeroplane, the amount of fuel required to fly for 30 minutes at holding speed at 450 m (1 500 ft) above aerodrome elevation in standard conditions.
- (5) **ADDITIONAL FUEL.** Which shall be the supplementary amount of fuel required if the minimum fuel calculated in accordance with trip fuel, contingency fuel, destination alternate fuel, and final reserve fuel above is not sufficient to—
 - (i) Allow the aeroplane to descend as necessary and proceed to an alternate aerodrome in the event of engine failure or loss of pressurisation, whichever requires the greater amount of fuel based on the assumption that such a failure occurs at the most critical point along the route—
 - (A) Fly for 15 minutes at holding speed at 450 m (1,500 ft) above the aerodrome elevation in standard conditions;
 - (B) Make an approach and landing;
 - (C) Allow an aeroplane engaged in EDTO to comply with the EDTO critical fuel scenario as established by the Authority; and
 - (D) Meet additional requirements not covered above.

Note: Fuel planning for a failure that occurs at the most critical point along a route may place the aeroplane in a fuel emergency situation.

- (6) **DISCRETIONARY FUEL.** Which shall be the extra amount of fuel to be carried at the discretion of the PIC; or
- (7) Notwithstanding the provisions in Paragraphs 8.6.2.15(b)(1) to (7) of this section, the Authority may approve a variation to these requirements, provided the operator can demonstrate an equivalent level of safety will be maintained through a safety risk assessment that includes at least the following—

- (i) Flight fuel calculations;
 - (ii) Capabilities of the operator to include—
 - (A) A data-driven method that includes a fuel consumption monitoring programme; and/or
 - (B) The advanced use of alternate aerodromes; and
 - (iii) Specific mitigation measures.
- (d) [AAC] HELICOPTERS. A person shall not commence a flight under IFR unless there is enough fuel supply, considering meteorological conditions and any delays that are expected in-flight, to—
 - (1) When a destination alternate heliport or landing location is required—
 - (i) Fly to and execute an approach, and a missed approach, at the heliport or landing location to which the flight is planned, and thereafter;
 - (ii) Fly for 30 minutes at a holding speed at 450 m (1,500 ft) above the alternate heliport or landing location under standard temperature conditions, and approach and land; and
 - (iii) Have a reserve for contingencies specified by the operator and approved by the Authority.
 - (2) When a destination alternate heliport or landing location is not required, fly to the heliport or landing location to which the flight is planned and thereafter—
 - (i) Fly for 30 minutes at a holding speed at 450 m (1,500 ft) above the alternate heliport or landing location under standard temperature conditions, and approach and land; and
 - (ii) Have a reserve for contingencies specified by the operator and approved by the Authority.

8.6.2.16 FLIGHT PLANNING DOCUMENT DISTRIBUTION AND RETENTION: COMMERCIAL AIR TRANSPORT

- (a) A PIC shall ensure completion of and sign the following flight preparation documents prior to the departure for commercial operations—
 - (1) An operational flight plan (when required), including NOTAMs and weather pertinent to the flight planning decisions regarding minimum fuel supply, en route performance, and destination and alternate aerodromes.
 - (2) A load manifest, showing the distribution of the load, centre of gravity, takeoff and landing mass and compliance with maximum operating mass limitations, and performance analysis; and
 - (3) An applicable technical log page, if mechanical irregularities were entered after a previous flight, maintenance or inspection functions were performed or a maintenance release was issued at the departure aerodrome.
- (b) A person shall not takeoff an aircraft in commercial air transport unless all flight release documents, signed by the PIC, are retained and available at the point of departure.
- (c) A PIC shall carry a copy of the documents specified in Paragraph 8.6.2.16(a) of this subsection on the aircraft to the destination aerodrome.
- (d) The records under this section shall be retained for a period of six months.

Note 1: These documents are in addition to those specified in Subpart 8.2 for all aircraft operations.

Note 2: The Authority may approve a different retention location where all documents can be available for subsequent review.

8.6.2.17 AIRCRAFT LOADING, MASS AND BALANCE

- (a) A person shall not operate an aircraft unless all loads carried on the aircraft are properly distributed and safely secured.
- (b) A person shall not operate an aircraft unless the calculations for the mass of the aircraft and centre of gravity location indicate that the flight can be conducted safely, taking into account the flight conditions expected. (See Note 1)

- (c) All mass used for the calculations for the mass of the aircraft must be of the same calibration standard. (See Note 2)
- (d) For commercial air transport operations, a PIC shall not commence a flight unless the PIC is satisfied that the loading and mass and balance calculations contained in the load manifest are accurate and comply with the aircraft limitations.

Note 1: When load masters, load planners or other qualified personnel are provided by the AOC holder in a commercial air transport operation, the PIC may delegate these responsibilities, but shall ascertain that proper loading procedures are followed.

Note 2: If fuel gauges are calibrated in pounds then the load manifest calculations shall be in pounds.

8.6.2.18 MAXIMUM ALLOWABLE MASS TO BE CONSIDERED ON ALL LOAD MANIFESTS

- (a) A PIC shall ensure that the maximum allowable mass for a flight does not exceed the maximum allowable takeoff mass—
 - (1) for the specific runway and conditions existing at the takeoff time; and
 - (2) considering anticipated fuel and oil consumption that allows compliance with applicable en route performance, landing mass, and landing distance limitations for destination and alternate aerodromes.

8.6.2.19 FLIGHT RELEASE REQUIRED: COMMERCIAL AIR TRANSPORT

- (a) A person shall not commence a flight under a flight following system without specific authority from the person authorised by the AOC holder to exercise operational control over the flight.
- (b) A person shall not commence a passenger-carrying flight in commercial air transport for which there is a published schedule, unless a qualified person authorised by the AOC holder to perform operational control functions has issued a flight release for that specific operation or series of operations.

8.6.2.20 OPERATIONAL FLIGHT PLAN: COMMERCIAL AIR TRANSPORT

- (a) A person shall not commence a flight in excess of 1 hour, unless the operational flight plan has been signed by the PIC and, where

applicable, signed by the flight operations officer, and a copy shall be filed with the operator or a designated agent, or, if these procedures are not possible, it shall be left with the aerodrome authority or on record in a suitable place at the point of departure.

- (b) A PIC shall sign the operational flight plan only when the PIC and the person authorised by the operator to exercise operational control have determined that the flight can be safely completed.

Note: The operational flight plan shall include the routing and fuel calculations, with respect to the meteorological and other factors expected, to complete the flight to the destination and all required alternates.

- (c) A PIC signing the operational flight plan shall have access to the applicable flight planning information for fuel supply, alternate aerodromes, weather reports and forecasts and NOTAMs for the routing and aerodrome.
- (d) A person shall not continue a flight from an intermediate aerodrome without a new operational flight plan if the aircraft has been on the ground more than 6 hours.
- (e) The Operations Manual shall describe the contents and use of the operational flight plan.

8.6.2.21 TIME CAPABILITY OF CARGO COMPARTMENT FIRE SUPPRESSION SYSTEM

- (a) A person shall not plan a flight if the diversion time to an aerodrome where a safe landing could be made exceeds the cargo compartment fire suppression time capability of the aeroplane, when one is identified in the relevant aeroplane documentation, unless the Authority specifies a reduction of the operational safety margin.

Note 1: Cargo compartment fire suppression time capabilities will be identified in the relevant aeroplane documentation when they are to be considered for the operation.

Note 2: Fifteen minutes is an operational safety margin commonly retained for that purpose.

8.7 AIRCRAFT OPERATING AND PERFORMANCE LIMITATIONS**8.7.1 All Aircraft****8.7.1.1 APPLICABILITY**

- (a) This Section prescribes the operating and performance limitations for all civil aircraft.

8.7.1.2 GENERAL

- (a) A person shall not operate an aircraft in a manner that—
 - (1) exceeds its designed performance limitations for any operation, as established by the State of Registry; or
 - (2) exceeds operating limitations contained in the aircraft's flight manual, or its equivalent; or
 - (3) exceeds the terms of its certificate of airworthiness; or
 - (4) exceeds the mass limitations, if applicable, imposed by the terms of its noise certification standards, as contained in the applicable part of ICAO Annex 16, Volume I, unless otherwise approved by the Authority

8.7.1.3 AIRCRAFT PERFORMANCE CALCULATIONS

- (a) An operator of an aircraft shall ensure that the performance data contained in the AFM, RFM, or other authorised source is used to determine compliance with the appropriate requirements of Subpart 8.7.
- (b) When applying performance data, a person performing calculations shall account for all factors that significantly affect the performance of the aircraft configuration, including, but not limited to, the—
 - (1) Mass of the aeroplane;
 - (2) Operating procedures;
 - (3) Pressure-altitude appropriate to the elevation of the aerodrome;
 - (4) Runway slope;

- (5) Ambient temperature;
 - (6) Wind;
 - (7) Surface conditions of the runway at the expected time of use (e.g., the presence of snow, slush, water and/or ice for landplanes, water surface condition for seaplanes); and
 - (8) Operation of any system or systems that may have an adverse effect on performance.
- (c) The factors described in Paragraph 8.7.1.3(b) of this section shall be taken into account directly as operations parameters or indirectly by means of allowances or margins, that may be provided in the design performance limits or in the terms of the AOC in accordance with which the aeroplane is being operated.
- (d) Aircraft operating procedures for noise abatement should comply with the provisions of PANS-OPS (Doc 8168). Noise abatement procedures specified by an operator for any one aeroplane type should be the same for all aerodromes.

8.7.1.4 GENERAL MASS AND OBSTRUCTION CLEARANCE LIMITATIONS

- (a) A person shall not takeoff an aircraft without ensuring that the maximum allowable mass for a flight does not exceed the maximum allowable takeoff or landing mass, or any applicable en route performance or landing distance limitations considering the—
condition of the takeoff and landing areas to be used;
- (1) gradient of runway to be used (landplanes only);
 - (2) pressure altitude;
 - (3) ambient temperature;
 - (4) current and forecast winds; and
 - (5) any know conditions (e.g., atmospheric and aircraft configuration) which may adversely affect performance, or compliance with noise certification standards if required.
- (b) A person shall not takeoff an aircraft at a mass that, assuming normal engine operation, cannot safely clear all obstacles during all phases of flight, including all points along the intended en route path or any planned diversions.

8.7.2 Aircraft Used in Commercial Air Transport**8.7.2.1 APPLICABILITY**

- (a) This Section prescribes aircraft performance and operating limitations for aircraft used in commercial air transport operations, except those aircraft holding a special authority or waiver by the Authority which exempt them from specific operating and performance limitations.
- (b) When establishing aerodrome operating minima which will apply to any particular operation, the operator shall take full account of—

8.7.2.2 GENERAL

- (a) A person operating an aircraft engaged in commercial air transport shall comply with the provisions of Section 8.7.2 of this part.
- (b) A person operating a rotorcraft identified as Class 1, 2, or 3 in international commercial air transport shall comply with the code of performance prescribed in IS 8.7.2.2.
- (c) The Authority may authorise deviations from the requirements of Section 8.7.2 of this part if special circumstances make a literal observance of a requirement unnecessary for safety.
- (d) Where full compliance with the requirements of Section 8.7.2 of this part cannot be shown due to specific design characteristics (e.g., seaplanes, airships, or supersonic aircraft), the operator shall apply approved performance standards that ensure a level of safety not less restrictive than those of relevant requirements of this section.
- (e) A person shall not operate in revenue passenger-carrying operations a single-engine aircraft or an aircraft type certificated for operation by a single pilot unless that aircraft is continually operated in daylight, VFR, excluding over-the-top, and over routes and diversions therefrom that permit a safe forced landing to be executed in the event of an engine failure—
 - (1) Notwithstanding paragraph 8.7.2.2(e) of this subsection, the Authority may approve single-pilot operations in propeller-driven, turbine-powered aircraft under IFR, at night, or under IMC for aircraft with a maximum certificated take-off mass of 5 700 kg (12 566 lb) or less and a maximum approved passenger seating configuration of nine or less, provided it meets the equipment requirements of Part 7 of these regulations.

- (2) Notwithstanding paragraph 8.7.2.2(e)(1) of this subsection, the Authority may approve single-pilot operations in propeller-driven, turbine-powered aircraft under IFR, at night, or under IMC for aircraft with a maximum certificated take-off mass of 5 700 kg (12 566 lb) or less with a passenger seating configuration of more than 9 passengers if the aircraft is type certificated for operations by a single pilot, provided it meets the equipment requirements of Part 7 of these regulations and the Authority has authorised an exemption from paragraph 8.7.2.2(e)(1) of this subsection in the operator's operations specifications. If such operations are to be conducted outside of Grenada, the State shall have an arrangement with the States where operations will be conducted.
- (f) A person shall not operate a multiengine aircraft used for revenue passenger carrying operations that is unable to comply with any of the performance limitations of Sections 8.7.2.4 through 8.7.2.8 of this part unless that aircraft is continually operated—
 - (1) in daylight;
 - (2) in VFR ; and
 - (3) at a mass that will allow it to climb, with the critical engine inoperative, at least 50 feet a minute when operating at the MEAs of the intended route or any planned diversion, or at 5,000 feet MSL, whichever is higher.
- (g) A multiengine airplane that is unable to comply with Paragraph 8.7.2.2(f) of this subsection is, for the purpose of this Section, considered to be a single engine aircraft and shall comply with the requirements of Paragraph 8.7.2.2(e) of this subsection.
- (h) A helicopter intended to be flown over water shall be fitted with a permanent or rapidly deployable means of flotation so as to ensure a safe ditching of the helicopter when—
 - (1) flying over water at a distance from land corresponding to more than 10 minutes at normal cruise speed in the case of performance Class 1 or 2 helicopters; or
 - (2) flying over water beyond autorotational or safe forced landing distance from land in the case of performance Class 3 helicopters.
 - (3) All helicopters on flights over water in a hostile environment in accordance with Paragraph 8.7.2.2 (h) (1) and (2) of this

subsection shall be certificated for ditching. Sea state shall be an integral part of the ditching information.

Implementing Standard: See IS: 8.7.2.2 Rotorcraft Class 1, 2 and 3 Code of performance.

8.7.2.3 AIRCRAFT PERFORMANCE CALCULATIONS

- (a) A person shall not takeoff an aircraft used in commercial air transport without ensuring that the applicable operating and performance limitations required for this Section can be accurately computed based on the AFM, RFM, or other data source approved by the Authority.
- (b) A person calculating performance and operating limitations for aircraft used in commercial air transport shall ensure that performance data used to determine compliance with this Section can, during any phase of flight, accurately account for—
 - (1) any reasonably expected adverse operating conditions that may affect aircraft performance;
 - (2) one engine failure for aircraft having two engines, if applicable; and
 - (3) two engine failures for aircraft having three or more engines, if applicable.
- (c) A person performing the calculations for the performance and limitation requirements of subsections 8.7.2.4 to 8.7.2.8 shall, for all engines operating and for inoperative engines, accurately account for—
 - (1) in all phases of flight—
 - (i) the effect of fuel and oil consumption on aircraft mass;
 - (ii) the effect of fuel consumption on fuel reserves resulting from changes in flight paths, winds, and aircraft configuration;
 - (iii) the effect of fuel jettisoning on aircraft mass and fuel reserves, if applicable and approved;
 - (iv) the effect of any ice protection system, if applicable and weather conditions require its use;

- (v) ambient temperatures and winds along intended route and any planned diversion;
 - (vi) flight paths and minimum altitudes required to remain clear of obstacles.
- (2) during takeoff and landing—
 - (i) the condition of the takeoff runway or area to be used, including any contaminants (e.g., water, slush, snow, ice);
- (3) In determining the length of the runway available, account shall be taken of the loss, if any, of runway length due to alignment of the aeroplane prior to take-off—
 - (i) the gradient of runway to be used;
 - (ii) the runway length including clearways and stopways, if applicable;
 - (iii) pressure altitudes at takeoff and landing sites;
 - (iv) current ambient temperatures and winds at takeoff;
 - (v) forecast ambient temperatures and winds at each destination and planned alternate landing site;
 - (vi) the ground handling characteristics (e.g., braking action) of the type of aircraft; and
 - (vii) landing aids and terrain that may affect the takeoff path, landing path, and landing roll.

Note 1: Where conditions are different from those on which the performance is based, compliance may be determined by interpolation or by computing the effects of changes in the specific variables, if the results of the interpolation or computations are substantially as accurate as the results of direct tests.

Note 2: To allow for wind effect, takeoff data based on still air may be corrected by taking into account not more than 50 percent of any reported headwind component and not less than 150 percent of any reported tailwind component, and landing data based on.

8.7.2.4 TAKEOFF LIMITATIONS

- (a) AEROPLANES: A person shall not takeoff an aeroplane used in commercial air transport unless the following requirements are met when determining the maximum permitted take-off mass—
- (1) the takeoff run shall not be greater than the length of the runway;
 - (2) for turbine engine powered aeroplanes—
 - (i) the takeoff distance shall not exceed the length of the runway plus the length of any clearway, except that the length of any clearway included in the calculation shall not be greater than $1/2$ the length of the runway; and
 - (ii) the accelerate-stop distance shall not exceed the length of the runway, plus the length of any stopway, at any time during takeoff until reaching V_1 .
 - (3) for reciprocating engine powered aeroplanes—
 - (i) the accelerate-stop distance shall not exceed the length of the runway at any time during takeoff until reaching V_1 ;
 - (4) if the critical engine fails at any time after the aeroplane reaches V_1 , to continue the takeoff flight path and clear all obstacles either—
 - (i) by a height of at least 9.1 m (35 ft) vertically for turbine engine powered aeroplanes or 15.2 m (50 ft) for reciprocating engine powered aeroplanes; and
 - (ii) by at least 60 m (200 ft) horizontally within the aerodrome boundaries and by at least 90 meters (300 feet) horizontally after passing the boundaries, without banking more than 15 degrees at any point on the takeoff flight path.
 - (5) The AOC holder shall take account of charting accuracy when assessing compliance with subsection 8.7.2.4

- (b) HELICOPTERS: A person shall not takeoff a helicopter used in commercial air transport that, in the event of a critical engine failure, cannot—
- (1) for Class 1 helicopters—
 - (i) at or before the takeoff decision point, discontinue the takeoff and stop within the rejected takeoff area; or
 - (ii) after the takeoff decision point, continue the takeoff and then climb, clearing all obstacles along the flight path, until a suitable landing site is found.
 - (2) for Class 2 helicopters—
 - (i) before reaching a defined point after take-off, safely execute a forced landing within the rejected takeoff area; or
 - (ii) at any point after reaching a defined point after take-off, continue the takeoff and then climb, clearing all obstacles along the flight path, until a suitable landing site is found.
 - (3) Performance Class 3 helicopters shall only be operated in conditions of weather and light, and over such routes and diversions therefrom, that permit a safe forced landing to be executed in the event of engine failure.
 - (4) The operator shall take account of charting accuracy when assessing compliance with the above.
- (c) Only performance Class 1 helicopters shall be permitted to operate from elevated heliports in congested areas.

8.7.2.5 EN ROUTE LIMITATIONS: ALL ENGINES OPERATING

- (a) A person shall not take off a reciprocating engine powered aeroplane used in commercial air transport at a mass that does not allow a rate of climb of at least $6.9 V_{so}$, (that is, the number of feet per minute obtained by multiplying the aircraft's minimum steady flight speed by 6.9) with all engines operating, at an altitude of at least 300 m (1,000 ft) above all terrain and obstructions within ten miles of each side of the intended track.

8.7.2.6 EN ROUTE LIMITATIONS: ONE ENGINE INOPERATIVE

- (a) AEROPLANE: A person shall not take off an aeroplane used in commercial air transport having two engines unless that aeroplane can, in the event of a power failure at the most critical point en route, continue the flight to a suitable aerodrome where a landing can be made while allowing—
- (1) for reciprocating engine powered aeroplanes—
- (i) at least a rate of climb of $0.079 - (0.106/\text{number of engines installed}) V_{so}^2$ (when V_{so} is expressed in knots) at an altitude of 300 m (1,000 ft) above all terrain and obstructions within 9.3 km (5 nm), on each side of the intended track; and
 - (ii) a positive slope at an altitude of at least 450 m (1,500 ft) above the aerodrome where the aeroplane is assumed to land.
- (2) for turbine engine powered transport category aeroplanes—
- (i) a positive slope at an altitude of at least 300 m (1,000 ft) above all terrain and obstructions within 9.3 km (5 nm), on each side of the intended track;
 - (ii) a net flight path from cruising altitude to the intended landing aerodrome that allows at least 600 m (2,000 ft) clearance above all terrain and obstructions within 9.3 km (5 nm), on each side of the intended track; and
 - (iii) a positive slope at an altitude of at least 450 m (1,500 ft) above the aerodrome where the aeroplane is assumed to land;

Note 1: The climb rate specified in Paragraph (a)(1)(i) of this subsection may be amended to $0.026 V_{so}^2$ for large transport category aircraft issued a type certificate prior to 1953.

Note 2: The 9.3 km (5 nm) clearance margin stated in Paragraph 8.7.2.6(a) of this subsection shall be increased to 18.5 km (10 nm) if navigational accuracy does not meet the 95% containment level.

- (b) **HELICOPTER:** A person shall not takeoff a helicopter used in commercial air transport having two engines unless that helicopter can, in the event of the critical engine failing and any point in the en route phase, continue the flight to the destination or alternate landing site without flying below the minimum flight altitude at any point and clearing all obstacles in the approach path by a safe margin.

8.7.2.7 EN ROUTE LIMITATIONS: TWO ENGINES INOPERATIVE

- (a) **AEROPLANE:** A person shall not takeoff an aeroplane used in commercial air transport having three or more engines at such a mass where there is no suitable landing aerodrome within 90 minutes at any point along the intended route (with all engines operating at cruising power), unless that aircraft can, in the event of simultaneous power failure of two critical engines at the most critical point along that route, continue to a suitable landing aerodrome while allowing—

- (1) for turbine engine powered aeroplanes—

- (i) a net flight path (considering the ambient temperatures anticipated along the track) clearing vertically by at least 2,000 feet all terrain and obstructions within 9.3Km (5 nautical miles) on each side of the intended track;
- (ii) a positive slope at 1,500 feet above the aerodrome of intended landing; and
- (iii) enough fuel to continue to the aerodrome of intended landing, to arrive at an altitude of at least 1,500 feet directly over the aerodrome, and thereafter to fly for 15 minutes at cruise power.

Note: The consumption of fuel and oil after the engine failure is the same as the consumption that is allowed for in the net flight path data in the AFM.

- (2) for reciprocating engine powered aeroplanes—

- (i) A rate of climb at $0.013 V_{so}^2$ feet per minute (that is, the number of feet per minute is obtained by multiplying the number of knots squared by 0.013) at an altitude of 1,000 feet above the highest ground or obstruction

within 10 miles on each side of the intended track, or at an altitude of 5,000 feet, whichever is higher; and

- (ii) enough fuel to continue to the aerodrome of intended landing and to arrive at an altitude of at least 300 m (1,000 ft) directly over that aerodrome.

Note 1: When the two engines of the reciprocating aeroplane are predicted to fail at an altitude above the prescribed minimum altitude, compliance with the prescribed rate of climb need not be shown during the descent from the cruising altitude to the prescribed minimum altitude, if those requirements can be met once the prescribed minimum altitude is reached, and assuming descent to be along a net flight path and the rate of descent to be $0.013 V_{so}^2$ greater than the rate in the approved performance data.

Note 2: If fuel jettisoning is authorised (or planned), the aeroplane's mass at the point where the two engines fail is considered to be not less than that which would include enough fuel to proceed to an aerodrome and to arrive at an altitude of at least 300 m (1,000 ft) directly over that aerodrome.

- (b) **HELICOPTERS:** A person shall not takeoff a Class 1 or Class 2 helicopter used in commercial air transport having three or more engines unless that helicopter can, in the event of two critical engines failing simultaneously at any point in the en route phase, continue the flight to a suitable landing site.

8.7.2.8 LANDING LIMITATIONS

- (a) **AEROPLANE:** A person shall not take off an aeroplane used in commercial operations unless its mass on arrival at either the intended destination aerodrome or any planned alternate aerodrome would allow a full stop landing from a point 50 feet above the intersection of the obstruction clearance plane and the runway, and within—
 - (1) for turbine-powered aeroplanes, 60 percent of the effective length of each runway; and
 - (2) for reciprocating-engine aeroplanes, 70 percent of the effective length of each runway.

- (b) For the purpose of determining the allowable landing mass at the destination aerodrome, each person determining the landing limit shall ensure that—
 - (1) the aeroplane is landed on the most favourable runway and in the most favourable direction, in still air; or
 - (2) the aeroplane is landed on the most suitable runway considering the probable wind velocity and direction, runway conditions, the ground handling characteristics of the aeroplane, and other conditions such as landing aids and terrain.

Note: If the runway at the landing destination is reported or forecast to be wet or slippery, the landing distance available shall be at least 115 percent of the required landing distance unless, based on a showing of actual operating landing techniques on wet or slippery runways, a shorter landing distance (but not less than that required by Paragraph 8.7.2.8(a) of this subsection has been approved for a specific type and model aeroplane and this information is included in the AFM.

- (c) A turbine powered transport category aeroplane that would be prohibited from taking off because it could not meet the requirements of Paragraph 8.7.2.8(a)(1) of this subsection, may take off if an alternate aerodrome is specified that meets all the requirements of Paragraph 8.7.2.8(a) of this subsection.
- (d) **HELICOPTERS:** A person shall not take off a helicopter used in commercial air transport unless, with all engines operating on arrival at the intended destination landing site or any planned alternate landing, it can clear all obstacles on the approach path and can land and stop within the landing distance available.
- (e) **HELICOPTERS:** A person shall not take off a helicopter used in commercial air transport unless, in the event of any engine becoming inoperative in the approach and landing phase on arrival at the intended destination landing site or any planned alternate landing, can—
 - (1) for Class 1 helicopters—
 - (i) before the landing decision point, clear all obstacles on the approach path and be able to land and stop within the landing distance available or to perform a balked

landing and clear all obstacles in the flight path by an adequate margin; or

- (ii) after the landing decision point, land and stop within the landing distance available.
- (2) for Class 2 and Class 3 helicopters—
- (i) before reaching a defined point before landing, safely execute a forced landing within the landing distance available.

8.7.2.9 SINGLE-ENGINE AND MULTI-ENGINE AEROPLANE OPERATIONS

- (a) A person shall not operate a single-engine aeroplane in revenue passenger-carrying operations unless that aeroplane is continually operated in daylight, VFR, and over such routes and diversions therefrom that permit a safe forced landing to be executed in the event of an engine failure.
- (1) Notwithstanding paragraph 8.7.2.9(a) of this subsection, the Authority may approve single-engine operations in propeller-driven, turbine-powered aeroplanes under IFR, at night, or under IMC for aeroplanes with a maximum certificated take-off mass of 5 700 kg (12 566 lb) or less and a maximum approved passenger seating configuration of nine or less, provided it meets the equipment requirements of Part 7 of these regulations.
- (2) Notwithstanding paragraph 8.7.2.9(a)(1) of this subsection, the Authority may approve single-engine operations in propeller-driven, turbine-powered aeroplanes under IFR, at night, or under IMC for aeroplanes with a maximum certificated take-off mass of 5 700 kg (12 566 lb) or less with a passenger seating configuration of more than nine passengers if the aeroplane is type certificated for operations by a single pilot, provided it meets the equipment requirements of Part 7 of these regulations and the Authority has authorised an exemption from paragraph 8.7.2.9(a)(1) of this subsection in the operator's operations specifications. If such operations are to be conducted outside of Grenada, the Grenada shall have an arrangement with the States where operations will be conducted.

- (b) A person shall not operate a single-engine turbine-powered aeroplane at night and/or in IMC unless the aeroplane's certificate of airworthiness is appropriate and acceptable to the Authority and the overall safety of the operation is consistent with commercial air transportation operations as provided by—
 - (1) The reliability of the turbine engine;
 - (2) The operator's maintenance procedures, operating practices, and flight dispatch procedures;
 - (3) Crew training programmes; and
 - (4) Equipment and additional requirements provided in accordance with paragraph 8.7.2.9(d) of this subsection.
- (c) No person shall operate a single-engine turbine-powered aeroplane at night and/or in IMC unless the aeroplane has an engine trend monitoring system, and those aeroplanes for which the individual certificate of airworthiness is first issued on or after 01 January 2005 shall have an automatic trend monitoring system.
- (d) IS 8.7.2.9 prescribes additional airworthiness and operational requirements applicable to the operation of single-engine, turbine-powered aeroplanes at night and/or in IMC with respect to—
 - (1) Turbine engine reliability;
 - (2) Systems and equipment;
 - (3) MEL;
 - (4) Aircraft Flight Manual information;
 - (5) Event reporting;
 - (6) Operator planning;
 - (7) Flight crew experience, training, and checking;
 - (8) Route limitations over water; and
 - (9) Operator certification or validation.
- (e) No person may operate a multi-engine aeroplane in revenue passenger-carrying operations that is unable to comply with any of

the performance limitations of 8.7.2.3 through 8.7.2.7 of this part unless that aeroplane is continually operated—

- (1) In daylight;
 - (2) In VFR, excluding over-the-top operations; and
 - (3) At a mass that will allow it to climb, with the critical engine inoperative, at least 15 m (50 ft) a minute when operating at the MEAs of the intended route or any planned diversion, or at 1 500 m (5 000 ft) MSL, whichever is higher.
- (f) Multi-engine aeroplanes that are unable to comply with paragraph 8.7.2.9(e)(3) of this subsection are, for the purpose of this section, considered to be a single-engine aeroplane and shall comply with the requirements of paragraph 8.7.2.9(a) of this subsection.

8.8 FLIGHT RULES

8.8.1 All Operations

8.8.1.1 OPERATION OF AIRCRAFT ON THE GROUND

- (a) A person shall not taxi an aircraft on the movement area of an aerodrome unless the person at the controls—
- (1) has been authorised by the owner, the lessee, or a designated agent;
 - (2) is fully competent to taxi the aircraft;
 - (3) is qualified to use the radio if radio communications are required; and
 - (4) has received instructions from a competent person in respect of aerodrome layout, and where appropriate, information on routes, signs, marking, lights, ATC signals and instructions, phraseology and procedures, and is able to conform to the operational standards required for safe aircraft movement at the aerodrome.
- (b) A person shall not cause a helicopter rotor to be turned under power unless there is a qualified pilot at the controls.
- (c) No person shall taxi an aircraft under the guidance of a signalman unless—

- (1) the standard marshalling signals to the aircraft are provided in a clear and precise manner using the signals as prescribed by in IS [8.8.2.11](#);
- (2) the signalman is wearing a distinctive fluorescent identification vest to allow the flight crew to identify that he or she is the person responsible for the marshalling operation; and
- (3) the signalman and all participating ground personnel are using daylight-fluorescent wands, tabletennis bats, or gloves for all signalling during daylight hours, and illuminated wands at night or in low visibility.

8.8.1.2 TAKEOFF CONDITIONS

- (a) Before commencing takeoff, a PIC shall ensure that—
 - (1) according to the available information, the weather at the aerodrome and the condition of the runway intended to be used will allow for a safe takeoff and departure; and
 - (2) the RVR or visibility in the takeoff direction of the aircraft is equal to or better than the applicable minimum.

8.8.1.3 FLIGHT INTO KNOWN OR EXPECTED ICING

- (a) A person shall not takeoff an aircraft or continue to operate an aircraft en route when icing conditions are expected or encountered, without ensuring that the aircraft is certificated for icing operations and has sufficient operational de-icing or anti-icing equipment.
- (b) A person shall not takeoff an aircraft when frost, ice or snow is adhering to the wings, control surfaces, propellers, engine inlets or other critical surfaces of the aircraft which might adversely affect the performance or controllability of the aircraft.
- (c) For commercial air transport operations, a person shall not takeoff an aircraft if conditions are such that frost, ice or snow may reasonably be expected to adhere to the aircraft, unless the aircraft has been inspected for icing and the procedures approved for the AOC holder by the Authority are followed to ensure ground de-icing and anti-icing is accomplished.

8.8.1.4 ALTIMETER SETTINGS

- (a) A person operating an aircraft, except a balloon or a glider, shall maintain the cruising altitude or flight level by reference to an altimeter setting—
- (1) below transition level to—
 - (i) the current reported altimeter setting of a station along the route and within 100 nautical miles of the aircraft;
 - (ii) the current reported altimeter setting of a nearby station, if there is not a station along the route; or
 - (iii) in the case of an aircraft not equipped with a radio, the elevation of the departure aerodrome or an appropriate altimeter setting available before departure; or
 - (2) above transition altitude to 1013.2 hPa.

Note: The lowest usable flight level shall be as published in the Eastern Caribbean AIP.

8.8.1.5 MINIMUM SAFE ALTITUDES: GENERAL

- (a) Except when necessary for takeoff or landing, a person shall not operate an aircraft below the following altitudes—
- (1) ANYWHERE: an altitude allowing, if a power unit fails, continuation of flight or an emergency landing without undue hazard to persons or property on the surface;
 - (2) OVER CONGESTED AREAS: over any congested area of a city, town, or settlement, or over any open-air assembly of persons, an altitude of 300m (1,000 feet) above the highest obstacle within a horizontal radius of 600m (2,000 feet) of the aircraft;
 - (3) OVER OTHER THAN CONGESTED AREAS: an altitude of 150m (500 feet) above the surface, except over open water or sparsely populated areas where the aircraft may not be operated closer than 150m (500 feet) to any person, vessel, vehicle, or structure;

- (4) HELICOPTERS: helicopters are not subject to the proximity restrictions provided they are operate in a manner that is not hazardous to persons and property on the surface. The PIC of a helicopter shall comply with any routes or altitudes for the area that are prescribed for helicopters by the Authority.

8.8.1.6 MINIMUM SAFE VFR ALTITUDES—

- (a) Except when necessary for take-off or landing a person shall not operate an aeroplane during the day, under VFR, at an altitude less than 1,000 feet above the surface or within 1,000 feet of any mountain, hill, or other obstruction to flight.
- (b) A person shall not operate an aircraft at night, under VFR.

8.8.1.7 INSTRUMENT APPROACH OPERATING MINIMA

- (a) An Operator shall establish aerodrome operating minima for each aerodrome to be used, and the Authority shall approve the method of determination of such minima. Such minima shall not be lower than any that may be established for such aerodromes by the State in which the aerodrome is located, except when specifically approved by that State.
- (b) Category II and Category III instrument approach and landing operations shall not be authorized unless RVR information is provided.
- (c) For instrument approach and landing operations, aerodrome operating minima below 800 m visibility should not be authorized unless RVR information is provided.

8.8.1.8 CATEGORY II AND III OPERATIONS: GENERAL OPERATING RULES

- (a) A person shall not operate a civil aircraft in a Category II or III operation unless—
 - (1) the PIC and Co-Pilot of the aircraft hold the appropriate authorisations and ratings prescribed in Part 2, Subsection 2.2.1.6. of these regulations.
 - (2) each flight crew member has adequate knowledge of, and familiarity with, the aircraft and the procedures to be used; and

- (3) the instrument panel in front of the pilot who is controlling the aircraft has appropriate instrumentation for the type of flight control guidance system that is being used.
- (b) Unless otherwise authorised by the Authority, a person shall not operate a civil aircraft in a Category II or Category III operation unless each ground component required for that operation and the related airborne equipment is installed and operating.
- (c) When the approach procedure being used provides for and requires the use of a DH, the authorised DH is the highest of the following—
 - (1) the DH prescribed by the approach procedure;
 - (2) the DH prescribed for the PIC;
 - (3) the DH for which the aircraft is equipped.
- (d) Unless otherwise authorised by the Authority, a pilot operating an aircraft in a Category II or Category III approach that provides and requires use of a DH shall not continue the approach below the authorised decision height unless the following conditions are met—
 - (1) the aircraft is in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal manoeuvres, and where that descent rate will allow touchdown to occur within the touchdown zone of the runway of intended landing; and
 - (2) at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot—
 - (i) the approach light system, except that the pilot may not descend below 30 m (100 ft) above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable;
 - (ii) the threshold;
 - (iii) the threshold markings;
 - (iv) the threshold lights;
 - (v) the touchdown zone or touchdown zone markings;

- (vi) the touchdown zone lights.
- (e) Unless otherwise authorised by the Authority, a pilot operating an aircraft shall immediately execute an appropriate missed approach whenever, prior to touchdown, the requirements of Paragraph 8.8.1.8(d) of this subsection are not met.
- (f) A person operating an aircraft using a Category III approach without DH shall not land that aircraft except in accordance with the provisions of the letter of authorisation issued by the Authority.
- (g) The Authority shall issue a specific approval for the minimum take-off RVR for take-off in low visibility.
- (h) A person shall not conduct CAT II or CAT III instrument approaches and landing operations below 800 m (2 600 ft) visibility unless RVR information is provided
- (i) The State of the Operator shall issue a specific approval for instrument approach operations in low visibility which shall only be conducted when RVR information is provided.
- (j) Paragraphs 8.8.1.8(a) through (g) of this subsection shall not apply to operations conducted by AOC holders issued a certificate under Part 9 of the schedule. A person shall not operate a civil aircraft in a Category II or Category III operation conducted by an AOC holder unless the operation is conducted in accordance with that AOC holder's approved training programme and operations specifications.

Note 1: CAT II approval is required prior to obtaining CAT III.

Note 2: In general, visibility for take-off is defined in terms of RVR. An equivalent horizontal visibility may also be used.

8.8.1.9 CATEGORY II AND CATEGORY III MANUAL

- (a) Except as provided in Paragraph 8.8.1.9(c) of this subsection, a person shall not operate a civil aircraft in a Category II or a Category III operation unless—
 - (1) there is available in the aircraft a current and approved Category II or Category III manual, as appropriate, for that aircraft;

- (2) the operation is conducted in accordance with the procedures, instructions, and limitations in the appropriate manual; and
 - (3) the instruments and equipment listed in the manual that are required for a particular Category II or Category III operation have been inspected and maintained in accordance with the maintenance program contained in the manual.
- (b) An operator shall keep a current copy of each approved manual at its principal base of operations and must make each manual available for inspection upon request by the Authority.
- (c) Paragraphs (a) and (b) of this subsection shall not apply to operations conducted by an AOC holder issued a certificate under Part 9 of these regulations, which will have approved CAT II or CAT III operations included as a part of its Operations Manual.

Note: CAT II approval is required prior to obtaining CAT III.

Implementing Standard: See IS 8.8.1.9 for specific Category II and CATEGORY III manual requirements

8.8.1.10 RESERVED

8.8.1.11 DIVERSION DECISION - ENGINE INOPERATIVE

- (a) Except as provided in Paragraph (b), the PIC shall land the aircraft at the nearest suitable aerodrome at which a safe landing can be made whenever an engine of an aircraft fails or is shut down to prevent possible damage.
- (b) If not more than one engine of an aeroplane having three or more engines fails, or its rotation is stopped, the PIC may proceed to an aerodrome if he or she decides that proceeding to that aerodrome is as safe as landing at the nearest suitable aerodrome after considering the—
 - (1) nature of the malfunction and the possible mechanical difficulties that may occur if the flight is continued;
 - (2) altitude, mass, and usable fuel at the time of engine stoppage;
 - (3) weather conditions en route and at possible landing points;
 - (4) air traffic congestion;

- (5) type of terrain; and
- (6) familiarity with the aerodrome to be used.

8.8.1.12 OPERATING NEAR OTHER AIRCRAFT – INCLUDING FORMATION FLIGHTS

- (a) A person shall not operate an aircraft so close to another aircraft as to create a collision hazard.
- (b) A person shall not operate an aircraft in formation flight except
 - (1) By arrangement with the PIC of each aircraft in the formation; and
 - (2) If in controlled airspace, in accordance with conditions prescribed by the appropriate air traffic authority, which includes that—
 - (i) The formation operates as a single aircraft with regard to navigation and position reporting;
 - (ii) Separation between aircraft in the flight shall be the responsibility of the flight leader and the PICs of the other aircraft in-flight;
 - (iii) Separation between aircraft shall include periods of transition when aircraft are manoeuvring to attain their own separation within the formation and during join-up and breakaway; and
 - (iv) A distance not exceeding 1 km (0.5 NM) laterally and longitudinally and 30 m (100 ft) vertically from the flight leader shall be maintained by each aircraft.
- (c) A person shall not operate an aircraft, carrying passengers for hire, in formation flight.

8.8.1.13 RIGHT-OF-WAY RULES: EXCEPT WATER OPERATIONS

- (a) GENERAL.
 - (1) a pilot shall maintain vigilance so as to see and avoid other aircraft;

- (2) when a rule of this subsection gives another aircraft the right-of-way, the pilot shall give way to that aircraft and may not pass over, under, or ahead of it unless well clear and taking into account the effect of aircraft wake turbulence.
 - (3) a pilot who has the right-of-way shall maintain his or her heading and speed but is still responsible for taking such action, including collision-avoidance manoeuvres based on resolution advisories provided by ACAS equipment, as will best avert collision.
- (b) IN DISTRESS. An aircraft in distress has the right-of-way over all other air traffic.
- (c) CONVERGING.
 - (1) when aircraft of the same category are converging at
 - (2) approximately the same altitude (except head-on, or nearly so), the aircraft to the other's right has the right-of-way;
 - (3) if the converging aircraft are of different categories—
 - (i) a balloon has the right-of-way over any other category of aircraft;
 - (ii) a glider has the right-of-way over an airship, aeroplane, or rotorcraft; and
 - (iii) an airship has the right-of-way over an aeroplane or rotorcraft.
- (d) TOWING OR REFUELLING. An aircraft towing or refuelling any other aircraft shall have the right-of-way over all other engine-driven aircraft, except aircraft in distress.
- (e) APPROACHING HEAD-ON. When two or more aircraft are approaching each other head-on, or nearly so, the pilot of each aircraft shall alter course to the right.
- (f) OVERTAKING. An aircraft that is being overtaken has the right-of-way and the pilot of each overtaking aircraft, whether climbing, descending, or in horizontal flight, shall alter course to the right to pass well clear.

- (g) **LANDING.** An aircraft, while on final approach to land or while landing, shall have the right-of-way over other aircraft in flight or operating on the surface.

Note: The PIC may not take advantage of this rule to force an aircraft off the runway surface which has already landed and is attempting to make way for an aircraft on final approach.

- (h) **MORE THAN ONE LANDING AIRCRAFT.** When two or more aircraft are approaching an aerodrome for the purpose of landing, the aircraft at the lower altitude shall have the right-of-way.

Note: The PIC will not take advantage of this rule to cut in front of another which is on final approach to land or to overtake that aircraft.

- (i) **EMERGENCY LANDING.** Aircraft that are compelled to land have the right-of-way over other aircraft.

- (j) **TAKING OFF.** Aircraft taking off have the right-of-way over aircraft taxiing on the manoeuvring area of an aerodrome.

- (k) **SURFACE MOVEMENT OF AIRCRAFT**

- (1) **APPROACHING HEAD ON.** When aircraft are approaching each other head-on, or approximately so, the pilot of each aircraft shall stop or, where practicable, alter course to the right so as to keep well clear.

- (2) **CONVERGING.** When two aircraft are converging on a course, the pilot who has the other aircraft on his right shall give way.

- (3) **OVERTAKING.** Each aircraft that is being overtaken has the right-of-way and each pilot of an overtaking aircraft shall keep well clear.

- (l) **AIRCRAFT TAXIING ON THE MANOEUVRING AREA OF AN AERODROME.**

- (1) The pilot of an aircraft taxiing on the manoeuvring area shall stop and hold at all runway-holding positions unless otherwise authorised by the aerodrome control tower.

- (2) The pilot of an aircraft taxiing on the manoeuvring area shall stop and hold at all lighted stop bars and may proceed further when the lights are switched off.

- (3) The pilot of an aircraft taxiing on the manoeuvring area of an aerodrome shall give way to aircraft—
 - (i) Taking off or about to take off; or
 - (ii) Landing or in the final stages of an approach to landing.

8.8.1.14 RIGHT-OF-WAY RULES: WATER OPERATIONS

- (a) **GENERAL.** A person operating an aircraft on the water shall, insofar as possible, keep clear of all vessels and avoid impeding their navigation, and shall give way to any vessel or other aircraft that is given the right-of-way by any rule of this subsection.
- (b) **CONVERGING OR CROSSING.** When an aircraft, or an aircraft and a vessel, are on crossing courses, the aircraft or vessel to the other's right has the right-of-way.
- (c) **APPROACHING HEAD-ON.** When an aircraft, or an aircraft and a vessel, are approaching head-on, or nearly so, each shall alter its course to the right to keep well clear.
- (d) **OVERTAKING.** An aircraft or vessel that is being overtaken shall have the right-of-way, and the one overtaking shall alter course to keep well clear.
- (e) **SPECIAL CIRCUMSTANCES.** When an aircraft, or an aircraft and a vessel, approach so as to involve risk of collision, the aircraft or the vessel shall proceed with care having regard to the existing circumstances, including the limitations of the respective craft.
- (f) **LANDING AND TAKING OFF.** Aircraft landing on or taking off from the water shall keep well clear of all vessels and shall avoid impeding their navigation.

8.8.1.15 USE OF AIRCRAFT LIGHTS

- (a) If an aircraft has red rotating beacon or equivalent lights installed, the pilot shall switch the lights on prior to starting engines and shall display them at all times when the engines are running.
- (b) A person shall not operate an aircraft between the period from sunset to sunrise unless—
 - (1) it has lighted navigation lights; and
 - (2) if anticollision lights are installed, those lights are lighted.

Note: A pilot is permitted to switch off or reduce the intensity of any flashing lights if they do or are likely to adversely affect the satisfactory performance of duties or to subject an outside observer to harmful dazzle.

- (c) A person shall not park or move an aircraft at night in, or in a dangerous proximity to, a movement area of an aerodrome, unless the aircraft—
 - (1) is clearly illuminated;
 - (2) has lighted navigation lights, or
 - (3) is in an area that is marked by obstruction lights.
 - (4) has lights to indicate when the engine is running
- (d) A person shall not anchor an aircraft unless that aircraft—
 - (1) has lighted anchor lights; or
 - (2) is in an area where anchor lights are not required on vessels.
- (e) A person shall not operate an aircraft on water during the period from sunset to sunrise unless—
 - (1) The aircraft displays lights as required by the International Regulations for Preventing Collisions at Sea (most recent edition); or
 - (2) The aircraft displays lights as similar as possible in characteristics and position to those required by the International Regulations for Preventing Collisions at Sea if it is not practical to display the lights exactly as required.

8.8.1.16 SIMULATED INSTRUMENT FLIGHT

- (a) A person shall not operate an aircraft in simulated instrument flight unless—
 - (1) that aircraft has fully functioning dual controls;
 - (2) the other control seat is occupied by a safety pilot who holds at least a private pilot licence with category and class ratings appropriate to the aircraft being flown, and

- (3) the safety pilot has adequate vision forward and to each side of the aircraft, or a competent observer in the aircraft adequately supplements the vision of the safety pilot.
- (b) A person shall not engage in simulated instrument flight conditions during commercial air transport operations.

8.8.1.17 INFLIGHT SIMULATION OF ABNORMAL SITUATIONS

- (a) A person shall not simulate an abnormal or emergency situation during commercial air transport operations.

8.8.1.18 DROPPING, SPRAYING, TOWING

- (a) Except under conditions prescribed by the Authority, a pilot shall not take the following actions—
 - (1) dropping, dusting or spraying from an aircraft;
 - (2) towing of aircraft or other objects; or
 - (3) allowing parachute descents.

8.8.1.19 AEROBATIC FLIGHT

- (a) A person shall not operate an aircraft in aerobatic flight—
 - (1) over any city, town or settlement;
 - (2) over an open air assembly of persons;
 - (3) within the lateral boundaries of the surface areas of Class B, C, D or E airspace designated for an aerodrome;
 - (4) below an altitude of 1,500 feet above the surface; or
 - (5) when the flight visibility is less than 3 statute miles.
 - (6) unless in compliance with any other conditions prescribed by the Authority.
- (b) A person shall not operate an aircraft in manoeuvres exceeding a bank of 60 degrees or pitch of 30 degrees from level flight attitude unless all occupants of the aircraft are wearing parachutes packed by a qualified parachute rigger in the past 12 calendar months.

8.8.1.20 FLIGHT TEST AREAS

- (a) A person shall not flight-test an aircraft except over open water, or sparsely populated areas having light traffic.

8.8.1.21 PROHIBITED AREAS AND RESTRICTED AREAS

- (a) A person shall not operate an aircraft in prohibited areas, or in restricted areas, the particulars of which have been duly published, except in accordance with the conditions of the restrictions or by permission of the State over whose territory the areas are established.

8.8.1.22 OPERATIONS IN MNPS OR RVSM AIRSPACE

- (a) A person shall not operate a civil aircraft of Grenada registry in airspace where a Regional Air Navigation Agreement, MNPS or RVSM has been prescribed except in accordance with—
 - (1) The conditions of the procedures and restrictions required for this airspace; and
 - (2) A written authorisation issued by the Authority.
- (b) A person shall not operate a civil aircraft of Grenada registry in the North Atlantic airspace designated as NAT HLA airspace or in airspace designated as RVSM, without a written authorisation issued by the Authority, and in accordance with the following conditions—
 - (1) the vertical navigation performance capability of the aeroplane satisfies the requirements of MNPS / RVSM airspace;
 - (2) the operator has instituted appropriate procedures in respect of continued airworthiness (maintenance and repair) practices, training and programmes; and
 - (3) the operator has instituted appropriate flight crew procedures for operations in RVSM airspace.

Note: See subsection [7.1.2.7](#) of these regulations for requirements regarding navigation equipment for operations in MNPS/RVSM airspace.

8.8.1.23 OPERATIONS ON OR IN THE VICINITY OF A CONTROLLED OR AN UNCONTROLLED AERODROME

- (a) When approaching to land at an aerodrome without an operating control tower, a pilot of—
 - (1) an aeroplane shall make all turns of that aeroplane to the left; or to the right, if appropriately indicated by the authorities having jurisdiction over that aerodrome;
 - (2) a helicopter shall avoid the flow of aeroplanes.
- (b) When departing an aerodrome without an operating control tower, a pilot of an aircraft shall comply with any traffic patterns established by the authorities having jurisdiction over that aerodrome.
- (c) A pilot of an aircraft shall land and takeoff into the wind unless safety, the runway configurations, or traffic considerations determine that a different direction is preferable.
- (d) Each pilot operating an aircraft either on or in the vicinity of an aerodrome shall—
 - (1) Observe other aerodrome traffic for the purpose of avoiding collision; and
 - (2) Conform with or avoid the pattern of traffic formed by other aircraft in operation.
- (e) Each pilot of an aircraft when operating to, from, or through an aerodrome having an operational control tower shall also comply with the requirements at [8.8.2.8](#) of this part.
- (f) Aerodrome traffic management at controlled and uncontrolled aerodromes may be supplemented or directed by the use of universal aviation signals, such as the light displays and visual markings.

Implementing Standard: See IS [8.8.2.11](#) for the appropriate displays of light signals or visual markings.

8.8.1.24 AERODROME TRAFFIC PATTERN ALTITUDES: TURBOJET, TURBOFAN, OR LARGE AIRCRAFT

- (a) When arriving at an aerodrome, the PIC of a turbojet, turboprop, or large aircraft shall enter the traffic pattern at least 1,500 feet AGL until further descent is required for landing.
- (b) When departing, the PIC of a turbojet, turboprop, or large aircraft shall climb to 1,500 feet AGL as rapidly as practicable.

8.8.1.25 COMPLIANCE WITH VISUAL AND ELECTRONIC GLIDE SLOPES

- (a) The PIC of an aeroplane approaching to land on a runway served by a visual approach slope indicator shall maintain an altitude at or above the glide slope until a lower altitude is necessary for a safe landing.
- (b) The PIC of a turbojet, turboprop, or large aeroplane approaching to land on a runway served by an ILS shall fly that aeroplane at or above the glide slope from the point of interception to the middle marker.
- (c) An AOC holder shall establish operational procedures designed to ensure that an aircraft being used to conduct precision approaches crosses the threshold by a safe margin, with the aeroplane in the landing configuration and attitude.

8.8.1.26 RESTRICTION OR SUSPENSION OF OPERATIONS: COMMERCIAL AIR TRANSPORT

- (a) If a PIC or an AOC holder knows of conditions, including aerodrome and runway conditions, that are a hazard to safe operations, the PIC or the AOC holder shall restrict or suspend all commercial air transport operations to such aerodromes and runways as necessary until those conditions are corrected.

8.8.1.27 CONTINUATION OF FLIGHT WHEN DESTINATION AERODROME IS TEMPORARILY RESTRICTED: COMMERCIAL AIR TRANSPORT

- (a) A PIC shall not allow a flight to continue toward any aerodrome of intended landing where commercial air transport operations have been restricted or suspended, unless—
 - (1) in the opinion of the PIC, the conditions that are a hazard to safe operations may reasonably be expected to be corrected by the estimated time of arrival; or
 - (2) there is no safer procedure.

8.8.1.28 INTERCEPTION OF CIVIL AIRCRAFT

- (a) When intercepted by a military or government aircraft, a PIC shall comply with the international standards when interpreting and responding to visual signals and communication.
- (b) No pilot shall conduct an international flight unless the procedures and signals relating to interception of aircraft are readily available on the flight deck.

Implementing Standard: See IS [8.8.1.28](#) for Interception of Civil Aircraft.

8.8.1.29 NOISE ABATEMENT PROCEDURES

- (a) Each AOC holder shall operate its aircraft in accordance with the noise abatement procedures approved by the Authority.
- (b) Unless otherwise directed by the Authority, the noise abatement procedures specified by an AOC holder for any one aeroplane type shall be the same for all aerodromes.

Note: A single procedure may not satisfy requirements at some aerodromes.

8.8.1.30 SINGLE-PILOT OPERATIONS – AEROPLANE

- (a) An aeroplane shall not be operated under IFR or at night by a single pilot unless approved by the State of the Operator.
- (b) An aeroplane shall not be operated under IFR or at night by a single pilot unless—
 - (1) The Aircraft Flight Manual does not require a flight crew of more than one;
 - (2) The aeroplane is propeller driven and turbine powered and complies with paragraph 8.7.2.2(e)(1) of this part;
 - (3) The maximum approved passenger seating configuration is not more than nine, or the aeroplane is propeller driven and turbine powered and complies with paragraph 8.7.2.2(e)(2) and the maximum approved passenger seating configuration is more than nine;

- (4) The maximum certificated take-off mass does not exceed 5 700 kg (12 566 lb);
 - (5) The aeroplane is equipped as described in paragraphs 7.1.2.4(d), (e), (f), (g) and (h) of these regulations;
 - (6) The PIC has satisfied the requirements of experience, training, checking, and recency described in IS 8.4.1.1 of this part.
- (c) Notwithstanding paragraphs 8.8.1.30(b)(2) and (3) of this subsection, the aeroplane shall be operated in compliance with paragraph 8.7.2.2(a) of this part.
- (d) Any exemption for single-pilot operations with more than nine passengers shall be authorised by the Authority in the operations specifications, as required by paragraph 8.7.2.2(e)(2) of this part.
- (e) If such operations are to be conducted outside of Grenada, Grenada shall have an arrangement with the States where the operations will be conducted.

8.8.1.31 SINGLE-ENGINE AEROPLANE OPERATIONS

- (a) Except as provided in paragraphs 8.8.1.31(b) and (c) of this subsection, single-engine aeroplanes shall only be operated in conditions of weather and light, and over such routes and diversions therefrom that permit a safe forced landing to be executed in the event of engine failure.
- (b) In approving operations by single-engine turbine-powered aeroplanes, at night and/or in IMC, the State of the Operator shall ensure that the airworthiness certification of the aeroplane is appropriate and that the overall level of safety intended by the provisions of Parts 5 and 8 of these regulations is provided by—
 - (1) The reliability of the turbine engine;
 - (2) The operator's maintenance procedures, operating practices, flight dispatch procedures, and crew training programmes; and
 - (3) Equipment and other requirements provided in accordance with 8.7.2.9 of this part and IS 8.7.2.9.
- (c) All single-engine turbine-powered aeroplanes operated at night and/or in IMC shall have an engine trend monitoring system, and

those aeroplanes for which the individual certificate of airworthiness is first issued on or after 01 January 2005 shall have an automatic trend monitoring system.

8.8.1.32 AEROPLANE OPERATING PROCEDURES FOR RATES OF CLIMB AND DESCENT

- (a) Unless otherwise specified in an ATC instruction, to avoid unnecessary ACAS II resolution advisories in aircraft at or approaching adjacent altitudes or FLs, each operator shall specify procedures by which an aeroplane climbing or descending to an assigned altitude or FL, especially with an autopilot engaged, may do so at a rate less than 8 m (26 ft)/sec or 450 m (1 500 ft)/min (depending on the instrumentation available) throughout the last 300 m (1 000 ft) of climb or descent to the assigned level) when the pilot is made aware of another aircraft at or approaching an adjacent altitude or FL.

8.8.2 Control of Air Traffic

8.8.2.1 ATC CLEARANCES

- (a) A PIC shall obtain an ATC clearance prior to operating a controlled flight, or a portion of a flight as a controlled flight.
- (b) A PIC shall request an ATC clearance, including potential re-clearance in-flight through the submission of a flight plan to an ATC facility.
- (c) Whenever a PIC has requested a clearance involving priority, a PIC shall submit a report explaining the necessity for such priority, if requested by the appropriate ATC facility.
- (d) ATC clearance shall be checked and confirmed by both pilots, especially where terrain clearance is a factor.
- (e) A person operating an aircraft on a controlled aerodrome shall not taxi on the manoeuvring area or any runway without clearance from the aerodrome control tower.

8.8.2.2 ADHERENCE TO ATC CLEARANCES

- (a) When an ATC clearance has been obtained, no PIC may deviate from the clearance, except in an emergency, unless he or she obtains an amended clearance.

Note 1: A flight plan may cover only part of a flight, as necessary, to describe that portion of the flight or those manoeuvres which are subject to air traffic control. A clearance may cover only part of a current flight plan, as indicated in a clearance limit or by reference to specific manoeuvres such as taxiing, landing or taking off.

Note 2: Paragraph 8.8.2.2(a) does not prohibit a pilot from cancelling an IFR clearance when operating in VMC or cancelling a controlled flight clearance when operating in airspace that does not require controlled flight.

- (b) When operating in airspace requiring controlled flight, no PIC may operate contrary to ATC instructions, except in an emergency.
- (c) A PIC who deviates from an ATC clearance or instructions in an emergency, shall notify ATC of that deviation as soon as possible.

8.8.2.3 COMMUNICATIONS

- (a) A person operating an aircraft on a controlled flight shall maintain a continuous listening watch on the appropriate communications channel and establish two-way communication as required with, the appropriate ATC facility.
- (b) Each person operating an aircraft on a controlled flight shall, except when landing at a controlled aerodrome, advise the appropriate ATC facility as soon as it ceases to be subject to ATC service.

Note 1: More specific procedures may be prescribed by the appropriate ATC authority in respect of aircraft forming part of aerodrome traffic at a controlled aerodrome.

Note 2: Automatic signalling devices may be used to satisfy the requirement to maintain a continuous listening watch, if authorised by the Authority.

8.8.2.4 ROUTE TO BE FLOWN

- (a) Unless otherwise authorised or directed by the appropriate ATC facility, the PIC of a controlled flight shall, in so far as practicable—
 - (1) when on an established ATC route, operate along the defined centre line of that route; or
 - (2) when on any other route, operate directly between the navigation facilities and/or points defining that route.

- (b) A PIC of a controlled flight operating along an ATC route defined by reference to VORs shall change over for primary navigation guidance from the facility behind the aircraft to that ahead of it at, or as close as operationally feasible to, the change-over point, where established.

Note: These requirements do not prohibit manoeuvring the aircraft to pass well clear of other air traffic or the manoeuvring of the aircraft in VFR conditions to clear the intended flight path both before and during climb or descent.

8.8.2.5 DEVIATIONS FROM CURRENT FLIGHT PLAN

- (a) A PIC shall take the following action in the event that a controlled flight inadvertently deviates from its current flight plan—
- (1) DEVIATION FROM TRACK. If the aircraft is off track, the PIC shall adjust the heading of the aircraft to regain track as soon as practicable;
 - (2) DEVIATION FROM ATC ASSIGNED MACH NUMBER / INDICATED AIRSPEED: The appropriate
 - (3) ATS unit shall be informed immediately.
 - (4) DEVIATION FROM MACH NUMBER / TRUE AIRSPEED. A PIC shall inform the appropriate ATC facility if the average Mach number / true airspeed at cruising level between reporting points varies from that given in the flight plan or is expected to vary by plus or minus 0.02 Mach or plus or minus 10 Kt of the true airspeed or more from the current flight plan
 - (5) CHANGE IN TIME ESTIMATE. A PIC shall notify the appropriate ATC facility and give a revised estimated time as soon as possible if the time estimate for a reporting point, flight information region boundary, or destination aerodrome, whichever comes first, is found to be in excess of two minutes from that notified to ATC, or such other period of time as is prescribed by the appropriate ATC authority or on the basis of air navigation regional agreements.
- (b) When ADS-C services are provided and ADS-C is activated, the ATS unit shall be informed automatically via data link whenever changes occur beyond the threshold values stipulated by the ADS event contract.

8.8.2.6 ATC CLEARANCE: CHANGE REQUESTS

- (a) Any requests for flight plan changes shall include the following information—
 - (1) CHANGE OF CRUISING LEVEL. Aircraft identification, requested new cruising level and cruising speed at this level, and revised time estimates, when applicable, at subsequent reporting points or flight information region boundaries;
 - (2) CHANGE OF MACH NUMBER / TRUE AIRSPEED: Aircraft identification: requested Mach number/True airspeed;
 - (3) CHANGE OF ROUTE—
 - (i) DESTINATION UNCHANGED. Aircraft identification, flight rules; description of new route of flight including related flight plan data beginning with the position from which requested change of route is to commence; revised time estimates, and any other pertinent information;
 - (ii) DESTINATION CHANGE. Aircraft identification; flight rules; description of revised route of flight to revised destination aerodrome including related flight plan data, beginning with the position from which requested change of route is to commence; revised time estimates; alternate aerodrome(s); any other pertinent information.

8.8.2.7 POSITION REPORTS

- (a) A pilot of a controlled flight shall report to the appropriate ATC facility, as soon as possible, the time and level of passing each designated compulsory reporting point, together with any other required information, unless exempted from this requirement by the appropriate ATC authority.
- (b) A pilot of a controlled flight shall make position reports in relation to additional points or intervals when requested by the appropriate ATC facility.
- (c) When operating via data link communications providing position information to the appropriate ATS unit, each pilot of a controlled

flight shall only provide voice position reports when requested by the appropriate ATC facility.

8.8.2.8 OPERATIONS ON OR IN THE VICINITY OF A CONTROLLED AERODROME

- (a) A person shall not operate an aircraft to, from, through, or on an aerodrome having an operational control tower unless two-way communications are maintained between that aircraft and the control tower.
- (b) A PIC shall, on arrival, establish communications required by Paragraph 8.8.2.8(a) prior to 4 nautical miles from the aerodrome when operating from the surface up to and including 2,500 feet.
- (c) A PIC shall, on departure, establish communications with the control tower prior to taxi.
- (d) **TAKEOFF, LANDING, TAXI CLEARANCE.** A person shall not, at any aerodrome with an operating control tower, operate an aircraft on a runway or taxiway or takeoff or land an aircraft, unless an appropriate clearance has been received by ATC.

Note: A clearance to “taxi to” the takeoff runway is not a clearance to cross or taxi on to that runway. It does authorise the PIC to cross other runways during the taxi to the assigned runway. A clearance to “taxi to” any other point on the aerodrome is a clearance to cross all runways that intersect the taxi route to the assigned point.

- (e) **COMMUNICATIONS FAILURE.** If the radio fails or two-way communication is lost, a PIC may continue a VFR flight operation and land if—
 - (1) the weather conditions are at or above basic VFR minimums; and
 - (2) clearance to land is received by light signals and acknowledged by the PIC, as prescribed in IS 8.8.2.11(f) and (g) for light signals and acknowledgement.

Note: During IFR operations, the two-way communications failure procedures will apply.

8.8.2.9 UNLAWFUL INTERFERENCE

- (a) A PIC shall, when and if possible, notify the appropriate ATC facility when an aircraft is being subjected to unlawful interference, including—
 - (1) any significant circumstances associated with the unlawful interference; and (2) any deviation from the current flight plan necessitated by the circumstances.
- (b) When an aircraft is subjected to unlawful interference, the PIC shall attempt to land as soon as practicable at—
 - (1) The nearest suitable aerodrome; or
 - (2) A dedicated aerodrome assigned by the appropriate Authority, unless considerations aboard the aircraft dictate otherwise.

8.8.2.10 TIME CHECKS

- (a) A PIC shall use Co-ordinated Universal Time (UTC), expressed in hours and minutes and, when required seconds of the 24-hour day beginning at midnight, in flight operations.
- (b) A PIC shall obtain a time check prior to operating a controlled flight and at such other times during the flight as may be necessary.
- (c) Whenever time is used in the application of data link communications, it shall be accurate to within 1 second of UTC.

Note: The time check in Paragraph 8.8.2.10(b) of this subsection is normally obtained from an ATS unit unless other arrangements have been made by the operator or by the appropriate ATC authority.

8.8.2.11 UNIVERSAL AVIATION SIGNALS

- (a) Upon observing or receiving any of the designated universal aviation signals, a person operating an aircraft shall take such action as may be required by the interpretation of the signal.
- (b) Universal signals shall have only the meanings designated.
- (c) A person using universal signals in the movement of aircraft shall only use them for the purpose indicated.
- (d) A person shall not use signals likely to cause confusion with universal aviation signals.

Implementing Standard: See IS 8.8.2.11 for a list of universal aviation signals.

8.8.2.12 SIGNAL MAN

- (a) No person shall guide an aircraft unless trained, qualified, and approved by the Authority to carry out the functions of a signalman.
- (b) The signalman shall wear a distinctive fluorescent identification vest to allow the flight crew to identify that he or she is the person responsible for the marshalling operation.
- (c) The signalman shall use the marshalling equipment prescribed in Paragraph 8.8.1.1(c) of this part.

8.8.3 VFR Flight Rules

8.8.3.1 VISUAL METEOROLOGICAL CONDITIONS

- (a) A person shall not operate an aircraft under VFR when the flight visibility is less than, or at a distance from the clouds that is less than that prescribed, or the corresponding altitude and class of airspace in the following table—

Airspace and VMC Minima*

Airspace Class		A	B	C	D	E	F	G
								Above 900 m (3 000 ft) AMSL or above 300 m (1 000 ft) above terrain, whichever is the higher
Distance From		1 500 m (4 920 ft) horizontally						Clear of cloud and in sight of the surface
Cloud		300 m (1 000 ft) vertically						
Flight Visibility		8 km (5 SM) at and above 3 050 m (10 000 ft) AMSL						5 km (3 SM) **
		5 km (3 SM) below 3 050 m (10 000 ft) AMSL						

*When the height of the transition altitude is lower than 3 050 m (10 000 ft) AMSL, FL 100 shall be used in lieu of 10 000 ft.

**When so prescribed by the appropriate ATC authority, lower flight visibilities to 1 500 m (4 920 ft) may be permitted for flights operating—

- (1) At speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; or
- (2) In circumstances in which the probability of encounters with other traffic would normally be low (e.g., in areas of low volume traffic and for aerial work at low levels).

Helicopters may be permitted to operate in less than 1 500 m (4 920 ft) flight visibility, if manoeuvred at a speed that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision.

***The VMC minima in Class A airspace are included for guidance to pilots and do not imply acceptance of VFR flights in Class A airspace.

8.8.3.2 VFR WEATHER MINIMA FOR TAKEOFF AND LANDING

- (a) A person shall not land or take off an aircraft under VFR from an aerodrome located within a control zone, or enter the aerodrome traffic zone or traffic pattern airspace, unless the—
 - (1) reported ceiling is at least 450 m (1 500 ft); and
 - (2) reported ground visibility is at least 5 km (3 SM); or
 - (3) except when a clearance is obtained from ATC.
- (b) A person shall not land or take off an aircraft or enter the traffic pattern under VFR from an aerodrome located outside a control zone unless VMC conditions are at or above those indicated in 8.8.3.1 of this part.
- (c) FOR HELICOPTERS. a helicopter can be operated clear of clouds at a speed that allows the pilot adequate opportunity to see any air traffic or obstruction in time to avoid a collision.

Note: The only exception to the required weather minima of this subsection is during a Special VFR operation.

8.8.3.3 SPECIAL VFR OPERATIONS

- (a) A person shall not conduct a Special VFR flight operation to enter the traffic pattern, land or takeoff an aircraft under Special VFR from an aerodrome located in Class B, Class C, Class D or Class E airspace unless—
 - (1) authorised by an ATC clearance;

- (2) the aircraft remains clear of clouds; and
 - (3) the flight visibility is at least 1 statute mile.
- (b) A person shall not conduct a Special VFR flight operation in an aircraft between sunset and sunrise unless the—
 - (1) the PIC and co-pilot are current and qualified for IFR operations; and
 - (2) the aircraft is qualified to be operated for IFR flight.

8.8.3.4 VFR CRUISING ALTITUDES

- (a) A person operating an aircraft in level cruising flight under VFR at altitudes above 900 m (3,000 ft) from the ground or water, shall maintain—
 - (1) for magnetic courses from zero degrees to 179 degrees, any odd thousand MSL altitude or flight level plus 500 feet (such as 3,500, 5,500 or FL 215);
 - (2) for magnetic courses from 180 degrees to 359 degrees, any even thousand MSL altitude or flight level plus 500 feet (such as 4,500, 6,500 or FL 225).

Note: Paragraphs (1) and (2) do not apply when otherwise authorised by ATC, when operating in a holding pattern, or during manoeuvring in turns.

Implementing Standard: See IS [8.8.3.4](#) for tables of cruising levels.

8.8.3.5 ATC CLEARANCES FOR VFR FLIGHTS

- (a) A pilot of a VFR flight shall obtain and comply with ATC clearances and maintain a listening watch before and during operations—
 - (1) within Classes B, C and D airspace;
 - (2) as part of aerodrome traffic at controlled aerodromes; and
 - (3) under Special VFR.

8.8.3.6 VFR FLIGHTS REQUIRING ATC AUTHORISATION

- (a) Unless authorised by the appropriate ATC authority, a pilot shall not operate in VFR flight—
 - (1) above FL 200; or
 - (2) at transonic and supersonic speeds.

Note: ATC authorisation for VFR flights may not be granted in areas where a vertical separation minimum of only 300m (1,000 ft) applied above FL 290.

8.8.3.7 WEATHER DETERIORATION BELOW VMC

- (a) A pilot of a VFR flight operated as a controlled flight shall, when he or she finds that it is not practical or possible to maintain flight in VMC in accordance with the ATC flight plan—
 - (1) request an amended clearance enabling the aircraft to continue in VMC to its destination or to an alternative aerodrome, or to leave the airspace within which an ATC clearance is required;
 - (2) if no clearance can be obtained, continue to operate in VMC and notify the appropriate ATC facility of the action being taken either to leave the airspace concerned or to land at the nearest suitable aerodrome;
 - (3) operating within a control zone, request authorisation to operate as a special VFR flight; or
 - (4) request clearance to operate in IFR, if currently rated for IFR operations.

8.8.3.8 CHANGING FROM VFR TO IFR

- (a) A pilot operating in VFR who wishes to change to IFR shall—
 - (1) if a flight plan was submitted, communicate the necessary changes to be effected to its current flight plan; or
 - (2) submit a flight plan to the appropriate ATC facility and obtain a clearance prior to proceeding IFR when in controlled airspace.

8.8.3.9 TWO-WAY RADIO COMMUNICATION FAILURE IN VFR

- (a) COMMUNICATIONS FAILURE – GENERAL.
 - (1) In the event of a communications failure, the pilot shall attempt to establish communications with the appropriate ATC unit using all other available means; and
 - (2) In addition, the pilot shall, when forming part of the aerodrome traffic at a controlled aerodrome, keep a watch for such instructions as may be issued by visual signals.
- (b) If radio failure occurs in VMC while under ATC control, or if VMC is encountered after the failure, a pilot shall—
 - (1) continue the flight under VFR;
 - (2) land at the nearest suitable aerodrome; and
 - (3) report arrival to ATC by the most expeditious means possible.

8.8.4 Instrument Flight Rules**8.8.4.1 IFR IN CONTROLLED AIRSPACE**

- (a) A person shall not operate an aircraft in controlled airspace under IFR unless the person has—
 - (1) filed an IFR flight plan; and
 - (2) received an appropriate ATC clearance.
- (b) All aircraft operated in accordance with instrument flight procedures shall comply with IFR and the aerodrome Instrument Approach Procedures approved by the State where the operation will take place.

8.8.4.2 IFR FLIGHTS OUTSIDE CONTROLLED AIRSPACE

- (a) A PIC of an IFR flight operating outside controlled airspace but within or into areas, or along routes, designated by the appropriate ATC authority, shall maintain air ground voice communications on the appropriate communications channel and shall establish two-way communication, as necessary, with the ATC facility providing flight information service.
- (b) A PIC of an IFR flight operating outside controlled airspace for which the appropriate ATC authority requires a flight plan, shall maintain

air ground voice communications on the appropriate communications channel and shall establish two-way communication, as necessary, with the ATC facility providing flight information service and shall report position as specified for controlled flights.

- (c) All aircraft operated in accordance with instrument flight procedures shall comply with IFR and the aerodrome Instrument Approach Procedures approved by the State where the operation will take place.

8.8.4.3 IFR TAKEOFF MINIMA FOR COMMERCIAL AIR TRANSPORT

- (a) Unless otherwise authorised by the Authority, a pilot operating an aircraft in commercial air transport operations shall not accept a clearance to take off from a civil aerodrome under IFR unless weather conditions are at or above—
 - (1) for aircraft, other than helicopters, having two engines or less — 1 500 m (1 SM) visibility;
 - (2) for aircraft having more than two engines — 800 m (1/2 SM) visibility;
 - (3) for helicopters — 800 m (1/2 SM) visibility.

8.8.4.4 MINIMUM ALTITUDES FOR IFR OPERATIONS

- (a) OPERATION OF AIRCRAFT AT MINIMUM ALTITUDES. Except when necessary for takeoff or landing, no person shall operate an aircraft under IFR below—
 - (1) the applicable minimum altitudes prescribed by the authorities having jurisdiction over the airspace being overflown; or
 - (2) if no applicable minimum altitude is prescribed by the authorities—
 - (i) over high terrain or in mountainous areas, at a level which is at least 600m (2,000 ft) above the highest obstacle located within 5 statute miles of the estimated position of the aircraft; and
 - (ii) elsewhere than as specified in Paragraph 8.8.4.8(a) of this subsection, at a level which is at least 300m (1,000

ft) above the highest obstacle located within 5 statute miles of the estimated position of the aircraft.

- (3) if an MEA and a MOCA are prescribed for a particular route or route segment, a person may operate an aircraft below the MEA down to, but not below, the MOCA, when within 22 nautical miles of the VOR concerned.

(b) CLIMB FOR OBSTACLE CLEARANCE.

- (1) if unable to communicate with ATC, each pilot shall climb to a higher minimum IFR altitude immediately after passing the point beyond which that minimum altitude applies;
- (2) if ground obstructions intervene, each pilot shall climb to a point beyond which that higher minimum altitude applies, at or above the applicable Minimum Crossing Altitude.

8.8.4.5 MINIMUM ALTITUDES FOR USE OF AN AUTOPILOT

- (a) For en route operations, a person shall not use an autopilot at an altitude above the terrain that is less than 500 feet.

Note: If the maximum altitude loss specified in the AFM for a malfunction under cruise conditions when multiplied by two is more than 500 feet, then it becomes the controlling minimum altitude for use of the autopilot.

- (b) For instrument approach operations, a person shall not use an autopilot at an altitude above the terrain that is less than 50 feet below the MDA or DH.

Note: If the maximum altitude loss specified in the AFM for a malfunction under approach conditions when multiplied by two is more than 50 feet, then it becomes the controlling minimum altitude for use of the autopilot.

- (c) For Category III approaches, the Authority shall approve the use of a flight control guidance system with automatic capability to touchdown.

8.8.4.6 IFR CRUISING ALTITUDE OR FLIGHT LEVEL IN CONTROLLED AIRSPACE

- (a) A person operating an aircraft under IFR in level cruising flight in controlled airspace shall maintain the altitude or flight level assigned that aircraft by ATC.
- (b) A person operating an aircraft in level cruising flight under IFR, or if authorised to employ cruise climb techniques between two levels, shall maintain an FL appropriate to the track as specified in the tables of cruising levels prescribed in IS 8.8.3.4 or according to a modified table of cruising levels when so prescribed in accordance with IS 8.8.3.4 for flight above FL 410.
- (c) Paragraph (b) above does not apply when otherwise authorised by ATC or specified by the appropriate ATC authority in AIPs.

Note: The requirements for VFR cruising altitudes are in Subsection 8.8.3.4 of this part.

8.8.4.7 IFR CRUISING ALTITUDE OR FLIGHT LEVEL IN UNCONTROLLED AIRSPACE

- (a) A person operating an aircraft in level cruising flight under IMC at altitudes above 900 m (3,000 ft) from the ground or water, shall maintain—
 - (1) for magnetic courses from zero degrees to 179 degrees, any odd thousand MSL altitude or flight level, such as 5,000, 7,000, or FL 210; and
 - (2) for magnetic courses from 180 degrees to 359 degrees, any even thousand MSL altitude or flight level, such as 4,000, 6,000 or FL 220.
- (b) A person may deviate from the cruising altitudes specified in Paragraph 8.8.4.7(a) only when—
 - (1) authorised by ATC;
 - (2) operating in a holding pattern; or
 - (3) manoeuvring in turns.

Implementing Standard: See IS 8.8.3.4 for tables of cruising levels.

8.8.4.8 IFR RADIO COMMUNICATIONS

- (a) A PIC of an aircraft operated under IFR in controlled airspace shall have a continuous watch maintained on the appropriate frequency and shall report by radio as soon as possible—
 - (1) the time and altitude of passing each designated reporting point, or the reporting points specified by ATC, except that while the aircraft is under radar control, only the passing of those reporting points specifically requested by ATC need be reported;
 - (2) any unforecast weather conditions encountered; and
 - (3) any other information relating to the safety of flight, such as hazardous weather or abnormal radio station indications.

8.8.4.9 OPERATION UNDER IFR IN CONTROLLED AIRSPACE: MALFUNCTION REPORTS

- (a) A PIC of an aircraft operated in controlled airspace under IFR shall report as soon as practical to ATC any malfunctions of navigational, approach or communication equipment occurring in flight.
- (b) In each report specified in Paragraph 8.8.4.9(a), the PIC shall include the—
 - (1) aircraft identification;
 - (2) equipment affected;
 - (3) degree to which the capability of the pilot to operate under IFR in the ATC system is impaired; and
 - (4) nature and extent of assistance desired from ATC.

8.8.4.10 CONTINUATION OF IFR FLIGHT TOWARD A DESTINATION

- (a) A pilot shall not continue an IFR flight toward an aerodrome or heliport of intended landing, unless the latest available meteorological information indicates that the conditions at that aerodrome, or at least one destination alternate aerodrome will, at the expected time of arrival, be at or above the specified instrument approach minima.

8.8.4.11 INSTRUMENT APPROACH PROCEDURES AND IFR LANDING MINIMA

- (a) A person shall not make an instrument approach at an aerodrome except in accordance with IFR weather minima and IAPs established for that aerodrome as set forth by the Authority.
- (b) An AOC holder shall not make an instrument approach at an aerodrome except as set forth in the AOC holder's operations specifications.
- (c) For instrument approach and landing operations, heliport operating minima below 800m visibility should not be authorized unless RVR information or an accurate measurement or observation of visibility is provided.

8.8.4.12 COMMENCING AN INSTRUMENT APPROACH

- (a) A pilot shall not continue an approach past the final approach fix, or where a final approach fix is not used, begin the final approach segment of an instrument approach procedure, at any aerodrome unless—
 - (1) a source approved by the Authority issues a weather report for that aerodrome;
 - (2) the latest weather report for that aerodrome reports the visibility or controlling RVR to be equal to or more than the visibility minimums prescribed for that procedure; and
 - (3) The given available runway surface condition information
 - (4) and the aeroplane performance information indicates that a safe landing can be made.
- (b) If, after passing the outer marker fix in case of precision approach, or after descending below 300 m (1,000 ft) above the aerodrome in case of non-precision approach, the reported visibility or controlling RVR falls below the specified minimum, the approach may be continued to DA/H or MDA/H. In any case, an aircraft shall not continue its approach-to-land beyond a point at which the limits of the aerodrome operating minima would be infringed.

Note 1: For the purpose of this subsection, the final approach segment begins at the final approach fix or facility prescribed in the instrument approach procedure. When a final approach fix is not prescribed for a procedure that includes a procedure turn, the final

approach segment begins at the point where the procedure turn is completed and the aircraft is established inbound toward the aerodrome on the final approach course within the distance prescribed in the procedure.

Note 2: Controlling RVR means the reported values of one or more RVR reporting locations (touchdown, mid-point and stop-end) used to determine whether operating minima are or are not met. Where RVR is used, the controlling RVR is the touchdown RVR, unless otherwise specified by State criteria.

8.8.4.13 INSTRUMENT APPROACHES TO CIVIL AERODROMES

- (a) A person operating a civil aircraft shall use a standard instrument approach procedure prescribed by the authorities having jurisdiction over the aerodrome, unless otherwise authorised by the Authority.
- (b) Authorised DH or MDA. For the purpose of this section, when the approach procedure being used provides for and requires the use of a DH or MDA, the authorised DH or MDA is the highest of the following—
 - (1) the DH or MDA prescribed by the approach procedure;
 - (2) the DH or MDA prescribed for the PIC;
 - (3) the DH or MDA for which the aircraft is equipped.

8.8.4.14 OPERATION BELOW DH OR MDA

- (a) Where a DH or MDA is applicable, a pilot shall not operate a civil aircraft at any aerodrome or heliport below the authorised MDA, or continue an approach below the authorised DH unless—
 - (1) the aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal manoeuvres;
 - (2) for commercial air transport operations, a descent rate will allow touchdown to occur within the touchdown zone of the runway of intended landing;
 - (3) the reported flight visibility is not less than the visibility prescribed in the standard instrument approach being used or the controlling RVR is above the specified minimum; and

- (4) at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot—
 - (i) the approach light system, except that the pilot may not descend below 100 feet above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable.
 - (ii) the threshold;
 - (iii) the threshold markings;
 - (iv) threshold lights;
 - (v) the runway end identifier lights;
 - (vi) the visual approach slope indicator;
 - (vii) the touchdown zone or touchdown zone markings;
 - (viii) the touchdown zone lights;
 - (ix) the runway or runway markings; or
 - (x) the runway lights.

Note 1: Controlling RVR means the reported values of one or more RVR reporting locations (touchdown, mid-point and stop-end) used to determine whether operating minima are or are not met. Where RVR is used, the controlling RVR is the touchdown RVR, unless otherwise specified by Grenada criteria.

Note 2: These visual references do not apply to Category II and III operations. The required visual references under Category II and III operations are provided in the AOC holder's operations specifications or a special authorisation prescribed by the Authority.

8.8.4.15 LANDING DURING INSTRUMENT METEOROLOGICAL CONDITIONS

- (a) A pilot operating a civil aircraft shall not land that aircraft when the flight visibility is less than the visibility prescribed in the standard instrument approach procedure being used.

8.8.4.16 EXECUTION OF A MISSED APPROACH PROCEDURE

- (a) A pilot operating a civil aircraft shall immediately execute an appropriate missed approach procedure when either of the following conditions exist—
 - (1) whenever the required visual reference criteria is not met in the following situations—
 - (2) when the aircraft is being operated below MDA; or
 - (3) upon arrival at the missed approach point, including a DH where a DH is specified and its use is required, and at any time after that until touchdown.
 - (4) whenever an identifiable part of the aerodrome is not distinctly visible to the pilot during a circling manoeuvre at or above MDA, unless the inability to see an identifiable part of the aerodrome results only from a normal bank of the aircraft during the circling approach.

8.8.4.17 CHANGE FROM IFR FLIGHT TO VFR FLIGHT

- (a) A pilot electing to change from IFR flight to VFR flight shall notify the appropriate ATC facility specifically that the IFR flight is cancelled and then communicate the changes to be made to his or her current flight plan.
- (b) When a pilot operating under IFR encounters VMC, he or she shall not cancel the IFR flight unless it is anticipated, and intended, that the flight will be continued for a reasonable period of time in uninterrupted VMC.

8.8.4.18 TWO-WAY RADIO COMMUNICATIONS FAILURE IN IFR

- (a) COMMUNICATIONS FAILURE: GENERAL.
 - (1) In the event of communications failure, the pilot shall attempt to establish communications with the appropriate ATC unit using all other available means.
 - (2) In addition, the pilot shall, when forming part of the aerodrome traffic at a controlled aerodrome, shall keep a watch for such instructions as may be issued by visual signals.

- (b) If radio failure occurs in VMC while under ATC control, or if VMC conditions are encountered after the failure, each pilot shall—
 - (1) Continue the flight under VMC;
 - (2) Land at the nearest suitable aerodrome; and
 - (3) Report arrival to the appropriate ATC services unit by the most expeditious means possible.
- (c) If two-way radio communication failure occurs in IMC, or when the pilot of an IFR flight considers it inadvisable to continue the flight in VMC, the PIC shall—
 - (1) Unless otherwise prescribed on the basis of regional air navigation agreement, in airspace where radar is not used in the provision of ATC, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 20 minutes following the aircraft's failure to report its position over a compulsory reporting point and thereafter adjust level and speed in accordance with the filed flight plan;
 - (2) In airspace where radar is used in the provision of ATC, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 7 minutes following—
 - (i) The time the last assigned level or minimum flight altitude is reached; or
 - (ii) The time the transponder is set to Code 7600; or
 - (iii) The aircraft's failure to report its position over a compulsory reporting point; whichever is later, and thereafter adjust level and speed in accordance with the filed flight plan.
 - (3) When being radar vectored or having been directed by ATC to proceed offset using RNAV without a specified limit, rejoin the current flight plan route no later than the next significant point, taking into consideration the applicable minimum flight altitude;
 - (4) Proceed according to the current flight plan route to the appropriate designated navigation aid or fix serving the destination aerodrome and, when required to ensure

compliance with (5) below, hold over this aid or fix until commencement of descent;

- (5) Commence descent from the navigation aid or fix specified in (4) at, or as close as possible to, the expected approach time last received and acknowledged; or, if no expected approach time has been received and acknowledged, at, or as close as possible to the ETA resulting from the current flight plan;
- (6) Complete a normal IAP as specified for the designated navigation aid or fix; and
- (7) Land, if possible, within 30 minutes after the ETA specified in (5) or the last acknowledged expected approach time, whichever is later.

8.8.4.19 THRESHOLD CROSSING HEIGHT FOR 3D INSTRUMENT APPROACH OPERATIONS

- (a) An operator shall establish operational procedures designed to ensue that an aeroplane being used to conduct 3D instrument approach operations crosses the threshold by a safe margin with the aeroplane in the landing configuration and attitude.

8.9 PASSENGERS AND PASSENGER HANDLING

8.9.1 All Passenger Carrying Operations

8.9.1.1 UNACCEPTABLE CONDUCT

- (a) A person on board an aircraft shall not interfere with a crew member in the performance of his or her duties.
- (b) A passenger shall fasten his or her seat belt and keep it fastened while the seat belt sign is lighted.
- (c) A person on board an aircraft shall not recklessly or negligently act or omit to act in such a manner as to endanger the aircraft or persons and property therein.
- (d) A person shall not secrete himself or herself or secrete any cargo on board an aircraft.
- (e) A person shall not smoke on an aircraft.
- (f) A person shall not smoke in any aircraft lavatory.

- (g) A person shall not tamper with, disable or destroy any smoke detector installed in any aircraft lavatory.

8.9.1.2 REFUELLING WITH PASSENGERS ON BOARD

- (a) A PIC shall not allow an aeroplane to be refuelled when passengers are embarking, on board or disembarking unless—
 - (1) the aeroplane is manned by qualified personnel ready to initiate and direct an evacuation by the most practical, safe and expeditious means available;
 - (2) two-way communication is maintained between the qualified personnel in the aeroplane and the ground crew supervising the refuelling;
 - (3) the aeroplane illuminated 'NO SMOKING' signs should be on together with sufficient interior lighting to enable emergency exits to be identified. Such lighting should remain on until fuelling operations have been completed; and
 - (4) the 'Fasten Seat Belts' signs should be switched off and passengers should be briefed to unfasten their seat belts.
 - (5) An operator shall establish procedures and specify conditions under which refuelling an aeroplane with passengers on board, may be carried out.
- (b) A PIC shall not allow a helicopter to be refuelled when—
 - (1) passengers are embarking, or disembarking; or
 - (2) when oxygen is being replenished.
- (c) A PIC when refuelling a helicopter with passengers on board, rotors stopped or turning, shall ensure that the helicopter is properly attended by sufficient qualified personnel, ready to initiate and direct an evacuation of the helicopter by the most practical, safe and expeditious means available. In order to achieve this—
 - (1) the flight crew shall ensure that the passengers are briefed on what actions to take if an incident occurs during refuelling;
 - (2) a constant two-way communication shall be maintained by the helicopter's intercommunication system or other suitable

means between the ground crew supervising the refuelling and the qualified personnel on board the helicopter; and

- (3) during an emergency shutdown procedure, the flight crew shall ensure that any personnel or passengers outside the helicopter are clear of the rotor area.
- (c) An operator shall establish procedures and specify conditions under which refuelling a helicopter with passengers on board, rotors stopped or turning may be carried out.
- (d) An operator shall ensure the operational procedures required in paragraph (c), specify at least following precautions are taken—
 - (1) doors on the refuelling side of the helicopter remain closed where possible, unless these are the only suitable exits;
 - (2) doors on the non-refuelling side of the helicopter remain open, weather permitting, unless otherwise specified by the RFM;
 - (3) fire-fighting facilities of the appropriate scale be positioned so as to be immediately available in the event of a fire;
 - (4) if the presence of fuel vapour is detected inside the helicopter, or any other hazard arises during refuelling, fuelling be stopped immediately;
 - (5) the ground or deck area beneath the exits intended for emergency evacuation be kept clear;
 - (6) seat belts should be unfastened to facilitate rapid egress; and
 - (7) with rotors turning, only ongoing passengers should remain on board.
- (e) A PIC shall not refuel a helicopter with AVGAS (aviation gasoline) or wide-cut type fuel or a mixture of these types of fuel when passengers are on board.
- (f) A PIC shall not defuel a helicopter at any time when—
 - (1) passengers remain on board; or
 - (2) passengers are embarking or disembarking; or
 - (3) oxygen is being replenished.

8.9.1.3 PASSENGER SEATS, SAFETY BELTS, AND SHOULDER HARNESSES

- (a) A PIC shall ensure that a person on onboard an aircraft occupies an approved seat or berth with their own individual safety belt and shoulder harness (if installed) properly secured about them during takeoff and landing.
- (b) A passenger shall have his or her seatbelt securely fastened at any other time the PIC determines it is necessary for safety.
- (c) A safety belt provided for the occupant of a seat shall not be used during takeoff and landing by more than one person who has reached his or her second birthday.

Note: When Cabin Crew are required in a commercial air transport operation, the PIC may delegate this responsibility, but shall ascertain that the proper briefing has been conducted prior to takeoff.

8.9.1.4 PASSENGER BRIEFING

- (a) A PIC shall ensure that crew members and passengers are made familiar, by means of an oral briefing or by other means, with the location and use of the following items, if appropriate—
 - (1) seat belts;
 - (2) emergency exits;
 - (3) life jackets;
 - (4) oxygen dispensing equipment; and
 - (5) other emergency equipment provided for individual use, including passenger emergency briefing cards.
- (b) A PIC shall ensure that all persons on board the aircraft—
 - (1) are aware of the locations and general manner of use of the principal emergency equipment carried for collective use;
 - (2) are briefed about all subjects for the specific operations conducted by a commercial air transport operation and are included in the pertinent OM, as approved by the Authority.

- (3) For helicopters - are briefed on the actions to take if an incident occurs when a helicopter is refuelled or replenished with oxygen when passengers are onboard.
- (c) During take-off and landing, and whenever by reason of turbulence or any emergency occurring during flight the precaution is considered necessary, cabin crew members shall ensure that all passengers aboard the aircraft fasten their seat belts so as to be secured in their seats.
- (d) For helicopter offshore operations, the PIC shall ensure that each occupant of the aircraft wear—
 - (1) A life jacket or integrated survival suit, when operating beyond autorotational distance from land;
 - (2) A survival suit, when the sea temperature is less than 10°C or when the estimated rescue time exceeds the calculated survival time.

Note: When Cabin Crew are required in a commercial air transport operation, the PIC may delegate this responsibility, but shall ascertain that the proper briefing has been conducted prior to takeoff.

8.9.1.5 IN-FLIGHT EMERGENCY INSTRUCTION

- (a) A PIC shall, in an emergency in-flight, ensure that all persons on board the aircraft are instructed in such emergency action as may be appropriate to the circumstances.
- (b) When Cabin Crew are required in a commercial air transport operation, the PIC may delegate this responsibility, but shall ascertain that the proper briefing has been conducted.

8.9.1.6 PASSENGER OXYGEN: MINIMUM SUPPLY AND USE

- (a) A PIC shall ensure that breathing oxygen and masks are available to all passengers in sufficient quantities for all flights at such altitudes where a lack of oxygen might harmfully effect passengers.
- (b) A PIC shall ensure that the minimum supply of oxygen prescribed by the Authority is on board the aircraft.

Note: The requirements for oxygen storage and dispensing apparatus are prescribed in Part 7.

- (c) A PIC shall require all passengers to use oxygen continuously at cabin pressure altitudes above 13,000 feet.

8.9.1.7 ALCOHOL OR DRUGS

- (a) A person shall not permit the boarding or serving of any person who appears to be intoxicated or who demonstrates, by manner or physical indications, that that person is under the influence of drugs (except a medical patient under proper care).

8.9.2 Commercial Air Transport Passenger Carrying Operations

8.9.2.1 PASSENGER COMPLIANCE WITH INSTRUCTIONS

- (a) A passenger on a commercial air transport flight shall comply with instructions given by a crew member in compliance with this section.

8.9.2.2 DENIAL OF TRANSPORTATION

- (a) An AOC holder may refuse to transport a passenger who—
 - (1) refuses to comply with the instructions regarding exit seating restrictions prescribed by the Authority; or
 - (2) has a handicap that can be physically accommodated only by an exit row seat.

8.9.2.3 CARRIAGE OF PERSONS WITHOUT COMPLIANCE WITH THESE PASSENGER-CARRYING REQUIREMENTS

- (a) The passenger-carrying requirements of Paragraph 8.9.2.3(b) of this subsection shall not apply when carrying—
 - (1) a crew member not required for the flight;
 - (2) a representative of the Authority on official duty;
 - (3) a person necessary to the safety or security of cargo or animals; or
 - (4) any person authorised by the AOC holder's Operation Manual procedures, as approved by the Authority.

- (b) A person shall not be carried on an aircraft without compliance with the passenger carrying requirements unless—
 - (1) there is an approved seat with an approved seat belt for that person;
 - (2) that seat is located so that the occupant is not in any position to interfere with the flight crew members performing their duties;
 - (3) there is unobstructed access from their seat to the flight deck or a regular or emergency exit;
 - (4) there is a means for notifying that person when smoking is prohibited and when seat belts shall be fastened; and
 - (5) that person has been orally briefed by a crew member on the use of emergency equipment and exits.

8.9.2.4 CABIN CREW AT DUTY STATIONS

- (a) Cabin Crew shall, during taxi, take-off and landing and whenever the PIC so directs, remain at their duty stations with their safety belts and shoulder harness fastened except to perform duties related to the safety of the aircraft and its occupants.
- (b) Cabin Crew shall, during takeoff or landing, be located as near as practicable to required floor level exits and shall be uniformly distributed throughout the aircraft to provide the most effective egress of passengers in event of an emergency evacuation.
- (c) When passengers are on board a parked aircraft, Cabin Crew (or another person qualified in emergency evacuation procedures for the aircraft) shall be placed in the following manner—
 - (1) if only one qualified person is required, that person shall be located in accordance with the AOC holder's Operations Manual procedures;
 - (2) if more than one qualified person is required, those persons shall be spaced throughout the cabin to provide the most effective assistance for the evacuation in case of an emergency.

8.9.2.5 EVACUATION CAPABILITY

- (a) A PIC, SCA and any other person assigned by the AOC holder shall ensure that, when passengers are on board the aircraft prior to movement on the surface, at least one floor-level exit provides for egress of passengers through normal or emergency means.

8.9.2.6 ARMING OF AUTOMATIC EMERGENCY EXITS

- (a) A person shall not cause an aircraft carrying passengers to be moved on the surface, takeoff or land unless each automatically deployable emergency evacuation assisting means installed on the aircraft is ready for evacuation.

8.9.2.7 ACCESSIBILITY OF EMERGENCY EXITS AND EQUIPMENT

- (a) A person shall not allow carry-on baggage or other items to block access to the emergency exits when the aircraft is moving on the surface, during takeoff or landing, or while passengers remain on board.

8.9.2.8 STOPS WHERE PASSENGERS BOARD, DEPLANE OR REMAIN ON BOARD

- (a) At stops where passengers board, deplane or remain on board the aircraft, the PIC, the SCA, or both shall ensure that—
 - (1) all engines are shut down, unless a qualified flight crew member remains at his or her duty station and (on propeller driven aircraft) propeller rotation is stopped;
 - (2) at least one floor level exit remains open to provide for the deplaning of passengers;
 - (3) there is at least one person immediately available who is qualified in the emergency evacuation of the aircraft and who has been identified to the passengers on board as responsible for the passenger safety;
 - (4) if only one qualified person is required, that person shall be located in accordance with the AOC holder's Operations Manual procedures; and
 - (5) if more than one qualified person is required, those persons shall be spaced throughout the cabin to provide the most

effective assistance for the evacuation in case of an emergency.

- (6) If refuelling with passengers on board, the PIC or a designated company representative shall ensure that the AOC holder's Operations Manual procedures are followed.

8.9.2.9 CARRIAGE OF PERSONS WITH REDUCED MOBILITY

- (a) A person shall not allow a person of reduced mobility to occupy seats where their presence could—
 - (1) impede the crew in their duties;
 - (2) obstruct access to emergency equipment; or
 - (3) impede the emergency evacuation of the aircraft.

8.9.2.10 EXIT ROW SEATING

- (a) A PIC or SCA shall not allow a passenger to sit in an emergency exit row if the PIC or SCA determine that it is likely that the passenger would be unable to understand and perform the functions necessary to open an exit and to exit rapidly.

Implement Standard: See IS [8.9.2.10](#) for additional requirements pertaining to exit row seating.

8.9.2.11 PROHIBITION AGAINST CARRIAGE OF WEAPONS

- (a) A person shall not, while on board an aircraft being operated in commercial air transport, carry on or about their person a deadly or dangerous weapon, either concealed or unconcealed. An AOC holder may permit a person to transport a weapon, in accordance with the AOC holder's approved security programme—
 - (1) if the weapon is unloaded; and
 - (2) both the weapon and ammunition are securely stowed in a place inaccessible to any person during the flight.
- (b) Officials or employees of the State, or crew members who are authorised to carry weapons on board the aircraft in domestic flights, shall do so in accordance with the AOC holders approved security programme. The PIC shall be notified by the AOC as to the number of armed persons and the location of their seats.

- (c) The persons identified in item (b) above may not carry weapons aboard an international flight unless there is prior agreement between Grenada and all States in which the operation will be either conducted or overflown.

8.9.2.12 OXYGEN FOR MEDICAL USE BY PASSENGERS

- (a) An AOC holder may allow a passenger to carry and operate equipment for the storage, generation or dispensing of medical oxygen only as prescribed by the Authority.

Implement Standard: See IS: 8.9.2.12 for specific requirements pertaining to the carriage of oxygen for medical use by passengers.

8.9.2.13 CARRY-ON BAGGAGE

- (a) A person shall not allow the boarding of carry-on baggage unless such baggage can be adequately and securely stowed in accordance with the AOC holder's Operations Manual procedures.
- (b) A person shall not allow aircraft passenger entry doors to be closed in preparation for taxi or pushback unless at least one required crew member has verified that each article of baggage has been properly stowed in overhead racks with approved restraining devices or doors, or in approved locations aft of the bulkhead.
- (c) A person shall not allow carry-on baggage to be stowed in a location that would cause that location to be loaded beyond its maximum placard mass limitation.

Note: The stowage locations shall be capable of restraining the articles in crash impacts severe enough to induce the ultimate inertia forces specified in the emergency landing conditions under which the aircraft was type-certified.

8.9.2.14 CARRIAGE OF CARGO IN PASSENGER COMPARTMENTS

- (a) A person shall not allow the carriage of cargo in the passenger compartment of an aircraft except as prescribed by the Authority.

Implementing Standard: See IS 8.9.2.14 for specific requirements pertaining to carriage of cargo in passenger compartments.

8.9.2.15 PASSENGER INFORMATION SIGNS

- (a) A PIC shall turn on required passenger information signs during any movement on the surface, for each takeoff and each landing, and when otherwise considered to be necessary.

8.9.2.16 REQUIRED PASSENGER BRIEFINGS

- (a) A person shall not commence a takeoff of an aircraft unless the passengers are briefed prior to takeoff in accordance with the AOC holder's Operation Manual procedures on—
 - (1) smoking limitations and prohibitions;
 - (2) emergency exit location and use;
 - (3) use of safety belts;
 - (4) emergency floatation means location and use;
 - (5) placement of seat backs;
 - (6) if flight is above 10,000 feet MSL, the normal and emergency use of oxygen; and
 - (7) the passenger briefing card.
- (b) Immediately before or immediately after turning the seat belt sign off, the PIC or SCA shall ensure that all passengers are briefed to keep their seat belts fastened while seated, even when the seat belt sign is off.
- (c) A PIC and SCA shall, before the takeoff of an aircraft, ensure that all persons of reduced mobility are personally briefed on—
 - (1) the route to the most appropriate exit; and
 - (2) the time to begin moving to the exit in event of an emergency.

8.9.2.17 PASSENGER BRIEFING: EXTENDED OVERWATER OPERATIONS

- (a) A person shall not commence extended overwater operations unless all passengers have been orally briefed on the location and operations of life preservers, liferafts and other flotation means, including a demonstration of the method of donning and inflating a life preserver.

8.9.2.18 PASSENGER SEAT BELTS

- (a) A passenger occupying a seat or berth shall fasten his or her safety belt and keep it fastened while the "Fasten Seat Belt" sign is lighted or, in aircraft not equipped with such a sign, whenever instructed by the PIC.
- (b) A passenger safety belt shall not be used by more than one occupant during takeoff and landing.
- (c) At each unoccupied seat, the safety belt and shoulder harness, if installed, shall be secured so as not to interfere with the other crew members in the performance of their duties or with the rapid egress of occupants in an emergency.

Note 1: A person who has not reached his or her second birthday may be held by an adult who is occupying a seat or berth only when secured by a supplementary loop belt or other restraint device.

Note 2: A berth, such as a multiple lounge or divan seat, may be occupied by two persons provided it is equipped with an approved safety belt for each person and is used during en route flight only.

8.9.2.19 PASSENGER SEAT BACKS

- (a) A PIC or SCA shall not allow the takeoff or landing of an aircraft unless each passenger seat back is in the upright position.

Note: Exceptions may only be made in accordance with procedures in the AOC holder's Operations Manual provided the seat back does not obstruct any passenger's access to the aisle or to any emergency exit.

8.9.2.20 STOWAGE OF FOOD, BEVERAGE AND PASSENGER SERVICE

- (a) A PIC or SCA shall not allow the movement of an aircraft on the surface, takeoff or land—
 - (1) when any food, beverage or tableware furnished by the AOC holder is located at any passenger seat; and
 - (2) unless each food and beverage tray and seat back tray table is in the stowed position.

8.9.2.21 SECURING OF ITEMS OF MASS IN PASSENGER COMPARTMENT

- (a) A person shall not allow the takeoff or landing of an aircraft unless each item of mass in the passenger cabin is properly secured to prevent it from becoming a hazard during taxi, takeoff and landing and during turbulent weather conditions.
- (b) A person shall not allow an aircraft to move on the surface, takeoff or land unless each passenger serving cart is secured in its stowed position.

8.9.2.22 PROHIBITION AGAINST SMOKING IN AN AIRCRAFT

- (a) A person shall not, while on board an aircraft being operated in commercial air transport, be allowed to smoke cigarettes, cigars or pipes.

8.10 CREW MEMBER AND FLIGHT OPERATIONS OFFICER QUALIFICATIONS: COMMERCIAL AIR TRANSPORT**8.10.1.1 PILOT AGE RESTRICTIONS**

- (a) A person shall not act as a pilot of an aircraft engaged in commercial air transport operations if the license holder has attained their 60th birthday, or in the case of operations with more than one pilot, their 65th birthday.
- (b) For aircraft engaged in commercial air transport operations requiring more than one pilot as flight crew members, the AOC holder may use one pilot up to age 65 provided that the other pilot is less than age 60.
- (c) A pilot shall not at any time after he attains the age of 65 years act as a PIC or co-pilot on any aircraft on a flight for the purpose of commercial air transport operations.
- (d) Check airmen who have reached their 65th birthday may continue their check airman functions, but may not serve as or occupy the position of a required pilot flight crew member on an aircraft engaged in commercial air transport operations and shall meet the requirements as prescribed in [8.10.1.39](#) of this part.

8.10.1.2 PIC LICENSE REQUIREMENTS: TURBOJET, TURBOFAN, OR LARGE AIRCRAFT

- (a) A pilot shall not act as PIC of a turbojet, turboprop, or large aircraft in commercial air transportation operations unless he or she holds an ATP licence and a type rating for that aircraft.
- (b) FOR HELICOPTER. A pilot of a helicopter conducting VFR operations only, is not required to hold an instrument rating.

8.10.1.3 PIC LICENSE REQUIREMENTS: NON TURBOJET, OR TURBOFAN SMALL AIRCRAFT

- (a) A pilot shall not act as PIC of a non-turbojet or turboprop small aircraft in commercial air transport during—
 - (1) IFR operations unless he or she holds a commercial pilot licence with appropriate category, class and type ratings for the aircraft operated, and an instrument rating and meets the experience requirements for the operation, or
 - (2) day VFR operations unless he or she holds a commercial pilot licence with appropriate category, class and type ratings for the aircraft operated.

8.10.1.4 PIC AERONAUTICAL EXPERIENCE: SMALL AIRCRAFT

- (a) A pilot shall not act as PIC of a small aircraft in commercial air transport during—
 - (1) IFR operations unless he or she—
 - (i) Holds a CPL with category, class and type rating for the aircraft to be operated and an instrument rating; and
 - (ii) A minimum of 500 hours as a pilot
 - (b) VFR operations unless he or she has logged a minimum of 500 hours of time as a pilot, including at least 100 hours of cross-country flight time including 25 hours of which were at night.

8.10.1.5 CO-PILOT AND CRUISE RELIEF PILOT LICENCE REQUIREMENTS

- (a) A pilot shall not act as Co-pilot of an aircraft in commercial air transport operations unless he or she holds a commercial pilot licence/instrument rating or ATPL with appropriate category, class and type ratings for the aircraft operated.

- (b) A pilot shall not act as a cruise relief pilot in commercial air transport operations unless he or she holds an ATPL with category, and if applicable, class and type ratings, and has completed all training to serve as PIC with the exception of initial operating experience.

8.10.1.6 FE LICENCE REQUIREMENTS

- (a) A person shall not act as the flight engineer of an aircraft unless he or she holds a flight engineer licence with the appropriate class rating.

8.10.1.7 ONE PILOT QUALIFIED TO PERFORM FE FUNCTIONS

- (a) An AOC holder shall ensure that, on all flights requiring a flight engineer, there is assigned at least one other flight crew member qualified to perform the FE duties in the event the FE becomes incapacitated.

8.10.1.8 PERSONS QUALIFIED TO FLIGHT RELEASE

- (a) A person shall not act as a flight operations officer in releasing a scheduled passenger-carrying commercial air transport operation unless the person—
 - (1) Holds a FOO licence or an ATPL; and
 - (2) is currently qualified with the AOC holder for the operation and type of aircraft used. He or she shall demonstrate to the operator the ability to perform the duties as prescribed in [8.12.1.4](#) of this part.

8.10.1.9 COMPANY PROCEDURES INDOCTRINATION

- (a) A person shall not serve nor may any AOC holder use a person as a crew member or flight operations officer/flight dispatcher unless that person has completed the company procedures indoctrination curriculum approved by the Authority, which shall include a complete review of the applicable regulations and operations manual procedures pertinent to the crew member or flight operation officer's duties and responsibilities.
- (b) The AOC holder shall provide a minimum of 40 programmed hours of instruction for company procedures indoctrination training unless a reduction is determined appropriate by the Authority.

Implementing Standard: See IS [8.10.1.9](#) for knowledge areas.

8.10.1.10 INITIAL AND RECURRENT DANGEROUS GOODS TRAINING

- (a) A person shall not serve nor shall an AOC holder use a person as a crew member or flight operations officer unless he or she has completed the appropriate initial dangerous goods curriculum approved by the Authority.
- (b) Recurrent training shall be satisfactorily completed within 24 calendar months. Implementing Standard: See IS [8.10.1.10](#) for specific course curriculum requirements.

8.10.1.11 INITIAL AND RECURRENT SECURITY TRAINING

- (a) A person shall not serve nor may any AOC holder use a person as operational personnel unless he or she has completed the initial security curriculum approved by the Authority.
- (b) Recurrent training shall be satisfactorily completed within 12 calendar months.

Implementing Standards: See IS: 8.10.1.11 for specific course curriculum requirements.

8.10.1.12 INITIAL AND RECURRENT CREW RESOURCE MANAGEMENT TRAINING

- (a) A person shall not serve nor shall an AOC holder use a person as a flight operations officer or crew member unless the person has completed the initial CRM curriculum approved by the Authority.
- (b) Recurrent training shall be satisfactorily completed within 12 calendar months.

Implementing Standard: See IS 8.10.1.12 for specific course curriculum requirements.

8.10.1.13 INITIAL AND RECURRENT EMERGENCY EQUIPMENT DRILLS TRAINING

- (a) A person shall not serve nor shall an AOC holder use a person as a crew member unless that person has completed the appropriate initial emergency equipment curriculum and drills for the crew member position approved by the Authority for the emergency equipment available on the aircraft to be operated.

- (b) Recurrent training shall be satisfactorily completed within 12 calendar months.

Implementing Standard: See IS [8.10.1.13](#) for specific course curriculum requirements.

8.10.1.14 INITIAL AND RECURRENT AIRCRAFT GROUND TRAINING

- (a) A person shall not serve nor may an AOC holder use a person as a crew member or flight operations officer unless he or she has completed the initial ground training approved by the Authority for the aircraft type.

- (1) FOR FLIGHT CREW. Initial aircraft ground training shall include the pertinent portions of the operations manuals relating to aircraft-specific performance, mass and balance, operational policies, systems, limitations, normal, abnormal and emergency procedures on the aircraft type to be used.

Implementation Standard: See IS [8.10.1.14\(1\)](#) for specific course curriculum requirements for flight crew members.

Note: The AOC holder may have separate initial aircraft ground training curricula of varying lengths and subject emphasis which recognise the experience levels of flight crew members approved by the Authority.

- (2) FOR CABIN CREW. Initial aircraft ground training shall include the pertinent portions of the operations manuals relating to aircraft-specific configuration, equipment, normal and emergency procedures for the aircraft types within the fleet.

Implementation Standard: See IS [8.10.1.14\(2\)](#) for specific course curriculum requirements for cabin crew.

- (3) FOR FLIGHT OPERATIONS OFFICERS. Aircraft initial ground training shall include the pertinent portions of the operations manuals relating to aircraft-specific flight preparation procedures, performance, mass and balance, systems, limitations for the aircraft types within the fleet.

Implementation Standard: See IS [8.10.1.14\(3\)](#) for specific course curriculum requirements for flight operations officers.

- (b) Recurrent training shall be satisfactorily completed within 12 calendar months.

8.10.1.15 INITIAL AIRCRAFT FLIGHT TRAINING

- (a) A person shall not serve nor shall an AOC holder use a person as a flight crew member unless he or she has completed the initial flight training approved by the Authority for the aircraft type.
- (b) All initial flight training shall focus on the manoeuvring and safe operation of the aircraft in accordance with AOC holder's normal, abnormal and emergency procedures.
- (c) An AOC holder may have separate initial flight training curricula which recognise the experience levels of flight crew members approved by the Authority.

Implementing Standard: See IS [8.10.1.15](#) for specific flight curriculum requirements.

8.10.1.16 INITIAL SPECIALISED OPERATIONS TRAINING

- (a) A person shall not serve nor shall an AOC holder use a person as a flight crew member unless he or she has completed the appropriate initial specialised operations training curriculum approved by the Authority.
- (b) Specialised operations for which initial training curricula shall be developed shall include—
 - (1) low minimums operations, including low visibility takeoffs and Category II and III operations;
 - (2) extended range operations;
 - (3) specialised navigation;
 - (4) PIC right seat qualification;
 - (5) RVSM; and
 - (6) RNP.

Implementing Standard: See IS [8.10.1.16](#) for specific initial specialised operations training curriculum.

8.10.1.17 AIRCRAFT DIFFERENCES

- (a) A person shall not serve nor shall an AOC holder use a person as a flight operations officer or crew member on an aircraft of a type for which a differences curriculum is included in the AOC holder's approved training program, unless that person has satisfactorily completed that curriculum, with respect to both the crew member position and the particular variant of that aircraft.

Implementing Standard: See IS [8.10.1.17](#) for aircraft differences training pertaining to flight operations officers.

8.10.1.18 USE OF FLIGHT SIMULATION TRAINING DEVICES

- (a) The requirement for flight training in a particular type of aeroplane may be considered fulfilled by the use, to the extent deemed feasible, of an FSTD approved by the Authority. An FSTD that is used for flight crew member qualification shall—
- (1) be specifically approved in writing by the Authority for—
 - (i) the AOC holder;
 - (ii) the type aircraft, including type variations, for which the training, recency or check is being conducted; and shall not be used for any purpose other than that specified in the Authority's approval
 - (iii) the particular manoeuvre, procedure, or crew member function involved;
 - (2) maintain the performance, functional, and other characteristics that are required for approval;
 - (3) be modified to conform with any modification to the aircraft being simulated that results in changes to performance, functional, or other characteristics required for approval;
 - (4) be given a daily functional pre-flight check before use; and
 - (5) have a daily discrepancy log kept by the appropriate instructor or check airman at the end of each training or check flight.

- (b) The simulation device shall have the same technology for the basic flight instruments (attitude indicator, airspeed, altimeter, heading reference) as those of the aircraft used by the operator.
 - (1) Operators that have electronic/glass displays shall use simulators that have electronic/glass displays.
 - (2) Operators that have standard instruments shall use simulators that have standard instruments.

8.10.1.19 INTRODUCTION OF NEW EQUIPMENT OR PROCEDURES

- (a) A person shall not serve nor shall an AOC holder use a person as a flight crew member when that service would require expertise in the use of new equipment or procedures for which a curriculum is included in the AOC holder's approved training program, unless that person has satisfactorily completed that curriculum, with respect to both the crew member position and the particular variant of that aircraft.

8.10.1.20 PILOT PROFICIENCY CHECKS

- (a) A person shall not serve nor shall an AOC holder use a person as a pilot flight crew member unless that person is checked in such a way as to demonstrate his or her competence on each type, or variant of a type, of aircraft. Where the operation may be conducted under instrument flight rules, the operator shall ensure that the pilot demonstrates his or her competence in carrying out normal, abnormal and emergency procedures as prescribed by the Authority. These checks shall be conducted by an authorised representative of the Authority. Such checks shall be performed twice within any period of one year. Any two such checks which are similar and which occur within a period of four consecutive months shall not alone satisfy this requirement..
- (b) A person shall not serve nor shall an AOC holder use a person as a pilot in IFR operations unless the proficiency check in (a) above, is conducted without external visual reference.

Note: FSTDs approved by the State of the Operator may be used for those parts of the checks for which they are specifically approved.

Implementing Standard: See IS [8.10.1.20](#) for specific operation and procedures pertaining to the proficiency checks.

8.10.1.21 RE-ESTABLISHING REGENCY OF EXPERIENCE: FLIGHT CREW**(a) PILOTS—**

- (1) In addition to meeting all applicable training and checking requirements, a required pilot flight crew member who, in the preceding 90 days has not made at least three takeoffs and landings in the type aircraft in which that person is to serve, shall, under the supervision of a check airman, re-establish recency of experience as follows—
 - (i) make at least three takeoffs and landings in the type aircraft in which that person is to serve or in a qualified simulator;
 - (ii) make at least one takeoff with a simulated failure of the most critical powerplant, one landing from the minimum ILS authorised for the AOC holder, and one landing to a full stop.
- (2) When using a simulator to accomplish any of the takeoff and landing training requirements necessary to re-establish recency of experience, a required flight crew member position shall be occupied by an appropriately qualified person and the simulator shall be operated as if in a normal in-flight environment without use of the repositioning features of the simulator.
- (3) A check airman who observes the takeoffs and landings of a pilot flight crew member shall certify that the person being observed is proficient and qualified to perform flight duty in operations and may require any additional manoeuvres that are determined necessary to make this certifying statement.

(b) FLIGHT ENGINEER.

- (1) An FE who in the preceding 6 months has not flown 50 hours flight time with an AOC holder as FE in the appropriate class of aeroplane shall re-establish recency by taking the proficiency check specified in IS [8.10.1.23](#).

8.10.1.22 PAIRING OF LOW EXPERIENCE PILOTS

- (a) If a co-pilot has fewer than 100 hours of flight time in the type aircraft being flown in commercial air transport, and the PIC is not an appropriately qualified check pilot, the PIC shall make all takeoffs and landings in situations designated as critical by the Authority.

- (b) A PIC or a co-pilot shall not conduct any operations for a type aircraft in commercial air transport unless either pilot has at least 75 hours of line operating flight time, either as PIC or co-pilot.
- (c) The Authority may, upon application by the AOC holder, authorise deviations from Paragraph 8.10.1.22(b) of this subsection by an appropriate amendment to the operations specifications in any of the circumstances identified in IS 8.10.1.22.

Implementing Standard: See IS 8.10.1.22 for those situations designated as critical by the Authority and for circumstances authorising a deviation from Paragraph 8.10.1.22(b).

8.10.1.23 FLIGHT ENGINEER PROFICIENCY CHECKS

- (a) A person shall not serve nor shall an AOC holder use a person as a flight engineer on an aeroplane unless he or she has had a proficiency check in accordance with the requirements prescribed by the Authority. Such checks shall be performed twice within any period of one year. Any two such checks which are similar and which occur within a period of four consecutive months shall not alone satisfy this requirement.

Implementing Standard: See IS [8.10.1.23](#) for specific procedures used in FE proficiency checks.

8.10.1.24 COMPETENCE CHECKS: CABIN CREW

- (a) A person shall not serve nor shall an AOC holder use a person as a Cabin Crew unless, since the beginning of the 12th calendar month before that service, that person has passed the competency check prescribed by the Authority performing the emergency duties appropriate to that person's assignment.

Implementing Standard: See IS [8.10.1.24](#) for specific procedures used in Cabin Crew competence checks.

8.10.1.25 COMPETENCE CHECKS: FLIGHT OPERATIONS OFFICERS

- (a) A person shall not serve nor shall an AOC holder use a person as a flight operations officer unless, since the beginning of the 12th calendar month before that service, that person has passed the competency check, prescribed by the Authority, performing the flight preparation and subsequent duties appropriate to that person's assignment.

Implementing Standard: See IS [8.10.1.25](#) for specific procedures used in flight operation officer competence checks.

8.10.1.26 SUPERVISED LINE FLYING: PILOTS

- (a) Unless otherwise determined by the Authority—
 - (1) A pilot initially qualifying as a PIC shall complete a minimum of 10 flights performing the duties of a PIC under the supervision of a check airman.
 - (2) A PIC transitioning to a new aircraft type shall complete a minimum of 5 flights performing the duties of a PIC under the supervision of a check airman.
 - (3) A pilot qualifying for duties other than PIC shall complete a minimum of 5 flights performing those duties under the supervision of a check airman.
 - (4) During the time that a qualifying PIC is acquiring operating experience, a check pilot who is also serving as the PIC shall occupy a pilot station.
 - (5) In the case of a transitioning PIC, the check pilot serving as PIC may occupy the observer's seat if the transitioning pilot has made at least two takeoffs and landings in the type of aircraft used, and has satisfactorily demonstrated to the check pilot that he is qualified to perform the duties of a PIC for that type of aircraft.

8.10.1.27 SUPERVISED LINE FLYING: FLIGHT ENGINEERS

- (a) A person qualifying as a flight engineer for an aircraft type shall perform those functions for a minimum of five flights under the supervision of a check airman or a qualified flight engineer approved by the Authority.

8.10.1.28 SUPERVISED LINE EXPERIENCE: CABIN CREW

- (a) A person qualifying as a Cabin Crew shall perform those functions for a minimum of two flights that shall include at least 5 hours flown, under the supervision of a senior Cabin Crew.

Note: While qualifying, this person may not be a required crew member.

8.10.1.29 LINE OBSERVATIONS: FLIGHT OPERATIONS OFFICERS

- (a) A person shall not serve nor shall an AOC holder use a person as a flight operations officer unless, since the beginning of the 12th calendar month before that service, that person has observed, on the flight deck, the conduct of two complete flights, comprising at least 5 total hours, over routes representative of those for which that person is assigned duties.

Note: For the purpose of the qualification flight, the flight operations officer/flight dispatcher must be able to monitor the flight crew intercommunication system and radio communications, and be able to observe the actions of the flight crew.

8.10.1.30 ROUTE AND AREA CHECKS: PILOT QUALIFICATION

- (a) A person shall not serve nor shall an AOC holder use a person as a pilot unless, within the preceding 12 calendar months, that person has passed a route check in which he or she satisfactorily performed their assigned duties in one of the types of aircraft they are to fly.

Note: That portion of the demonstration relating to arrival, departure, holding and instrument approach procedures may be accomplished in an appropriate training device which is adequate for this purpose.

- (b) A person shall not perform any PIC duties over a designated special operational area that requires a special navigation system or procedures or in EDTO operations unless his or her competency with the system and procedures has been demonstrated to the AOC holder within the past 12 calendar months.
- (c) Each PIC shall demonstrate operational competency by navigation over the route and area to be flown and the aerodromes to be used as PIC under the supervision of a check person and, on a continuing basis, by flights performing PIC duties. This, at a minimum, shall include a PIC demonstration of knowledge in the following—

- (1) The terrain and minimum safe altitudes.
- (2) The seasonal meteorological conditions.
- (3) The meteorological, communication and air traffic facilities, services and procedures.
- (4) The search and rescue procedures.

- (5) The navigational facilities and procedures, including any LORAN procedures, associated with the route along which the flight is to take place.
- (6) Procedures applicable to—
 - (i) Flight paths over heavily populated areas or high air traffic density;
 - (ii) Obstructions;
 - (iii) Physical layout;
 - (iv) Lighting, approach aids;
 - (v) Arrival, departure, holding and IAPs; and
 - (vi) Applicable operating minima.
- (d) NOTAMs.
- (e) The validity of the route and area checks shall be 12 calendar months in addition to the remainder of the month of issue.

8.10.1.31 PIC LOW MINIMA AUTHORISATION

- (a) Until a PIC has 15 flights performing PIC duties in the aircraft type (which included 5 approaches to landing using Category I or II procedures), he or she shall not plan for or initiate an instrument approach when the ceiling is less than 300 feet and the visibility less than 1 statute mile.
- (b) Until a PIC has 20 flights performing PIC duties in the aircraft type (which included 5 approach and landing using Category III procedures), he or she shall not plan for or initiate an approach when the ceiling is less than 100 feet or the visibility is less than 1200 ft RVR.

8.10.1.32 DESIGNATED SPECIAL AERODROMES AND HELIPORTS: PIC QUALIFICATION

- (a) The Authority may determine that certain aerodromes, due to items such as surrounding terrain, obstructions, or complex approach or departure procedures, are special aerodromes requiring special

aerodrome qualifications and that certain areas or routes, or both, require a special type of navigation qualifications.

- (b) A person shall not serve nor shall an AOC holder use a person as PIC for operations at designated special aerodromes and heliports unless within the preceding 12 calendar months—
 - (1) the PIC has been qualified by the AOC holder through a pictorial means acceptable to the Authority for that aerodrome;
 - (2) the PIC or the assigned co-pilot has made a takeoff and landing at that aerodrome while serving as a flight crew member for the AOC holder; or
 - (3) the PIC has made a takeoff and landing at an adjacent aerodrome at which he or she is currently qualified.
- (c) Designated special aerodrome and heliport limitations are not applicable if the operation will occur—
 - (1) during daylight hours;
 - (2) when the visibility is at least 3 miles; and
 - (3) when the ceiling at that aerodrome is at least 1000 feet above the lowest initial approach altitude prescribed for an instrument approach procedure.

8.10.1.33 RECURRENT TRAINING AND RE-ESTABLISHMENT OF QUALIFICATIONS: FLIGHT CREW MEMBERS

- (a) A person shall not serve nor shall an AOC holder use a person as a flight crew member unless within the preceding 12 calendar months that person has completed the recurrent ground and flight training curricula approved by the Authority. The recurrent ground training shall include training on—
 - (1) aircraft systems and limitations and normal, abnormal and emergency procedures;
 - (2) emergency equipment and drills;
 - (3) crew resource management; and
 - (4) security training.

- (b) Recurrent ground training shall include training within the preceding 24 calendar months on recognition and transportation of dangerous goods.
- (c) The recurrent flight training curriculum shall include—
 - (1) manoeuvring and safe operation of the aircraft in accordance with AOC holder's normal, abnormal and emergency procedures;
 - (2) manoeuvres and procedures necessary for avoidance of in-flight hazards; and
 - (3) for authorised pilots, at least one low visibility takeoff to the lowest applicable minimum LVTO and two approaches to the lowest approved minimums for the AOC holder, one of which is to be a missed approach
- (d) A required flight crew member who, due to a period of inactivity, has not met the recurrent training requirements in paragraphs (a) through (c) shall complete the initial AOC training programme and proficiency check specified in [8.10.1.20](#) of this part.

Implementing Standard: See IS [8.10.1.33](#) for detailed recurrent training requirements.

8.10.1.34 RECURRENT TRAINING AND RE-ESTABLISHMENT OF QUALIFICATIONS: CABIN CREW

- (e) A person shall not serve nor shall an AOC holder use a person as a Cabin Crew unless within the preceding 12 calendar months that person has completed the recurrent ground curricula approved by the Authority relevant to the type(s) and/or variant(s) of aircraft and operations to which he or she is assigned. The recurrent ground training shall include training on—
 - (1) aircraft-specific configuration, equipment and procedures;
 - (2) emergency and first aid equipment and drills;
 - (3) crew resource management; and
 - (4) security training.

- (f) Recurrent ground training shall include training within the preceding 24 calendar months on recognition and transportation of dangerous goods.
- (g) A required cabin crew member who, due to a period of inactivity, has not met the recurrent training requirements in paragraphs (a) and (b) shall complete the initial AOC training programme and competency check specified in 8.10.1.24 of this part.

Implementing Standard: See IS 8.10.1.34 for specific normal and emergency program training requirements for Cabin Crew.

8.10.1.35 RECURRENT TRAINING AND RE-ESTABLISHMENT OF QUALIFICATIONS: FLIGHT OPERATIONS OFFICERS

- (a) A person shall not serve nor shall an AOC holder use a person as a flight operations officer unless that person has completed the recurrent ground curricula approved by the Authority.
- (b) The recurrent ground training shall include training within the preceding 12 calendar months on—
 - (1) aircraft-specific flight preparation; and
 - (2) crew resource management.
- (c) The recurrent ground training shall include training within the preceding 24 calendar months on—
 - (1) recognition or transportation of dangerous goods.
- (d) A required FOO who, due to a period of inactivity, has not met the recurrent training requirements in paragraphs (a) through (c) shall complete the initial AOC training programme and competency check specified in 8.10.1.25 of this part.

Implementing Standard: See IS 8.10.1.35 for specific program training requirements for flight operations officers.

8.10.1.36 CREW MEMBER TRAINING PROGRAMMES

- (a) The operator shall establish and maintain a ground and flight training programme, approved by the State of the Operator, which ensures that all crew members are adequately trained to perform their assigned duties. The training programme shall—

(1) FLIGHT CREW—

- (i) include ground and flight training facilities and properly qualified instructors as determined by the State of the Operator;
- (ii) consist of ground and flight training in the type(s) of aeroplane on which the flight crew member serves;
- (iii) include proper flight crew coordination and training in all types of emergency and abnormal situations or procedures caused by engine, airframe or systems malfunctions, fire or other abnormalities;
- (iv) include upset prevention and recovery training;
- (v) include training in knowledge and skills related to visual and instrument flight procedures for the intended area of operation, charting, human performance including threat and error management and in the transport of dangerous goods;
- (vi) ensure that all flight crew members know the functions for which they are responsible and the relation of these functions to the functions of other crew members, particularly in regard to abnormal or emergency procedures; and
- (vii) be given on a recurrent basis, as determined by the State of the Operator and shall include an assessment of competence.

(2) CABIN CREW—

- (i) ensure that each person is competent to execute those safety duties and functions which the cabin crew member is assigned to perform in the event of an emergency or in a situation requiring emergency evacuation;
- (ii) ensure that each person is drilled and capable in the use of emergency and life-saving equipment required to be carried, such as life jackets, life rafts, evacuation slides, emergency exits, portable fire extinguishers, oxygen equipment, first-aid and universal precaution kits, and automated external defibrillators;

- (iii) ensure that each person is when serving on aeroplanes operated above 3 000 m (10 000 ft), knowledgeable as regards the effect of lack of oxygen and, in the case of pressurized aeroplanes, as regards physiological phenomena accompanying a loss of pressurization;
- (iv) ensure that each person is aware of other crew members' assignments and functions in the event of an emergency so far as is necessary for the fulfilment of the cabin crew member's own duties;
- (v) ensure that each person is aware of the types of dangerous goods which may, and may not, be carried in a passenger cabin; and
- (vi) ensure that each person is knowledgeable about human performance as related to passenger cabin safety duties including flight crew-cabin crew coordination.

8.10.1.37 INSTRUCTOR QUALIFICATIONS – FLIGHT CREW, CABIN CREW, FLIGHT OPERATIONS OFFICER, DANGEROUS GOODS

- (a) FLIGHT CREW. An AOC holder shall not use a person nor shall a person serve as a flight instructor in an established flight training programme unless, with respect to the aircraft type involved, that person—
 - (1) Holds the personnel licences and ratings required to serve as a PIC, or a flight engineer, as applicable;
 - (2) Has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training and differences training, that are required to serve as a PIC, or a flight engineer, as applicable;
 - (3) Has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC, or a flight engineer, as applicable;
 - (4) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check; and
 - (5) Holds the appropriate medical certificate for service as a required crew member.

- (b) FLIGHT INSTRUCTOR – FLIGHT SIMULATION TRAINING. A person shall not serve nor shall an AOC holder use a person as a flight instructor in an FSTD, unless, since the beginning of the 12th calendar month before that service, that person has—
- (1) Flown at least five flights as a required crew member for the type of aircraft involved; or
 - (2) Observed, on the flight deck, the conduct of two complete flights in the aircraft type to which the person is assigned.
- (c) CABIN CREW. An AOC holder shall not use a person nor shall a person serve as an instructor in an established cabin crew training programme unless, with respect to the aircraft type or position involved, that person—
- (1) Holds the qualification required to serve as a cabin crew member;
 - (2) Has satisfactorily completed the appropriate training phases for the aircraft and position involved, including recurrent training and differences training, that are required to serve as a cabin crew member;
 - (3) Has satisfactorily completed the appropriate competency and recency of experience checks that are required to service as a cabin crew member;
 - (4) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check.
- (d) FLIGHT OPERATIONS OFFICER. An AOC holder shall not use a person nor shall a person serve as an instructor in an established FOO training programme unless, with respect to the aircraft type and position involved, that person—
- (1) Holds the licence required to serve as a FOO;
 - (2) Has satisfactorily completed the appropriate training phases for the aircraft or position involved, including recurrent training and differences training, that are required to serve as a FOO;

- (3) Has satisfactorily completed the appropriate competency and recency of experience checks that are required to serve as a FOO; and
- (4) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check.
- (e) DANGEROUS GOODS. An AOC holder shall not use a person nor shall a person serve as an instructor in an established dangerous goods training programme unless—
 - (1) they have adequate instructional skills and
 - (2) have successfully completed a dangerous goods training programme and in an applicable category to be taught.

8.10.1.38 INSTRUCTOR TRAINING

- (a) A person shall not serve nor shall an AOC holder use a person as an instructor for flight crew, cabin crew, FOOs, or dangerous goods, unless he or she has completed the curricula approved by the Authority for those functions for which they are to serve.

Implementing Standard: See IS [8.10.1.38](#) for specific training program requirements for flight crew instructors.

8.10.1.39 CHECK PERSONNEL QUALIFICATIONS (CABIN CREW AND FLIGHT OPERATIONS OFFICERS)

- (a) CHECK PERSONNEL for CABIN CREW—
 - (1) An AOC holder shall not use a person, nor shall a person serve as a check cabin crew member in an established cabin crew training programme unless, with respect to the aircraft type or position involved, that person—
 - (i) holds the qualifications required to serve as a cabin crew member;
 - (ii) has satisfactorily completed the appropriate training phases for the aircraft and or position, including recurrent training and differences training, that are required to serve as a cabin crew member;

- (iii) has satisfactorily completed the appropriate competency and recency of experience checks that are required to serve as a cabin crew member;
 - (iv) has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check for the check personnel duties; and
 - (v) has been approved by the Authority for the check cabin crew member duties involved.
- (b) CHECK PERSONNEL for FLIGHT OPERATIONS OFFICERS.
 - (1) An AOC holder shall not use a person, nor shall a person serve as a check FOO in an established FOO training programme unless, with respect to the aircraft type or position involved, that person—
 - (i) holds the licence required to serve as a FOO;
 - (ii) has satisfactorily completed the appropriate training phases for the aircraft and or position, including recurrent training and differences training, that are required to serve as a FOO;
 - (iii) has satisfactorily completed the appropriate competency and recency of experience checks that are required to serve as a FOO; and
 - (iv) has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check for the check FOO duties involved.

8.10.1.40 CHECK PERSONNEL TRAINING

- (a) A person shall not serve nor shall an AOC holder use a person for checks unless he or she has completed the curricula approved by the Authority for those functions for which they are to serve.

Implementing Standard: See IS [8.10.1.40](#) for specific training program requirements for a check personnel.

8.10.1.41 CHECK AIRMAN QUALIFICATIONS

- (a) An AOC holder shall not use a person, nor shall any person serve as a check airman in an established flight crew training program unless, with respect to the aircraft type involved, that person—
 - (1) holds the licences and ratings required to serve as a PIC, or flight engineer, as applicable;
 - (2) has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training and differences training, that are required to serve as a PIC, or flight engineer, as applicable;
 - (3) has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC, or flight engineer, as applicable;
 - (4) has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check for check airman duties
 - (5) holds at least a Class III medical certificate unless serving as a required crew member, in which case holds a Class I or Class II medical certificate as appropriate; and
 - (6) has been approved by the Authority for the check airman duties involved.
- (b) Additional Simulator Requirements: Since the beginning of the 12th calendar month before that service, the check airman shall have—
 - (1) flown at least five flights as a required crew member for the type of aircraft involved; or
 - (2) observed, on the flight deck, the conduct of two complete flights in the aircraft type to which the person is assigned.

8.10.1.42 CHECK AIRMAN TRAINING

- (a) A person shall not serve nor shall an AOC holder use a person for checks unless he or she has completed the curricula approved by the Authority for those functions for which they are to serve.

Implementing Standard: See IS [8.10.1.42](#) for specific training program requirements for a check airman.

8.10.1.43 CHECK AIRMAN DESIGNATION

- (a) A person shall not serve nor shall an AOC holder use a person as a check airman for any flight check unless that person has been designated by name, approved and observed by the Authority within the preceding 12 calendar months.

8.10.1.44 CHECK AIRMAN LIMITATIONS

- (a) A person shall not serve nor shall an AOC holder use a person as a check airman for any check—
 - (1) in an aircraft as a required pilot flight crew member, unless that person holds the required airman licences and ratings and has completed for the AOC holder all applicable training, qualification and currency requirements of this Part applicable to the crew position and the flight operations being checked;
 - (2) in an aircraft as an observer check airman, unless that person holds the airman licences and ratings and has completed all applicable training, qualification and line observation requirements of this Part applicable to the position and the flight operations being checked; or
 - (3) in a simulator unless that person has completed or observed with the AOC holder all training, qualification and line observation requirements of this Part applicable to the position and flight operations being checked.

8.10.1.45 TERMINATION OF A PROFICIENCY, COMPETENCE OR LINE CHECK

- (a) If it is necessary to terminate a check for any reason, the AOC holder shall not use the crew member or flight operations officer in commercial air transport operations until the completion of a satisfactory recheck.

8.10.1.46 RECORDING OF CREW MEMBER AND FLIGHT OPERATIONS OFFICER QUALIFICATIONS

- (a) An AOC holder shall record in its records maintained for each crew member and flight operations officer, the completion of each of the qualifications required by this Part.

- (b) A crewmember or FOO may complete the curricula required by this Part concurrently or intermixed with other required curricula, but completion of each of these curricula shall be recorded separately.

8.10.1.47 MONITORING OF TRAINING AND CHECKING ACTIVITIES

- (a) To enable adequate supervision of its training and checking activities, the AOC holder shall forward to the Authority at least 7 days prior to the scheduled activity the dates, report times and report location of all—
 - (1) training for which a curriculum is approved in the AOC holder's training program; and
 - (2) proficiency, competence and line checks.
- (b) Failure to provide the information required by Paragraph 8.10.1.46(a) of this subsection may invalidate the training or check and the Authority may require that it be repeated for observation purposes.

8.10.1.48 ELIGIBILITY PERIOD

- (a) All crew members who are required to take a proficiency check, a test or competency check, or recurrent training to maintain qualification for commercial air transport operations may complete those requirements at any time during the eligibility period.
- (b) The eligibility period is defined as the final three calendar months of the validity of the previous check. If any of the checks and or training required in (a) above are completed during the eligibility period, they shall be considered as if completed in the month-due, for the purpose of calculating the next due date.

8.10.1.49 REDUCTIONS IN REQUIREMENTS

- (a) The Authority may authorise reductions in, or waive, certain portions of the training requirements of this subpart, taking into account the previous experience of the crew members.
- (b) An AOC holder's request for reduction or waiver shall be made in writing and outline the basis under which the request is made.
- (c) If the request was for a specific crew member, the correspondence from the Authority authorising the reduction and the basis for it shall be filed in the record the AOC holder maintains for that crew member.

- (d) A person who progresses successfully through flight training, is recommended by their instructor or a check airman, and successfully completes the appropriate flight check for a check airman, or is permitted by the Authority, to complete a course in less than programmed time, need not complete the programmed hours of flight training for the particular aircraft.
- (e) If approved by the Authority, a person need not complete the programmed hours of cabin crew or FOO training if he or she is recommended by their instructor.

Note: Whenever the Authority finds that 20 percent of the flight checks given at a particular training base during the previous 6 months are unsuccessful, this method of approval will not be used by the AOC holder at that base until the Authority finds that the effectiveness of the flight training there has improved.

8.10.1.50 PERSONNEL APPROVED TO CONDUCT CHECKS

- (a) The Authority may approve the following AOC holder personnel to conduct checks when such personnel meet the requirements for the authorised responsibilities, and may be approved for either aircraft or simulator, or both, as applicable, for checking of flight crew.
 - (1) Check person;
 - (2) Check cabin crew member; and
 - (3) Check FOO.
- (b) The authorised duties of check personnel are to—
 - (1) conduct initial and recurrent proficiency checks for flight crew and competency checks for cabin crew and FOOs;
 - (2) certify as satisfactory, the knowledge and proficiency of the flight crew, and the knowledge and competency of the cabin crew and FOOs; and
 - (3) for all check personnel, supervise operating experience (OE).
- (c) A person shall not serve nor shall an AOC holder use a person as a check personnel under the AOC holder's crew member checking and standardisation programme in Part 9 of these regulations unless that person has—

- (i) been identified by name and function and approved in writing by the Authority; and
 - (ii) successfully completed the AOC holder's curricula approved by the Authority for those functions for which he or she is to serve.
- (d) Once approved, a person shall not serve nor shall an AOC holder use a person as a check personnel for any flight crew, cabin crew or FOO checks unless that person has demonstrated, initially and at least biennially to an Authority inspector, the ability to conduct a check for which he or she is approved.

8.11 REST PERIODS, DUTY, AND FLIGHT TIME: COMMERCIAL AIR TRANSPORT

8.11.1.1 APPLICABILITY

- (a) This scheme shall apply in relation to any duty carried out at the behest of the AOC holder by both flight crew and cabin crew.

8.11.1.2 PURPOSE

- (a) The purpose of the scheme is to interpret the requirements of the relevant sections of the Civil Aviation Regulations as they apply to the regulation of flight times and the avoidance of fatigue in aircrew.

8.11.1.3 RESPONSIBILITIES

- (a) An AOC holder shall publish rosters in advance so that operating crews can plan adequate pre-flight rest.
- (b) All crew members shall be given at least 7 days notice of days off.
- (c) Before the start of the roster year, the start and finish dates of each roster period, plus the expected publication date, shall be issued to crewmembers.
- (d) Responsibility for the proper control of flight and duty time does not rest wholly with the AOC holder. All crew members shall have a responsibility to make optimum use of the opportunities and facilities for rest provided.

- (e) All crew members shall be responsible for planning and using their rest periods properly in order to minimize incurring fatigue.
- (f) A crew member shall not act as operating crew if he or she knows, or suspects that their physical or mental condition renders them unfit to operate and shall not fly if they knows that he or she is, or are likely to be, in breach of this scheme.

8.11.1.4 DEFINITIONS

- (a) Definitions in the flight duty scheme shall have the meanings defined in IS: 8.11.1.4

8.11.1.5 FLIGHT DUTY PERIOD

- (a) An AOC holder shall not schedule a crewmember except as prescribed in IS: 8.11.1.5

8.11.1.6 FLIGHT DUTY PERIOD TABLES

- (a) An AOC holder shall not schedule a crewmember except as prescribed in IS: 8.11.1.6

8.11.1.7 LIMITS ON TWO FLIGHT CREW LONG RANGE OPERATIONS

- (a) An AOC holder shall not schedule a crewmember except as prescribed in IS: 8.11.1.7

8.11.1.8 EXTENSION OF FLYING DUTY PERIOD BY IN-FLIGHT RELIEF

- (a) An AOC holder shall not schedule a crewmember except as prescribed in IS: 8.11.1.8

8.11.1.9 CALCULATION OF DELAY REPORTING TIMES IN A SINGLE FDP

- (a) Delayed reporting times in a single flight duty period prior to leaving a place of rest shall be calculated as prescribed in IS: 8.11.1.9

8.11.1.10 AIRCRAFT PIC'S DISCRETION TO EXTEND AN FDP

- (a) An aircraft PIC's discretion to extend a flight duty period shall be as prescribed in IS: 8.11.1.10

8.11.1.11 SPLIT DUTY EXTENSIONS

- (a) An AOC holder shall not schedule a crewmember except as prescribed in IS: 8.11.1.11

8.11.1.12 REPORTING EXERCISE OF DISCRETION TO AN EXTENSION OF A FDP

- (a) Whenever a PIC extends an FDP it shall be reported to (Specify reporting point, i.e. Operations Manager) on a Discretion Report Form, in the format of (Specify Company form).
- (b) If the extension under Paragraph 8.11.1.12(a) of this subsection is greater than 2 hours, then the company shall submit the PIC's written report, together with the AOC holder's comments, to the Authority, within 14 days of the aircraft's return to base.

8.11.1.13 LATE FINISHES/EARLY STARTS

- (a) An AOC holder shall not schedule a crewmember except as prescribed in IS: 8.11.1.13

8.11.1.14 STANDBY DUTY

- (a) An AOC holder shall not schedule a crewmember except as prescribed in IS: 8.11.1.14

8.11.1.15 MIXED DUTIES

- (a) An AOC holder shall not schedule a crewmember except as prescribed in IS: 8.11.1.15

8.11.1.16 DEADHEADING

- (a) Travelling time shall be interpreted as prescribed in IS: 8.11.1.16

8.11.1.17 TRAVELLING TIME

- (a) An AOC holder shall not schedule a crewmember except as prescribed in IS: 8.11.1.17

8.11.1.18 REST PERIODS

- (a) An AOC holder shall not schedule rest periods except as prescribed in IS: 8.11.1.18

8.11.1.19 AIRCRAFT PIC'S DISCRETION TO REDUCE A REST PERIOD

- (a) An aircraft PIC's discretion to reduce a rest period shall be as prescribed in IS: 8.11.1.19

8.11.1.20 REPORTING EXERCISE OF DISCRETION TO REDUCE A REST PERIOD

- (a) Whenever a PIC reduces a rest period, it shall be reported as prescribed in IS 8.11.1.20

8.11.1.21 DAYS OFF

- (a) An AOC holder shall not schedule a crewmember except as prescribed in IS: 8.11.1.21

8.11.1.22 ABSOLUTE LIMIT ON FLYING HOURS

- (a) Absolute limit on flying hours shall be as prescribed in IS: 8.11.1.22

8.11.1.23 CUMULATIVE DUTY HOURS

- (a) Crew members cumulative duty hours shall be as prescribed in IS: 8.11.1.23

8.11.1.24 CALCULATION OF CUMULATIVE DUTY HOURS

- (a) Calculation of cumulative duty hours shall be as prescribed in IS: 8.11.1.24

8.11.1.25 RECORDS TO BE MAINTAINED

- (a) Records for flight and duty time and rest periods of all flying staff shall be as prescribed in IS: 8.11.1.25

8.11.1.26 DUTY AND REST PERIODS FLIGHT OPERATION OFFICERS / FLIGHT DISPATCHERS

- (a) Duty and rest periods for flight operation officers / flight dispatchers shall be as prescribed in IS 8.11.1.26

8.12 FLIGHT RELEASE: COMMERCIAL AIR TRANSPORT**8.12.1.1 APPLICABILITY**

- (a) This Subpart is applicable to an AOC holder and the person designated by the AOC holder to issue a flight release.

8.12.1.2 QUALIFIED PERSONS REQUIRED FOR OPERATIONAL CONTROL FUNCTIONS

- (a) A qualified person shall be designated by the AOC holder to exercise the functions and responsibilities for operational control of each flight in commercial air transport.
- (b) For passenger-carrying flights conducted on a published schedule, a licensed and qualified flight operations officer shall be on-duty at an operations base to perform the operational control functions.
- (c) For all other flights, the Director of Operations and the PIC are the qualified persons exercising operational control responsibilities shall be available for consultation prior to, during and immediately following the flight operation.

Note: The Director of Operations may delegate the functions for initiating, continuation, diversion and termination of a flight to other employees. However, the Director of Operations shall retain full responsibility for these functions.

- (d) For all flights, a PIC shall share in the responsibility for operational control of the aircraft and shall have the situational authority to make decisions regarding operational control issues in-flight.
- (e) Where a decision of the PIC differs from that recommended, the person making the recommendation shall make a record of the associated facts.

8.12.1.3 FUNCTIONS ASSOCIATED WITH OPERATIONAL CONTROL

- (a) The person exercising responsibility for operational control for an AOC holder shall—
 - (1) authorise the specific flight operation;
 - (2) ensure that only those operations authorised by the AOC operations specifications are conducted;
 - (3) ensure that an airworthy aircraft properly equipped for the flight is available;
 - (4) specify the conditions under which a flight may be dispatched or released (weather minimums, flight planning, aircraft loading, and fuel requirements);

- (5) ensure that qualified personnel and adequate facilities are available to support and conduct the flight;
- (6) ensure that crew members are in compliance with the flight and duty time requirements when departing on a flight;
- (7) provide the PIC and other personnel who perform operational control functions with access to the necessary information for the safe conduct of a flight (such as weather, NOTAMs, Aeronautical Information Circulars (AICs), Aeronautical Information Publications (AIPs) and aerodrome analysis for all countries of operation);
- (8) ensure that proper flight planning and preparation is made;
- (9) ensure that flight locating and flight following procedures are followed;
- (10) ensure that each flight has complied with the conditions specified for release before it is allowed to depart;
- (11) ensure that when the conditions specified for a release cannot be met, the flight is either cancelled, delayed, re-routed, or diverted; and
- (12) ensure the monitoring of the progress of the flight and the provision of information that may be necessary to safety.

8.12.1.4 OPERATIONAL CONTROL DUTIES

- (a) For all flights the qualified person performing the duties of a flight operations officer shall—
 - (1) assist the PIC in flight preparation and provide the relevant information required;
 - (2) assist the PIC in preparing the operational and ATC flight plans;
 - (3) sign the dispatch copy of the flight release;
 - (4) furnish the PIC while in flight, by appropriate means, with information which may be necessary for the safe conduct of the flight;

- (5) in the event of an emergency situation which endangers the safety of the aircraft or persons, becomes known first to the FOO/flight dispatcher, action by that person shall be in accordance with such procedures as outlined in the AOC holder's OM. Where necessary—
 - (i) convey safety-related information to the pilot-in-command that may be necessary for the safe conduct of the flight, including information related to any amendments to the flight plan that become necessary in the course of the flight, and
 - (ii) immediately notify the appropriate authorities on the nature of the situation, and if required, a request for assistance, and;
- (6) notify the appropriate ATS unit when the position of the aeroplane cannot be determined by an aircraft tracking capability and attempts to establish communication are unsuccessful.
- (b) A qualified person performing the operational control duties shall avoid taking any action that would conflict with the procedures established by—
 - (1) air traffic control;
 - (2) the meteorological service;
 - (3) the communications service; or
 - (4) AOC holder.

Note: It is equally important that the pilot-in-command also convey similar information to the flight operations officer/ flight dispatcher during the course of the flight, particularly in the context of emergency situations.

8.12.1.5 CONTENTS OF A FLIGHT RELEASE/OPERATIONAL FLIGHT PLAN

- (a) The flight release/operational flight plan shall contain at least the following information concerning each flight—
 - (1) company or organisation name;

- (2) make, model, and registration number of the aircraft being used;
 - (3) flight or trip number, and date of flight;
 - (4) name of each flight crew member, Cabin Crew, and PIC;
 - (5) departure aerodrome, destination aerodromes, alternate aerodromes, and route;
 - (6) minimum fuel supply (in gallons or pounds);
 - (7) a statement of the type of operation (e.g., IFR, VFR);
 - (8) the latest available weather reports, and forecasts for the destination aerodrome and alternate aerodromes; and
 - (9) any additional available weather information that the PIC considers necessary.
- (b) The flight release/operational flight plan shall be signed by the PIC and, when applicable, the FOO, and a copy shall be filed with operator or a designated agent. If these procedures are not possible, it shall be left with the aerodrome authority or on record at a suitable place at the point of departure.

8.12.1.6 FLIGHT RELEASE: AIRCRAFT REQUIREMENTS

- (a) A person shall not issue a flight release for a commercial air transport operation unless the aircraft is airworthy and properly equipped for the intended flight operation.
- (b) A person shall not issue a flight release for a commercial air transport operation using an aircraft with inoperative instruments and equipment installed, except as specified in the Minimum Equipment List approved for the AOC holder for that type aircraft.
- (c) A person shall not issue a flight release for a commercial air transport operation using an aircraft unless a maintenance release has been issued for that aircraft.
- (d) A person shall not issue a flight release for a commercial air transport operation unless the requirements of 8.12.1.5 of this part for operational flight planning have been met.
- (e) Completed flight preparation forms shall be kept by an operator for a period of 3 months

8.12.1.7 FLIGHT RELEASE: FACILITIES AND NOTAMS

- (a) A person shall not release an aircraft over any route or route segment unless there are adequate communications and navigational facilities in satisfactory operating condition as necessary to conduct the flight safely.
- (b) The flight operations officer shall ensure that the PIC is provided all available current reports or information on aerodrome conditions and irregularities of navigation facilities that may effect the safety of the flight.
- (c) A person shall not issue a flight release for a commercial air transport operation unless the requirements of 8.12.1.5 of this part for operational flight planning have been complied with.
- (d) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

Note: For their review of the operational flight plan, the PIC will be provided with all available NOTAMs with respect to the routing, facilities and aerodromes.

8.12.1.8 FLIGHT RELEASE: WEATHER REPORTS AND FORECASTS

- (a) A person shall not release a flight unless he or she is thoroughly familiar with reported and forecast weather conditions on the route to be flown.
- (b) A person shall not release a flight unless he or she has communicated all information and reservations they may have regarding weather reports and forecasts to the PIC.
- (c) A person shall not issue a flight release for a commercial air transport operation unless the requirements of 8.12.1.5 of this part for operational flight planning have been complied with.
- (d) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.12.1.9 FLIGHT RELEASE IN ICING CONDITIONS

- (a) A person shall not release an aircraft, when in their opinion or that of the PIC, the icing conditions that may be expected or are met, exceed that for which the aircraft is certified and has sufficient operational deicing or anti-icing equipment.

- (b) A person shall not release an aircraft any time if the conditions are such that frost, ice or snow may reasonably be expected to adhere to the aircraft, unless there is the available to the PIC at the aerodrome of departure adequate facilities and equipment to accomplish the procedures approved for the AOC holder by the Authority for ground de-icing and anti-icing.
- (c) A person shall not issue a flight release for a commercial air transport operation unless the requirements of 8.12.1.5 of this part for operational flight planning have been complied with.
- (d) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.12.1.10 FLIGHT RELEASE UNDER VFR OR IFR

- (a) A person shall not release a flight under VFR or IFR unless the weather reports and forecasts indicate that the flight can reasonably be expected to be completed as specified in the release.

8.12.1.11 FLIGHT RELEASE: MINIMUM FUEL SUPPLY

- (a) A person shall not issue a flight release for a commercial air transport operation unless the fuel supply specified in the release is equivalent to or greater than the minimum flight planning requirements of this Part, including anticipated contingencies.
- (b) A person shall not issue a flight release for a commercial air transport operation unless the requirements of 8.12.1.5 of this part for operational flight planning have been met.
- (c) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.12.1.12 FLIGHT RELEASE: AIRCRAFT LOADING AND PERFORMANCE

- (a) A person shall not issue a flight release unless he or she is familiar with the anticipated loading of the aircraft and is reasonably certain that the proposed operation will not exceed the—
 - (1) centre of gravity limits;
 - (2) aircraft operating limitations; and
 - (3) minimum performance requirements.
- (b) A person shall not issue a flight release for a commercial air transport operation unless any load carried is properly distributed and safely secured.

- (c) A person shall not issue a flight release for a commercial air transport operation unless the requirements of 8.12.1.5 of this part for operational flight planning have been met.
- (d) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.12.1.13 FLIGHT RELEASE: AMENDMENT OR RE-RELEASE EN ROUTE

- (a) A person who amends a flight release while the flight is en route shall record that amendment.
- (b) A person shall not amend the original flight release to change the destination or alternate aerodrome while the aircraft is en route unless the flight preparation requirements for routing, aerodrome selection and minimum fuel supply are met at the time of amendment or re-release.
- (c) A person shall not allow a flight to continue to an aerodrome to which it has been released if the weather reports and forecasts indicate changes which would render that aerodrome unsuitable for the original flight release.
- (d) A person shall not issue a flight release for a commercial air transport operation unless the requirements of 8.13.1.5 of this part for operational flight planning have been met.
- (e) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

8.12.1.14 FLIGHT RELEASE WITH AIRBORNE WEATHER RADAR EQUIPMENT

- (a) A person shall not release a large aeroplane carrying passengers when current weather reports indicate that thunderstorms, or other potentially hazardous weather conditions that can be detected with airborne weather radar, may reasonably be expected along the route to be flown, unless the airborne weather radar equipment is in satisfactory operating condition.
- (b) A person shall not issue a flight release for a commercial air transport operation unless the requirements of 8.12.1.5 of this part for operational flight planning have been met.
- (c) Completed flight preparation forms shall be kept by an operator for a period of 3 months.

PART 8 – IMPLEMENTING STANDARDS FOR OPERATIONS

For ease of reference the number assigned to each IS corresponds to its associated regulation. For example, IS 8.2.1.8 would reflect a standard required by 8.2.1.8 of this part

IMPLEMENTING STANDARDS 08 – OPERATIONS**IS: 8.2.1.8 DOCUMENTS TO BE CARRIED ON BOARD AIRCRAFT**

- (a) The agreement summary of an Article 83 bis agreement shall be accessible to a civil aviation safety inspector to determine which functions and duties are transferred under the agreement by the State of Registry to the State of the Operator, when conducting surveillance activities such as ramp checks.
- (b) The agreement summary shall be transmitted to ICAO together with the Article 83 bis agreement for registration with the ICAO Council by the State of Registry or the State of the Operator.
- (c) The agreement summary shall contain the information for the specific aircraft and shall follow the layout below.

ARTICLE 83 bis AGREEMENT SUMMARY		
Title of the agreement:		
State of Registry:		Focal point:
State of the Operator:		Focal point:
Date of signature:	1 By State of Registry :	
	1 By State of the Operator :	
	By State of the principal location of a general aviation operator ¹ :	
Duration:	1 Start date :	2 End date (if applicable) :
Languages of the agreement:		

ICAO registration number:	
Umbrella agreement (if any) with ICAO registration number:	

Chicago Convention	ICAO Annexes affected by the transfer to the State of the Operator of responsibility with respect to certain functions and duties			
Article 12: Rules of the Air	Annex 2, all chapters	Yes	☐	
		No	☐	
Article 30 a): Aircraft radio equipment	Radio station licence	Yes	☐	
		No	☐	
Articles 30 b) and 32 a): Personnel licensing	Annex 1, Chapters 1, 2, 3, and 6; and Annex 6, Part I, Radio operator, or Part III, Section II, Composition of the flight crew (radio operator), and/or Part II, Qualifications and/or Flight crew member licensing, or Part III, Section III, Qualifications	Yes	☐	Annex 6: [specify part and 3 paragraph]
		No	☐	
Article 31: Certificates of airworthiness	Annex 6 Part I or Part III, Section II	Yes	☐	3 [specify part and chapters]
		No	☐	
	Annex 6 Part II or Part III, Section III	Yes	☐	3 [specify part and chapters]
		No	☐	
	Annex 8	Yes	☐	3 [specify chapters]

		Part II, Chapters 3 and 4		No	☐
Aircraft affected by the transfer of responsibilities to the State of the Operator					
Aircraft Make, Model, Series	Nationality and Registration Marks	Serial No.	AOC # (Commercial Air Transport)	Dates of Transfer of Responsibilities	
				1 From	2 To (if applicable)

Notes:

1. dd/mm/yyyy.
2. dd/mm/yyyy or N/A if not applicable.
3. Required information.

IS: 8.4.1.1 SINGLE PILOT OPERATIONS UNDER THE INSTRUMENT FLIGHT RULES (IFR)

- (a) An aircraft shall not be operated under IFR by a single pilot unless—
- (1) the flight manual does not require a flight crew of more than one;
 - (2) the aircraft is propeller-driven;
 - (3) the maximum approved passenger seating configuration is not more than nine;
 - (4) the maximum certificated take-off mass does not exceed 5 700 kg;
 - (5) the aircraft is equipped as described in CAR 7.1.2.4
- (b) The pilot-in-command shall satisfy the following requirements—
- (1) for operations under IFR or at night, he shall have accumulated at least 50 hours flight time on the class of aeroplane, of which at least 10 hours shall be as pilot-in-command;
 - (2) for operations under IFR, he shall have accumulated at least 25 hours flight time under IFR on the class of aeroplane,

which may form part of the 50 hours flight time in sub-paragraph (1);

- (3) for operations at night, he shall have accumulated at least 15 hours flight time at night, which may form part of the 50 hours flight time in sub-paragraph (1);
- (4) for operations in IMC, he shall have acquired recent experience as a pilot engaged in a single pilot operation in IMC—
 - (i) of at least five IFR flights, including three instrument approaches carried out during the preceding 90 days on the class of aeroplane in the single pilot role; or
 - (ii) of an IFR instrument approach check carried out on such an aeroplane during the preceding 90 days;
 - (iii) for operations at night, he shall have made at least three takeoffs and landings at night on the class of aeroplane in the single pilot role in the preceding 90 days; and
 - (iv) successfully completed training programmes that include passenger briefings with respect to emergency evacuation, autopilot management, and the use of simplified in-flight documentation.
- (c) The initial and recurrent flight training and proficiency checks shall be performed by the pilot-in-command in the single pilot role on the class and type of aeroplane in an environment representative of the operation.
- (d) If such operations are to be conducted outside of Grenada, Grenada shall have an arrangement with the States where the operations will be conducted.

IS: 8.7.2.2**GENERAL – ROTORCRAFT CLASS 1, 2, AND 3 CODE OF PERFORMANCE**

- (a) The following guidance material is the basis of the code of helicopter performance referenced in 8.7.2.2 of this part.
- (b) DEFINITIONS.
 - (1) CATEGORY A. With respect to helicopters, means a multi-engined helicopter designed with engine and system isolation

features and capable of operations using take-off and landing data scheduled under a critical engine failure concept that assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected take-off.

- (2) CATEGORY B. With respect to helicopters, means a single-engine or multi-engined helicopter that does not meet Category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event of an engine failure, and a forced landing is assumed.

(c) GENERAL GUIDANCE.

- (1) Helicopters operating in performance Classes 1 and 2 shall be certificated in Category A.
 - (2) Helicopters operating in performance Class 3 shall be certificated in either Category A or Category B (or equivalent).
- (3) Except as permitted by the appropriate Authority—
- (i) Take-off or landing from/to heliports in a congested hostile environment shall only be conducted in performance Class 1.
 - (ii) Operations in performance Class 2 shall only be conducted with a safe forced landing capability during take-off and landing.
 - (iii) Operations in performance Class 3 shall only be conducted in a non-hostile environment.
- (4) The Authority may grant a waiver from the provisions of paragraphs (3)(i), (ii), and (iii) of this IS upon receiving a commercial air transport operator's application for waiver and undertaking a risk assessment of the operational conditions proposed, including—
- (i) The type of operation and the circumstances of the flight;
 - (ii) The area/terrain over which the flight is being conducted;

- (iii) The probability of a critical engine failure and the consequence of such an event;
- (iv) (The procedures to maintain the reliability of the engine(s);
- (v) The training and operational procedures to mitigate the consequences of the critical engine failure;
- (vi) Helicopter equipment; and
- (vii) Installation and utilisation of a usage monitoring system.

IS 8.7.2.9 SINGLE-ENGINE AND MULTI-ENGINE AEROPLANE OPERATIONS

- (a) An AOC holder shall not operate single-engine turbine-powered aeroplanes at night and/or in IMC unless the following airworthiness and operational requirements have been satisfied by the operator and approved by the Authority—

- (1) Turbine engine reliability shall be shown to have a power loss rate of less than 1 per 100 000 engine hours.

Note: Power loss in this context is defined as any loss of power, the cause of which may be traced to faulty engine or engine component design or installation, including design or installation of the fuel ancillary or engine control systems.

- (b) To minimise the probability of in-flight engine failure, the engine shall be equipped with—

- (1) An ignition system that activates automatically, or is capable of being operated manually, for take-off and landing, and during flight, in visible moisture;
- (2) A magnetic particle detection or equivalent system that monitors the engine, accessories gearbox, and reduction gearbox, and which includes a flight deck caution indication; and
- (3) An emergency engine power control device that permits continuing operation of the engine through a sufficient power range to safely complete the flight in the event of any reasonably probable failure of the fuel control unit.

- (c) **SYSTEMS AND EQUIPMENT.** Single-engine turbine-powered aeroplanes approved to operate at night and/or in IMC shall be equipped with the following systems and equipment intended to ensure continued safe flight and to assist in achieving a safe forced landing after an engine failure, under all allowable operating conditions—

- (1) Two separate electrical generating systems, each one capable of supplying all probable combinations of continuous in-flight electrical loads for instruments, equipment, and systems required at night and/or in IMC;
- (2) A radio altimeter;
- (3) An emergency electrical supply system of sufficient capacity and endurance, following loss of all generated power, to as a minimum—
 - (i) Maintain the operation of all essential flight instruments, communication, and navigation systems during a descent from the maximum certificated altitude in a glide configuration to the completion of a landing;
 - (ii) Lower the flaps and landing gear, if applicable;
 - (iii) Provide power to one pitot heater, which shall serve an air speed indicator clearly visible to the pilot;
 - (iv) Provide for operation of the landing light specified in paragraph (c)(10) of this IS;
 - (v) Provide for one engine restart, if applicable; and
 - (vi) Provide for the operation of the radio altimeter;
- (4) Two attitude indicators, powered from independent sources;
- (5) A means to provide for at least one attempt at engine re-start;
- (6) Airborne weather radar;
- (7) A certified RNAV system capable of being programmed with the positions of aerodromes and safe forced landing areas, and

providing instantly available track and distance information to those locations;

- (8) For passenger operations, passenger seats and mounts that meet dynamically tested performance standards and are fitted with a shoulder harness or a safety belt with a diagonal shoulder strap for each passenger seat;
 - (9) In pressurised aeroplanes, sufficient supplemental oxygen for all occupants for descent following engine failure at the maximum glide performance from the maximum certificated altitude to an altitude at which supplemental oxygen is no longer required;
 - (10) A landing light that is independent of the landing gear and is capable of adequately illuminating the touchdown area in a night forced landing; and
 - (11) An engine fire warning system.
- (d) **MINIMUM EQUIPMENT LIST.** An AOC holder shall develop an MEL approved by the Authority that is appropriate to the type of single-engine turbine-powered aeroplane operated, specifying the operating equipment required for night and/or IMC operations and for day/VMC operations.
 - (e) **AIRCRAFT FLIGHT MANUAL INFORMATION.** The Aircraft Flight Manual shall include limitations, procedures, approval status, and other information relevant to operations by single-engine turbine-powered aeroplanes at night and/or in IMC.
 - (f) **EVENT REPORTING.** An AOC holder operating turbine-powered aeroplanes at night and/or in IMC shall report all significant failures, malfunctions, or defects to the Authority who in turn will notify the State of Design.
 - (g) **OPERATOR PLANNING.** Each AOC holder operating single-engine turbine-powered aeroplanes at night and/or in IMC shall take account of all relevant information in the assessment of intended routes or areas of operation, including the following—
 - (1) The nature of the terrain to be overflown, including the potential for carrying out a safe forced landing in the event of an engine failure or major malfunction;

- (2) Weather information, including seasonal and other adverse meteorological influences that may affect the flight; and
 - (3) Other criteria and limitations as specified by the Authority.
- (h) Each AOC holder shall identify aerodromes or safe forced landing areas available for use in the event of engine failure and the position of these shall be programmed into the RNAV system.

Note 1: A “safe” forced landing in this context means a landing in an area in which it can reasonably be expected will not lead to serious injury or loss of life, even though the aeroplane may incur extensive damage.

Note 2: Operation over routes and in weather conditions that permit a safe forced landing in the event of an engine failure, as specified in paragraph 8.8.1.31(a) of this part is not required for aeroplanes approved in accordance with paragraph 8.8.1.31(b)(1) of this part. The availability of forced landing areas at all points along a route is not specified for these aeroplanes because of the very high engine reliability, additional systems and operational equipment, procedures, and training requirements specified in IS 8.7.2.9.

- (i) **FLIGHT CREW EXPERIENCE, TRAINING AND CHECKING.**
 - (1) No person may serve as, and no AOC holder shall use, a flight crew member in single-engine turbinepowered aeroplanes engaged in commercial air transport unless that person has completed the appropriate flight crew member training as specified in this part and approved by the Authority.
 - (2) The AOC holder’s approved flight crew training and checking shall be appropriate to night and/or IMC operations by single-engine turbine-powered aeroplanes, covering normal, abnormal, and emergency procedures and, in particular, engine failure, including descent to a forced landing in night and/or in IMC conditions.
- (j) **ROUTE LIMITATIONS OVER WATER.**
 - (1) An AOC holder shall not conduct over-water operations using single-engine turbine-powered aeroplanes operating at night and/or in IMC except in areas of operation or over specific routes identified in the AOC holder’s operations specifications.

- (2) No AOC holder may conduct over water operations using single-engine turbine-powered aeroplanes operating at night and/or in IMC except in accordance with procedures approved by the Authority in the AOC holder's OM for over-water operations covering flight beyond gliding distance from an area suitable for a safe forced landing/ditching having regard to the characteristics of the aeroplane, seasonal weather influences, including likely sea state and temperature, and the availability of search and rescue services.

(k) OPERATOR CERTIFICATION OR VALIDATION.

- (1) An AOC holder applying for operations specifications granting authorisation to conduct single-engine turbine-powered aeroplane operations at night and/or in IMC shall demonstrate to the Authority, consistent with Part 9 of these regulations, the ability to conduct operations by single-engine turbinepowered aeroplanes at night and/or in IMC through a certification and approval process specified by the Authority.

IS: 8.8.1.9

CATEGORY II AND CATEGORY III MANUAL

- (a) APPLICATION FOR APPROVAL. An applicant for approval of a Category II manual or an amendment to an approved Category II manual shall submit the proposed manual or amendment to the Authority. If the application requests an evaluation program, it shall include the following—
 - (1) The location of the aircraft and the place where the demonstrations are to be conducted; and
 - (2) The date the demonstrations are to commence (at least 10 days after filing the application).
- (b) CONTENTS. Each Category II or Category III manual must contain—
 - (1) The registration number, make, and model of the aircraft to which it applies;
 - (2) A maintenance program; and
 - (3) The procedures and instructions related to recognition of DH, use of runway visual range information, approach monitoring, the decision region (the region between the middle marker and the decision height), the maximum permissible deviations of

the basic ILS indicator within the decision region, a missed approach, use of airborne low approach equipment, minimum altitude for the use of the autopilot, instrument and equipment failure warning systems, instrument failure, and other procedures, instructions, and limitations that may be found necessary by the Authority.

Note: CAT II approval is required prior to obtaining CAT III approval.

IS 8.8.1.28 INTERCEPTION OF CIVIL AIRCRAFT

- (a) To achieve the uniformity in regulations which is necessary for the safety of navigation of civil aircraft due regard shall be had by Contracting States to the following principles when developing regulations and administrative directives—
- (1) Interception of civil aircraft will be undertaken only as a last resort.
 - (2) If undertaken, an interception will be limited to determining the identity of the aircraft, unless it is necessary to return the aircraft to its planned track, direct it beyond the boundaries of national airspace, guide it away from a prohibited, restricted, or danger area, or instruct it to effect a landing at a designated aerodrome.
 - (3) Practice interception of civil aircraft will not be undertaken.
 - (4) Navigational guidance and related information will be given to an intercepted aircraft by radiotelephony, whenever radio contact can be established.
 - (5) In the case where an intercepted civil aircraft is required to land in the territory overflown, the aerodrome designated for the landing is to be suitable for the safe landing of the aircraft type concerned.

Note: In the unanimous adoption by the 25th Session (Extraordinary) of the ICAO Assembly on 10 May 1984 of Article 3 bis to the Chicago Convention, the Contracting States have recognised that “every State must refrain from resorting to the use of weapons against civil aircraft in flight.”

- (b) Contracting States shall ensure that—
- (1) a standard method that has been established for the

manoeuvring of aircraft intercepting a civil aircraft. Such method shall be designed to avoid any hazard for the intercepted aircraft.;

- (2) provision is made for the use of SSR or ADS-B, where available, to identify civil aircraft in areas where they may be subject to interception.
- (c) The PIC of an aircraft that is intercepted by another aircraft shall immediately—
 - (1) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in paragraph (e) of this IS.
 - (2) notify, if possible, the appropriate ATS unit.
 - (3) attempt to establish radio communication with the intercepting aircraft or with the appropriate intercept control unit by making a general call on the emergency frequency 121.5 MHz, giving the identity of the intercepted aircraft and the nature of the flight; and if no contact has been established and if practicable, repeating this call on the emergency frequency 243 MHz.
 - (4) if equipped with an SSR transponder, select Mode A, Code 7700, unless otherwise instructed by the appropriate ATS unit.
 - (5) if equipped with ADS-B or ADS-C, select the appropriate emergency functionality, if available, unless otherwise instructed by the appropriate ATS unit.
- (d) If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the PIC of the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.
- (e) If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the PIC of the intercepted aircraft shall request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

- (f) RADIO COMMUNICATION DURING INTERCEPTION. If radio contact is established during interception but communication in a common language is not possible, the PIC of each involved aircraft shall attempt to convey instructions, acknowledgement of instructions, and essential information by using the phrases and pronunciations in Table 1 of this IS and transmitting each phrase twice.

Phrases for use by INTERCEPTING Aircraft			Phrases for use by INTERCEPTED Aircraft		
Phrase	Pronunciation ¹	Meaning	Phrase	Pronunciation ¹	Meaning
CALL SIGN	<u>KOL</u> SA-IN	What is your call sign?	CALL SIGN (call sign) ²	<u>KOL</u> SA-IN (call sign)	My call sign is (call sign)
FOLLOW	<u>FOL</u> -LO	Follow me	WILCO	<u>VILL</u> -KO	Understood Will comply
DESCEND	DEE- <u>SEND</u>	Descend landing	forCAN NOT	<u>KANN</u> NOTT	Unable to comply
YOU LAND	<u>YOU</u> <u>LA</u> AND	Land at this aerodrome	REPEAT	REE- <u>PEET</u>	Repeat your instruction
PROCEED	PRO- <u>SEED</u>	You proceed	mayAM LOST	<u>AM</u> <u>LOSST</u>	Position unknown
			MAYDAY	MAYDAY	I am in distress
			HIJACK ³	<u>HI-JACK</u>	I have been hijacked
			LAND (place name)	LAAND (place name)	I request to land at (place name)
			DESCEND	DEE- <u>SEND</u>	I require descent

Notes.

1. In the second column, syllables to be emphasised are 8.underlined.
 2. The call sign required to be given is that used in radiotelephone communications with ATS units and corresponding to the aircraft identification in the flight plan.
 3. Circumstances may not always permit, nor make desirable, the use of the phrase "HIJACK."
- (g) The signals in Table 2 of this IS shall be used by the pilots of each involved aircraft in the event of interception. Signals initiated by intercepting aircraft and responses by intercepted aircraft.

Table 2. Signals Initiated by Intercepting Aircraft and Responses by Intercepted Aircraft

Series	INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
1	DAY or NIGHT – Rocking aircraft and flashing navigational lights at irregular intervals (and landing lights in the case of a helicopter) from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft (or to the right if the intercepted aircraft is a helicopter) and, after acknowledgement, a slow level turn, normally to the left, (or to the right in the case of a helicopter) on the desired heading. Note 1: Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1. Note 2: If the intercepting aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of racetrack patterns and to rock the aircraft each time it passes the intercepted aircraft.	You have been intercepted. Follow me.	DAY or NIGHT – Rocking aircraft, flashing navigational lights at irregular intervals, and following.	Understood, will comply.
2	DAY or NIGHT – An abrupt breakaway manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.	You may proceed.	DAY or NIGHT – Rocking the aircraft.	Understood, will comply.
3	DAY or NIGHT – Lowering landing gear (if fitted), showing steady landing lights, and overflying runway in use or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. In the case of helicopters, the intercepting helicopter makes	Land at this aerodrome.	DAY or NIGHT – Lowering landing gear (if fitted), showing steady landing lights, and following the intercepting aircraft and, if, after overflying the runway in use or the helicopter landing area, landing is	Understood, will comply.

Series	INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
	a landing approach, coming to hover near the landing area.		considered safe, proceeding to land.	

Table 3. Signals Initiated by Intercepted Aircraft and Responses by Intercepting Aircraft

Series	INTERCEPTED Aircraft Signales	Meaning	INTERCEPTING Aircraft Response	Meaning
4	DAY or NIGHT – Raising landing gear (if fitted) and flashing landing lights while passing over runway in use or helicopter landing area at a height exceeding 300 m (1 000 ft) but not exceeding 600 m (2 000 ft) (in the case of a helicopter, at a height exceeding 50 m (170 ft) but not exceeding 100 m (330 ft) above the aerodrome level, and continuing to circle runway in use or helicopter landing area. If unable to flash landing lights, flash any other lights available.	Aerodrome you have designated is inadequate.	DAY or NIGHT – If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear (if fitted) and uses the Series 1 signals prescribed for intercepting aircraft. If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, follow me. Understood, you may proceed.
5	DAY or NIGHT – Regular switching on and off of all available lights, but in such a manner as to be distinct from flashing lights.	Cannot comply.	DAY or NIGHT – Use Series 2 signals prescribed for intercepting aircraft.	Understood.
6	DAY or NIGHT – Irregular flashing of all available lights.	In distress.	DAY or NIGHT – Use Series 2 signals prescribed for intercepting aircraft.	Understood.

IS: 8.8.2.11 UNIVERSAL AVIATION SIGNALS

- (a) **DISTRESS SIGNALS.** The following signals, used either together or separately, mean that grave and imminent danger threatens, and immediate assistance is requested—

Note: None of the provisions in this section shall prevent the use, by an aircraft in distress, of any means at its disposal to attract attention, make known its position and obtain help.

- (1) A signal made by radiotelegraphy or by any other signalling method consisting of the group SOS
 - (2) (••• — — —••• in the Morse Code)
 - (3) A signal sent by radiotelephony consisting of the spoken word MAYDAY;
 - (4) Rockets or shells throwing red lights, fired one at a time at short intervals;
 - (5) A parachute flare showing a red light.
- (b) The following signals, used either together or separately, mean that an aircraft wishes to give notice of difficulties which compel it to land without requiring immediate assistance—
- (1) The repeated switching on and off of the landing lights; or
 - (2) The repeated switching on and off of the navigation lights in such manner as to be distinct from flashing navigation lights.
 - (c) The following signals, used either together or separately, mean that an aircraft has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or of some person on board or within sight—
 - (1) A signal made by radiotelegraphy or by any other signalling method consisting of the group XXX.
 - (2) A signal sent by radiotelephony consisting of the spoken words PAN, PAN; or
 - (3) An urgency message sent via data link which transmits the intent of the words PAN, PAN
 - (d) VISUAL SIGNALS USED TO WARN AN UNAUTHORISED AIRCRAFT. By day and by night, a series of projectiles discharged from the ground at intervals of 10 seconds, each showing, on bursting, red and green lights or stars will indicate to an unauthorised aircraft that it is flying in or about to enter a restricted, prohibited, or danger area, and that the aircraft is to take such remedial action as may be necessary.

- (e) SIGNALS FOR AERODROME TRAFFIC. Aerodrome controllers shall use and pilots shall obey the following light and pyrotechnic signals—

Table 4. Light and Pyrotechnic Signals

Light		From Aerodrome Control to:	
		Aircraft in Flight	Aircraft on the Ground
Directed towards aircraft concerned (See Figure 1)	Steady green	Cleared to land	Cleared for take-off
	Steady red	Give way to other aircraft and continue circling	Stop
	Series of green flashes	Return for landing*	Cleared to taxi
	Series of red flashes	Aerodrome unsafe, do not land	Taxi clear of landing area in use
	Series of white flashes	Land at this aerodrome and proceed to ramp*	Return to starting point on the aerodrome
	Red pyrotechnic	Notwithstanding any previous instructions, do not land for the time being	

* Clearances to land and to taxi will be given in due course.

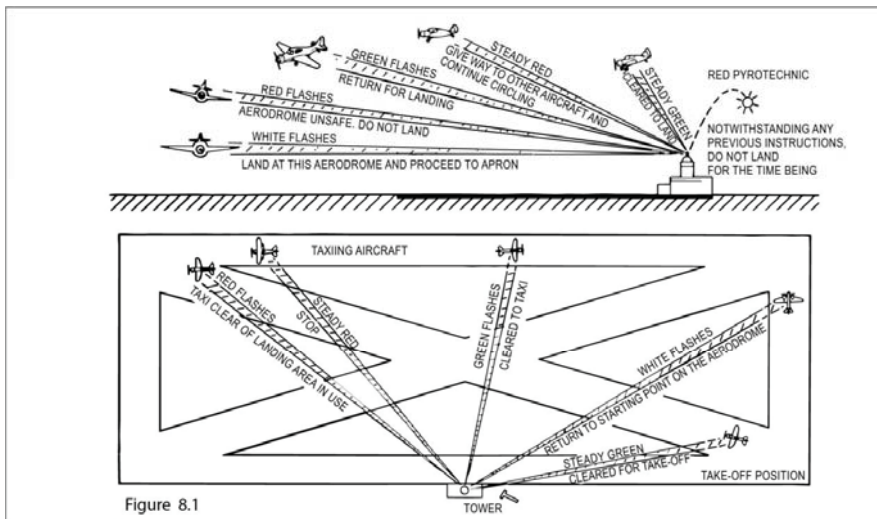


Figure 8.1

- (f) Pilots shall acknowledge aerodrome controller signals as follows—
- (1) When in flight—
- (i) during the hours of daylight by rocking the aircraft's wings;
- Note. - This signal should not be expected on the base and final legs of the approach.
- (ii) during the hours of darkness by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.
- (2) When on the ground—
- (i) during the hours of daylight by moving the aircraft's ailerons or rudder;
- (ii) during the hours of darkness by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.
- (g) Aerodrome authorities shall use the following visual ground signals shall be use during the following situations—
- (1) PROHIBITION OF LANDING. A horizontal red square panel with yellow diagonals (Figure 8.2) when displayed in a signal area indicates that landings are prohibited and that the prohibition is liable to be prolonged.



Figure 8.2

- (2) NEED FOR SPECIAL PRECAUTIONS WHILE APPROACHING OR LANDING. A horizontal red square panel with one yellow diagonal (Figure 8.3) when displayed in a signal area indicates that owing to the bad state of the manoeuvring area, or for any other reason, special precautions shall be observed in approaching to land or in landing.



Figure 8.3

(3) USE OF RUNWAYS AND TAXIWAYS.

- (i) A horizontal white dumb-bell (Figure 8.4) when displayed in a signal area indicates that aircraft are required to land, take off and taxi on runways and taxiways only.

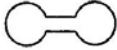


Figure 8.4

- (ii) The same horizontal white dumb-bell as in Figure 8.4, but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell (Figure 8.5) when displayed in a signal area indicates that aircraft are required to land and take off on runways only, but other manoeuvres need not be confined to runways and taxiways



Figure 8.5

- (4) CLOSED RUNWAYS OR TAXIWAYS. Crosses of a single contrasting colour, yellow or white (Figure 8.6), displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for movement of aircraft.



Figure 8.6

(5) DIRECTIONS FOR LANDING OR TAKE-OFF.

- (i) A horizontal white or orange landing T (Figure 8.7) indicates the direction to be used by aircraft for landing and take-off, which shall be in a direction parallel to the shaft of the T towards the cross arm.

Note: When used at night, the landing T is either illuminated or outlined in white coloured lights.



Figure 8.7

- (ii) A set of two digits (Figure 8.8) displayed vertically at or near the aerodrome control tower indicates to aircraft on the manoeuvring area the direction for take-off, expressed in units of 10 degrees to the nearest 10 degrees of the magnetic compass.

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Figure 8.8

- (6) RIGHT-HAND TRAFFIC. When displayed in a signal area, or horizontally at the end of the runway or strip in use, a right-hand arrow of conspicuous colour (Figure 8.9) indicates that turns are to be made to the right before landing and after take-off.

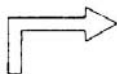


Figure 8.9

- (7) AIR TRAFFIC SERVICES REPORTING OFFICE. The letter C displayed vertically in black against a yellow background (Figure 8.10) indicates the location of the air traffic services reporting office.



Figure 8.10

- (8) GLIDER FLIGHTS IN OPERATION. A double white cross displayed horizontally (Figure 8.11) in the signal area indicates that the aerodrome is being used by gliders and that glider flights are being performed.



Figure 8.11

- (h) The following marshalling signals shall be used from a signalman to an aircraft.

Note: These signals are designed for use by the signalman, with hands illuminated as necessary to facilitate observation by the pilot, and facing the aircraft in a position—

- (1) For heavier-than-air aircraft, the signalman shall be positioned forward of the left-wing tip within view of the pilot and, for helicopters, where the signalman can best be seen by the pilot.

Note 1: The meaning of the relevant signals remains the same if bats, illuminated wands or torchlights are held.

Note 2: The aircraft engines are numbered, for the signalman facing the aircraft, from right to left (i.e. No. 1 engine being the port outer engine).

Note 3: Signals marked with an asterisk are designed for use to hovering helicopters.

- (2) Prior to using the following signals, the signalman shall ascertain that the area within which an aircraft is to be guided is clear of objects which the aircraft might otherwise strike.

Note: The design of many aircraft is such that the path of the wing tips, engines, and other extremities cannot always be monitored visually from the flight deck while the aircraft is being manoeuvred on the ground.



1. Wingwalker/guide

Raise right hand above head level with wand pointing up; move left-hand wand pointing down toward body.

Note: This signal provides an indication by a person positioned at the aircraft wing tip to the pilot / marshaller/push-back operator that the aircraft movement on/off a parking position would be unobstructed.

**2. Identify gate**

Raise fully extended arms straight above head with wands pointing up.

**3. Proceed to next signalman or as directed by tower/ground control**

Point both arms upward; move and extend arms outward to sides of body and point with wands to direction of next signalman or taxi area.

**4. Straight ahead**

Bend extended arms at elbows and move wands up and down from chest height to head.

**5 a). Turn left (from pilot's point of view)**

With right arm and wand extended at a 90-degree angle to body, make "come ahead" signal with left hand. The rate of signal motion indicates to pilot the rate of aircraft turn.

**5 b). Turn right (from pilot's point of view)**

With left arm and wand extended at a 90-degree angle to body, make "come ahead" signal with right hand. The rate of signal motion indicates to pilot the rate of aircraft turn.

**6 a). Normal stop**

Fully extend arms and wands at a 90-degree angle to sides and slowly move to above head until wands cross.

**6 b). Emergency stop**

Abruptly extend arms and wands to top of head, crossing wands.

**7 a). Set brakes**

Raise hand just above shoulder height with open palm. Ensuring eye contact with flight crew, close hand into a fist. Do not move until receipt of “thumbs up” acknowledgement from flight crew.

**7 b). Release brakes**

Raise hand just above shoulder height with hand closed in a fist. Ensuring eye contact with flight crew, open palm. Do not move until receipt of “thumbs up” acknowledgement from flight crew.

**8 a). Chocks inserted**

With arms and wands fully extended above head, move wands inward in a “jabbing” motion until wands touch. Ensure acknowledgement is received from flight crew.

**8 b). Chocks removed**

With arms and wands fully extended above head, move wands outward in a “jabbing” motion. Do not remove chocks until authorised by flight crew.

**9. Start engine(s)**

Raise right arm to head level with wand pointing up and start a circular motion with hand; at the same time, left arm raised above head level, point to engine to be started.

**10. Cut engines**

Extend arm with wand forward of body at shoulder level; move hand and wand to top of left shoulder and draw wand to top of right shoulder in a slicing motion across throat.

**11. Slow down**

Move extended arms downward in a “patting” gesture, moving wands up and down from waist to knees.

**12. Slow down engine(s) on indicated side**

With arms down and wands toward ground, wave either right or left wand up and down indicating engine(s) on left or right side respectively should be slowed down.

**13. Move back**

With arms in front of body at waist height, rotate arms in a forward motion. To stop rearward movement, use signal 6 a) or 6 b).

**14 a). Turns while backing (for tail to starboard)**

Point left arm with wand down and bring right arm from overhead vertical position to horizontal forward position, repeating right-arm movement.

**14 b). Turns while backing (for tail to port)**

Point right arm with wand down and bring left arm from overhead with vertical position to horizontal Forward position, repeating left arm movement

**15. Affirmative/all clear**

Raise right arm to head level with wand pointing up or display hand with “thumbs up”; left arm remains at side by knee.

**16. Hover**

Fully extend arms and wands at a 90-degree angle to sides.

**17. Move upward**

Fully extend arms and wands at a 90-degree angle to sides and, with palms turned up, move hands upward. Speed of movement indicates rate of ascent.

**18. Move downward**

Fully extend arms and wands at a 90-degree angle to sides and, with palms turned down, move hands downward. Speed of movement indicates rate of descent.

**19 a). Move horizontally left (from pilot's point of view)**

Extend arm horizontally at a 90 degree angle to right side of body. Move other arm in same direction in a sweeping motion

***19 b). Move horizontally right (from pilot's point of view)**

Extend arm horizontally at a 90-degree angle to left side of body. Move other arm in same direction in a sweeping motion.

**20. Land**

Cross arms with wands downward and in front of body.

**21. Fire**

Move right-hand wand in “fanning” motion from shoulder to knee, while at the same time pointing with left-hand wand to area of fire.

**22. Hold position/stand by**

Fully extend arms and wands downward at a 45-degree angle to sides. Hold position until aircraft is clear for next manoeuvre.

**23. Dispatch aircraft**

Perform a standard salute with right hand and/or wand to dispatch the aircraft. Maintain eye contact with flight crew until aircraft has begun to taxi.

**24. Do not touch controls (technical/servicing communication signal)**

Extend right arm fully above head and close fist or hold wand in horizontal position; left arm remains at side by knee.

**25. Connect ground power**

Hold arms fully extended above head; open left hand horizontally and move fingertips of right hand into and touch open palm of left hand (forming a “T”). At night, illuminated wands can also be used to form the “T” above head.



26. Disconnect power (technical/servicing communication signal)

Hold arms fully extended above head with fingertips of right hand touching open horizontal palm of left hand (forming a "T"); then move right hand away from the left. Do not disconnect power until authorised by flight crew. At night, illuminated wands can also be used to form the "T" above head.



27. Negative (technical/servicing a communication signal)

Hold right arm straight out at 90 degrees from shoulder and point wand down to ground or display hand with "thumbs down"; left hand remains at side by knee.



28. Establish communication via interphone (technical/servicing communication signal)

Extend both arms at 90 degrees from body and move hands to cup both ears.



29. Open/close stairs (technical/servicing communication signal)

With right arm at side and left arm raised above head at a 45-degree angle, move right arm in a sweeping motion towards top of left shoulder.

(i) SIGNALS FROM THE PILOT OF AN AIRCRAFT TO A SIGNALMAN.

- (1) The PIC or Co-Pilot shall use the following signals when communicating with a signalman—

Note 1: These signals are designed for use by a pilot on the flight deck with hands plainly visible to the signalman, and illuminated as necessary to facilitate observation by the signalman.

Note 2: The aircraft engines are numbered in relation to the signalman facing the aircraft, from right to left (i.e. No. 1 engine being the port outer engine).

- (i) BRAKES ENGAGED. Raise arm and hand, with fingers extended, horizontally in front of face, then clench fist.

- (ii) BRAKES RELEASED. Raise arm, with fist clenched, horizontally in front of face, then extend fingers.

Note: The moment the fist is clenched or the fingers are extended indicates, respectively, the moment of brake engagement or release.

- (i) INSERT CHOCKS. Arms extended, palms outwards, move hands inwards to cross in front of face.
- (ii) REMOVE CHOCKS. Hands crossed in front of face, palms outwards, move arms outwards.
- (iii) READY TO START ENGINE(S). Raise the appropriate number of fingers on one hand indicating the number of the engine to be started.

IS 8.8.3.4 TABLES OF CRUISING LEVELS

- (a) The cruising levels at which a flight or a portion of a flight is to be conducted shall be in terms of—

(1) FLs, for flights at or above the lowest usable FL or, where applicable, above the transition altitude; and

(2) Altitude, for flights below the lowest usable FL or, where applicable, at or below the transition altitude.
- (b) The PIC shall observe the following cruising levels in areas where, on the basis of Regional Air Navigation Agreements and in accordance with conditions specified therein, a VSM of 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive:*

TRACK*											
From 000 Degrees to 179 Degrees**						From 180 Degrees to 359 Degrees**					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
FL	Level Metres	Feet	FL	Level Metres	Feet	FL	Level Metres	Feet	FL	Level Metres	Feet
010	300	1 000				020	600	2 000			
030	900	3 000	035	1 050	3 500	040	1 200	4 000	045	1 350	4 500
050	1 500	5 000	055	1 700	5 500	060	1 850	6 000	065	2 000	6 500
070	2 150	7 000	075	2 300	7 500	050	2 450	8 000	085	2 600	8 500
090	2 750	9 000	095	2 900	9 500	100	3 050	10 000	105	3 200	10 500
110	3 350	11 000	115	3 500	11 500	120	3 650	12 000	125	3 800	12 500
130	3 950	13 000	135	4 100	13 500	140	4 250	14 000	145	4 400	14 500
150	4 550	15 000	155	4 700	15 500	160	4 900	16 000	165	5 050	16 500

170	5 200	17 000	175	5 350	17 500	180	5 500	18 000	185	5 650	18 500
190	5 800	19 000	195	5 950	19 500	200	6 100	20 000	205	6 250	20 500
210	6 400	21 000	215	6 550	21 500	220	6 700	22 000	225	6 850	22 500
230	7 000	23 000	235	7 150	23 500	240	7 300	24 000	245	7 450	24 500
250	7 600	25 000	255	7 750	25 500	260	7 900	26 000	265	8 100	26 500
270	8 250	27 000	275	8 400	27 500	280	8 550	28 000	285	8 700	28 500
290	8 850	29 000	300	9 150	30 000	310	9 450	31 000	320	9 750	32 000
330	10 050	33 000	340	10 350	34 000	350	10 650	35 000	360	10 950	36 000
370	11 300	37 000	380	11 600	38 000	390	11 900	39 000	400	12 200	40 000
410	12 500	41 000	420	12 800	42 000	430	13 100	43 000	440	13 400	44 000
450	13 700	45 000	460	14 000	46 000	470	14 350	47 000	480	14 650	48 000
490	14 950	49 000	500	15 250	50 000	510	15 550	51 000	520	15 850	52 000
etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.

*Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

**Except where, on the basis of Regional Air Navigation Agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.

- (c) The PIC shall observe the following cruising levels in other areas not specified in paragraph (a) of this IS.

TRACK*											
From 000 Degrees to 179 Degrees**						From 180 Degrees to 359 Degrees**					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level		
FL	Metres	Feet	FL	Metres	Feet	FL	Metres	Feet	FL	Metres	Feet
010	300	1 000		□□	□	020	600	2 000		□□	□
030	900	3 000	035	1 050	3 500	040	1 200	4 000	045	1 350	4 500
050	1 500	5 000	055	1 700	5 500	060	1 850	6 000	065	2 000	6 500
070	2 150	7 000	075	2 300	7 500	080	2 450	8 000	085	2 600	8 500
090	2 750	9 000	095	2 900	9 500	100	3 050	10 000	105	3 200	10 500
110	3 350	11 000	115	3 500	11 500	120	3 650	12 000	125	3 800	12 500
130	3 950	13 000	135	4 100	13 500	140	4 250	14 000	145	4 400	14 500
150	4 550	15 000	155	4 700	15 500	160	4 900	16 000	165	5 050	16 500
170	5 200	17 000	175	5 350	17 500	180	5 500	18 000	185	5 650	18 500
190	5 800	19 000	195	5 950	19 500	200	6 100	20 000	205	6 250	20 500
210	6 400	21 000	215	6 550	21 500	220	6 700	22 000	225	6 850	22 500
230	7 000	23 000	235	7 150	23 500	240	7 300	24 000	245	7 450	24 500
250	7 600	25 000	255	7 750	25 500	260	7 900	26 000	265	8 100	26 500
270	8 250	27 000	275	8 400	27 500	280	8 550	28 000	285	8 700	28 500
290	8 850	29 000	300	9 150	30 000	310	9 450	31 000	320	9 750	32 000
330	10 050	33 000	340	10 350	34 000	350	10 650	35 000	360	10 950	36 000
370	11 300	37 000	380	11 600	38 000	390	11 900	39 000	400	12 200	40 000
410	12 500	41 000	420	12 800	42 000	430	13 100	43 000	440	13 400	44 000
450	13 700	45 000	460	14 000	46 000	470	14 350	47 000	480	14 650	48 000
490	14 950	49 000	500	15 250	50 000	510	15 550	51 000	520	15 850	52 000

etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.
*Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North. **Except where, on the basis of Regional Air Navigation Agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.										

IS: 8.9.2.10EXIT ROW SEATING

- (a) No Cabin Crew may seat a person in a passenger exit seat if it is likely that the person would be unable to perform one or more of the applicable functions listed below—
- (1) The person lacks sufficient mobility, strength, or dexterity in both arms and hands, and both legs—

(i) to reach upward, sideways, and downward to the location of emergency exit and exit-slide operating mechanisms;

(ii) to grasp and push, pull, turn, or otherwise manipulate those mechanisms;

(ii) to push, shove, pull, or otherwise open emergency exits;

(iv) to lift out, hold, deposit on nearby seats, or manoeuvre over the seatbacks to the next row objects the size and weight of over-wing window exit doors;

(v) to remove obstructions of size and weight similar over-wing exit doors;

(vi) to reach the emergency exit expeditiously;

(vii) to maintain balance while removing obstructions;

(viii) to exit expeditiously;

(ix) to stabilise an escape slide after deployment; or

(x) to assist others in getting off an escape slide.

(2) The person is less than 15 years of age or lacks the capacity to perform one or more of the applicable functions listed above

without the assistance of an adult companion, parent, or other relative.

- (3) The person lacks the ability to read and understand instructions required by this section and related to emergency evacuation provided by the AOC holder in printed or graphic form or the ability to understand oral crew commands.
 - (4) The person lacks sufficient visual capacity to perform one or more of the above functions without the assistance of visual aids beyond contact lenses or eyeglasses.
 - (5) The person lacks sufficient aural capacity to hear and understand instructions shouted by Cabin Crews, without assistance beyond a hearing aid.
 - (6) The person lacks the ability adequately to impart information orally to other passengers.
 - (7) The person has a condition or responsibilities, such as caring for small children, that might prevent the person from performing one or more of the functions listed above; or a condition that might cause the person harm if he or she performs one or more of the functions listed above.
- (b) Determinations as to the suitability of a person permitted to occupy an exit seat shall be made by the Cabin Crew or other persons designated in the AOC holder's operations manual.
 - (c) In the event a Cabin Crew determines that a passenger assigned to an exit seat would be unable to perform the emergency exit functions, or if a passenger requests a non-exit seat, the Cabin Crew shall expeditiously relocate the passenger to a non-exit seat.
 - (d) In the event of full booking in the non-exit seats, and if necessary to accommodate a passenger being relocated from an exit seat, the Cabin Crew shall move a passenger who is willing and able to assume the evacuation functions, to an exit seat.
 - (e) An AOC ticket agent shall, prior to boarding, assign seats consistent with the passenger selection criteria and the emergency exit functions, to the maximum extent feasible.
 - (f) An AOC ticket agent shall make available for inspection by the public at all passenger loading gates and ticket counters at an aerodrome where it conducts passenger operations, written

procedures established for making determinations in regard to exit row seating,

- (g) A Cabin Crew shall include in their passenger briefings a request that a passenger identify himself or herself to allow reseating if he or she—
 - (1) cannot meet the selection criteria;
 - (2) has a nondiscernible condition that will prevent him or her from performing the evacuation functions;
 - (3) may suffer bodily harm as the result of performing one or more of those functions; or
 - (4) does not wish to perform emergency exit functions.
- (h) A Cabin Crew shall include in their passenger briefings a reference to the passenger information cards and the functions to be performed in an emergency exit.
- (i) A passenger shall comply with instructions given by a crew member or other authorised employee of the AOC holder implementing exit seating restrictions.
- (j) No PIC may allow taxi or pushback unless at least one required crew member has verified that all exit rows and escape paths are unobstructed and that no exit seat is occupied by a person the crew member determines is likely to be unable to perform the applicable evacuation functions.
- (k) The procedures required by this standard will not become effective until final approval is granted by the Authority. Approval will be based solely upon the safety aspects of the AOC holder's procedures. In order to comply with this standard AOC holders shall—
 - (1) Establish procedures that address the requirements of this standard; and
 - (2) Submit their procedures for preliminary review and approval to the Authority.

IS: 8.9.2.12 OXYGEN FOR MEDICAL USE BY PASSENGERS

- (a) An AOC holder may allow a passenger to carry and operate equipment for the storage, generation, or dispensing of oxygen in accordance with the following—
- (1) The equipment is—
 - (i) furnished by the certificate holder and is of an approved type.
 - (ii) maintained by the certificate holder in accordance with an approved maintenance program;
 - (iii) free of flammable contaminants on all exterior surfaces;
 - (iv) capable of providing a minimum mass flow of oxygen to the user of four liters per minute;
 - (v) constructed so that all valves, fittings, and gauges are protected from damage; and
 - (vi) appropriately secured.
 - (2) When the oxygen is stored in the form of a liquid, the equipment has been under the certificate holder's approved maintenance program since its purchase new or since the storage container was last purged.
 - (3) When the oxygen is stored in the form of a compressed gas.
 - (i) The equipment has been under the certificate holder's approved maintenance program since its purchase new or since the last hydrostatic test of the storage cylinder; and
 - (ii) The pressure in any oxygen cylinder does not exceed the rated cylinder pressure.
 - (4) A person using the equipment has a medical need to use it evidenced by a written statement to be kept in that person's possession, signed by a licensed physician which specifies the maximum quantity of oxygen needed each hour and the maximum flow rate needed for the pressure altitude corresponding to the pressure in the cabin of the airplane under normal operating conditions. This paragraph does not apply to the carriage of oxygen in an airplane in which the only passengers carried are persons who may have a medical

need for oxygen during flight, no more than one relative or other interested person for each of those persons, and medical attendants.

- (5) The pilot in command is advised when the equipment is on board, and when it is intended to be used.
- (6) The equipment is stowed, and the person using the equipment is seated, so as not to restrict access to or use of any required emergency, or regular exit or of the aisle in the passenger compartment.
- (7) A person shall not, and no certificate holder may allow any person to, smoke within 10 feet of oxygen storage and dispensing equipment carried in accordance with this IS.
- (8) No certificate holder may allow any person other than a person trained in the use of medical oxygen equipment to connect or disconnect oxygen bottles or any other ancillary component while any passenger is aboard the aircraft.
- (9) The requirements of this IS do not apply to the carriage of supplemental or first-aid oxygen and related equipment required by these regulations.

IS: 8.9.2.14**CARRIAGE OF CARGO IN PASSENGER COMPARTMENTS**

- (a) Cargo may be carried anywhere in the passenger compartment if it is carried in an approved cargo bin that meets the following requirements—
 - (1) The bin must withstand the load factors and emergency landing conditions applicable to the passenger seats of the aircraft in which the bin is installed, multiplied by a factor of 1.15, using the combined mass of the bin and the maximum mass of cargo that may be carried in the bin.
 - (2) The maximum mass of cargo that the bin is approved to carry and any instructions necessary to ensure proper mass distribution within the bin must be conspicuously marked on the bin.
 - (3) The bin may not impose any load on the floor or other structure of the aircraft that exceeds the load limitations of that structure.

- (4) The bin must be attached to the seat tracks or to the floor structure of the aircraft, and its attachment must withstand the load factors and emergency landing conditions applicable to the passenger seats of the aircraft in which the bin is installed, multiplied by either the factor 1.15 or the seat attachment factor specified for the aircraft, whichever is greater, using the combined mass of the bin and the maximum mass of cargo that may be carried in the bin.
 - (5) The bin may not be installed in a position that restricts access to or use of any required emergency exit, or of the aisle in the passenger compartment.
 - (6) The bin must be fully enclosed and made of material that is at least flame resistant.
 - (7) Suitable safeguards must be provided within the bin to prevent the cargo from shifting under emergency landing conditions.
 - (8) The bin may not be installed in a position that obscures any passenger's view of the "seat belt" sign, "no smoking" sign, or any required exit sign, unless an auxiliary sign or other approved means for proper notification of the passenger is provided.
- (b) Cargo, including carry-on baggage, may be carried anywhere in the passenger compartment of a small (Group B) aeroplane if it is carried in an approved cargo rack, bin, or compartment installed in or on the aeroplane, if it is secured by an approved means, or if it is carried in accordance with the following—
- (1) For cargo, it is properly secured by a safety belt or other tie-down having enough strength to eliminate the possibility of shifting under all normally anticipated flight and ground conditions, or for carry-on baggage, it is restrained so as to prevent its movement during air turbulence.
 - (2) It is packaged or covered to avoid possible injury to occupants.
 - (3) It does not impose any load on seats or in the floor structure that exceeds the load limitation for those components.
 - (4) It is not located in a position that obstructs the access to, or use of, any required emergency or regular exit, or the use of the aisle between the crew and the passenger compartment,

or is located in a position that obscures any passenger's view of the "seat belt" sign, "no smoking" sign or placard, or any required exit sign, unless an auxiliary sign or other approved means for proper notification of the passengers is provided;

- (5) It is not carried directly above seated occupants.
 - (6) It is stowed in compliance with these restrictions during takeoff and landing.
 - (7) For cargo-only operations, if the cargo is loaded so that at least one emergency or regular exit is available to provide all occupants of the aircraft a means of unobstructed exit from the aircraft if an emergency occurs.
- (c) Cargo, including carry-on baggage, shall not be stowed in toilets.
- (d) Cargo, including carry-on baggage shall not be stowed against bulkheads or dividers in passenger compartments that are incapable of restraining articles against movement forward, sideways, or upward and unless the bulkheads or dividers carry a placard specifying the greatest mass that may be placed there, provided that—
- (1) It is properly secured by a safety belt or other tie-down having enough strength to eliminate the possibility of shifting under all normally anticipated flight and ground conditions.
 - (2) It is packaged or covered to avoid possible injury to occupants.
 - (3) It does not impose any load on seats or in the floor structure that exceeds the load limitation for those components.
 - (4) It is not located in a position that obstructs the access to, or use of, any required emergency or regular exit, or the use of the aisle between the crew and the passenger compartment, or is located in a position that obscures any passenger's view of the "seat belt" sign, "no smoking" sign or placard, or any required exit sign, unless an auxiliary sign or other approved means for proper notification of the passengers is provided.

IS: 8.10.1.9**COMPANY PROCEDURES INDOCTRINATION**

- (a) An AOC holder shall ensure that all operations personnel are provided company indoctrination training that covers the following areas—

- (1) AOC holder's organisation, scope of operation, and administrative practices as applicable to their assignments and duties.
- (2) Appropriate provisions of these regulations and other applicable regulations and guidance materials.
- (3) AOC holder policies and procedures.
- (4) Applicable crew member manuals.
- (5) Appropriate portions of the AOC holder's operations manual.
- (6) Contents of the AOC holder's certificate and operations specifications (not required for cabin crew).
- (7) Crew member and FOO duties and responsibilities.
- (8) AOC holder testing programme for alcohol and narcotic psychoactive substances.

IS: 8.10.1.10 INITIAL AND RECURRENT DANGEROUS GOODS TRAINING

- (a) An AOC holder not holding a permanent approval to carry dangerous goods shall ensure that—
 - (1) personnel engaged in general cargo handling have received training to carry out their duties in respect of dangerous goods. At a minimum this training shall cover the areas identified in Column 1 of Table 1 and be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and how to identify such goods; and
 - (2) aircraft crew members, flight operations officers, passenger handling staff, and security staff employed by the AOC holder who deal with the screening of a passengers and their baggage, have received training which, at a minimum, shall cover the areas identified in Column 2 of Table 1 and be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify them and what requirements apply to the carriage of such goods by passengers.

Table 1

Areas Of Dangerous Goods Training	1	2
General Philosophy	x	x
Limitations On Dangerous Goods In Air Transport	x	x
Classification		x
Package Marking And Labelling		x
Transport Document And Relevant Documentation	x	x
Recognition Of Undeclared Dangerous Goods	x	x
Provisions For Passengers And Crew	x	x
Emergency Procedures	x	x

Note: x indicates an area to be covered.

Note; Security Staff referred to in (a) 2 above are not required to complete training in item 5 of Table 1

- (b) An AOC holder holding a permanent approval to carry dangerous goods shall ensure that—
- (1) personnel engaged in the acceptance of dangerous goods have received training and are qualified to carry out their duties. At a minimum, this training shall cover the areas identified in Column 1 of Table 2 and be to a depth sufficient to ensure the staff can take decisions on the acceptance or refusal of dangerous goods offered for carriage by air;
 - (2) personnel engaged in ground handling, storage and loading of dangerous goods have received training to enable them to carry out their duties in respect of dangerous goods. At a minimum, this training shall cover the areas identified in Column 2 of Table 2 and be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify such goods and how to handle and load them;
 - (3) personnel engaged in general cargo handling have received training to enable them to carry out their duties in respect of dangerous goods. At a minimum, this training shall cover the areas identified in Column 3 of Table 2 and be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify such goods and how to handle and load them;
 - (4) flight crew members have received training which, at a minimum, shall cover the areas identified in Column 4 of Table 2. Training shall be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and how they should be carried on an aircraft; and

- (5) passenger handling staff; security staff employed by the operator who deal with the screening of passengers and their baggage; and crew members (other than flight crew members) have received training which, at a minimum, shall cover the areas identified in Column 5 of Table 2. Training shall be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and what requirements apply to the carriage of such goods by passengers or, more generally, their carriage on an aircraft.
- (c) An AOC holder shall ensure that all personnel who require dangerous goods training receive recurrent training at intervals of not longer than 2 years.
- (d) An AOC holder shall ensure that records of dangerous goods training are maintained for all personnel required such training and that these records are maintained at the location where the personnel perform such duties.
- (e) An AOC holder shall ensure that its handling agent's staff are trained in accordance with the applicable column of Table 1 or Table 2.

Table 2

Areas Of Training	1	2	3	4	5
General Philosophy	x	x	x	x	x
Limitations On Dangerous Goods In Air Transport	x	x	x	x	x
Classification And List Of Dangerous Goods	x	x	x	x	x
General Packing Requirements And Packing Instructions	x	x	x	x	x
Package Marking And Labelling	x	x	x	x	x
Acceptance Of Dangerous Good, Including The Use Of A Checklist	x				
Transport Document And Relevant Documentation	x			x	x
Storage and Loading Procedures, Restrictions On Loading And Segregation	x	x	x	x	
Inspections For Damage Or Leakage And Decontamination Procedures	x	x	x	x	
Provision Of Information To PIC	x	x		x	
Provisions for passengers and crew	x	x	x	x	x

Recognition Of Undeclared Dangerous Goods	x	x	x	x
Emergency Procedures	x	x	x	x

Note: x indicates an area to be covered.

- (f) An AOC holder shall provide dangerous goods training manuals which contain adequate procedures and information to assist personnel in identifying packages marked or labelled as containing hazardous materials including—
- (1) instructions on the acceptance, handling, and carriage of hazardous materials;
 - (2) instructions governing the determination of proper shipping names and hazard classes;
 - (3) packaging, labelling, and marking requirements;
 - (4) requirements for shipping papers, compatibility requirements, loading, storage, and handling requirements; and
 - (5) restrictions.

IS: 8.10.1.11 INITIAL OR RECURRENT SECURITY TRAINING REQUIREMENTS

- (a) A person shall not serve nor shall any AOC holder use operational personnel unless they have completed the recurrent training security curriculum approved by the Authority within 12 calendar months.
- (b) The operator shall establish and maintain an approved security training programme which ensures crew members act in the most appropriate manner to minimise the consequences of acts of unlawful interference. As a minimum, this programme shall include the following elements—
- (1) determination of the seriousness of any occurrence;
 - (2) crew communication and coordination;
 - (3) appropriate self-defence responses;

- (4) use of non-lethal protective devices assigned to crew members whose use is authorised by the State of the Operator;
 - (5) understanding of behaviour of terrorists so as to facilitate the ability of crew members to cope with hijacker behaviour and passenger responses;
 - (6) live situational training exercises regarding various threat conditions;
 - (7) flight crew compartment procedures to protect the aeroplane; and
 - (8) aeroplane search procedures and guidance on least-risk bomb locations where practicable.
- (c) The operator shall also establish and maintain a training programme to acquaint appropriate employees with preventive measures and techniques in relation to passengers, baggage, cargo, mail, equipment, stores and supplies intended for carriage on an aeroplane so that they contribute to the prevention of acts of sabotage or other forms of unlawful interference.

IS: 8.10.1.12 INITIAL CREW RESOURCE MANAGEMENT TRAINING

- (a) An AOC holder shall ensure that the flight operations officer and all aircraft crew members have CRM training (inclusive of human factors) as part of their initial and recurrent training requirements.
- (b) A CRM training program shall include—
- (1) an initial indoctrination/awareness segment;
 - (2) a method to provide recurrent practice and feedback; and
 - (3) a method of providing continuing reinforcement.
- (c) Curriculum topics to be contained in an initial CRM training course include—
- (1) communications processes and decision behaviour;
 - (2) internal and external influences on interpersonal communications;
 - (3) barriers to communication;

- (4) listening skills;
- (5) decision making skills;
- (6) effective briefings;
- (7) developing open communications;
- (8) inquiry, advocacy, and assertion training;
- (9) crew self-critique;
- (10) conflict resolution;
- (11) team building and maintenance;
- (12) leadership and fellowship training;
- (13) interpersonal relationships;
- (14) workload management;
- (15) situational awareness;
- (16) how to prepare, plan and monitor task completions;
- (17) workload distribution;
- (18) distraction avoidance;
- (19) individual factors; and
- (20) stress reduction.

IS: 8.10.1.13 INITIAL EMERGENCY EQUIPMENT DRILLS TRAINING

- (a) An aircraft crew member shall accomplish emergency training during the specified training periods, using those items of installed emergency equipment for the type of aircraft in which he or she is to serve.
- (b) During initial training, an aircraft crew member shall perform the following one-time emergency drills—

(1) PROTECTIVE BREATHING EQUIPMENT/FIREFIGHTING DRILL—

- (i) Locate source of fire or smoke (actual or simulated fire).
- (ii) Implement procedures for effective crew co-ordination and communication, including notification of flight crew members about fire situation.
- (iii) Don and activate installed PBE or approved PBE simulation device.
- (iv) Manoeuvre in limited space with reduced visibility.
- (v) Effectively use the aircraft's communication system.
- (vi) Identify class of fire.
- (vii) Select the appropriate extinguisher.
- (viii) Properly remove extinguisher from securing device.
- (ix) Prepare, operate and discharge extinguisher properly.
- (x) Utilise correct firefighting techniques for type of fire.

(2) EMERGENCY EVACUATION DRILL—

- (i) Recognise and evaluate an emergency.
- (ii) Assume appropriate protective position.
- (iii) Command passengers to assume protective position.
- (iv) Implement crew co-ordination procedures.
- (v) Ensure activation of emergency lights.
- (vi) Assess aircraft conditions.
- (vii) Initiate evacuation (dependent on signal or decision).
- (viii) Command passengers to release seatbelts and evacuate.

- (ix) Assess exit and redirect, if necessary; to open exit, including deploying slides and commanding helpers to assist.
- (x) Command passengers to evacuate at exit and run away from aircraft.
- (xi) Assist special need passengers, such as handicapped, elderly, and persons in a state of panic.
- (xii) Actually exit aircraft or training device using at least one of the installed emergency evacuation slides.

Note: The crew member may either observe the aircraft exits being opened in the emergency mode and the associated exit slide/raft pack being deployed and inflated, or perform the tasks resulting in the accomplishment of these actions

- (c) An aircraft crew member shall accomplish additional emergency drills during initial and recurrent training, including performing the following emergency drills—
 - (1) EMERGENCY EXIT DRILL—
 - (i) Correctly pre-flight each type of emergency exit and evacuation slide or slideraft (if part of Cabin Crew's assigned duties).
 - (ii) Disarm and open each type of door exit in normal mode.
 - (iii) Close each type of door exit in normal mode.
 - (iv) Arming of each type of door exit in emergency mode.
 - (v) Opening each type of door exit in emergency mode.
 - (vi) Use manual slide inflation system to accomplish or ensure slide or slideraft inflation.
 - (vii) Open each type of window exit.
 - (viii) Remove escape rope and position for use.

(2) HAND FIRE EXTINGUISHER DRILL—

- (i) Pre-flight each type of hand fire extinguisher.
- (ii) Locate source of fire or smoke and identify class of fire.
- (iii) Select appropriate extinguisher and remove from securing device.
- (iv) Prepare extinguisher for use.
- (v) Actually operate and discharge each type of installed hand fire extinguisher.

Note 1: Fighting an actual or a simulated fire is not necessary during this drill.

Note 2: The discharge of Halon extinguishing agents during firefighting drills is not appropriate, unless a training facility is used that is specifically designed to prevent harm to the environment from the discharged Halon. When such facilities are not used, other fire extinguishing agents that are not damaging to the environment may be used during the drills.

- (vi) Utilise correct firefighting techniques for type of fire.
- (vii) Implement procedures for effective crew co-ordination and communication, including notification of crew members about the type of fire situation.

(3) EMERGENCY OXYGEN SYSTEM DRILL—

- (i) Pre-flight and operation of portable oxygen devices.
- (ii) Actually operate portable oxygen bottles, including masks and tubing.
- (iii) Verbally demonstrate operation of chemical oxygen generators or installed oxygen supply system.
- (iv) Prepare for use and operate oxygen device properly, including donning and activation.
- (v) Administer oxygen to self, passengers, and to those persons with special oxygen needs.

- (vi) Utilise proper procedures for effective crew co-ordination and communication.
 - (vii) Pre-flight and operation of PBE.
 - (viii) Activate PBE.
 - (ix) Manually open each type of oxygen mask compartment and deploy oxygen masks.
 - (x) Identify compartments with extra oxygen masks.
 - (xi) Implement immediate action decompression procedures.
 - (xii) Reset oxygen system, if applicable.
- (3) FLOTATION DEVICE DRILL—
- (i) Pre-flight flotation devices.
 - (ii) Don and inflate life vests.
 - (iii) Remove and use flotation seat cushions, as installed.
 - (iv) Demonstrate swimming techniques using life vests.
- (4) DITCHING DRILL, IF APPLICABLE—

Note: During a ditching drill students shall perform the "prior to impact" and "after impact" procedures for a ditching, as appropriate to the specific operator's type of operation.

- (i) Implement crew co-ordination procedures, including briefing with captain to obtain pertinent ditching information and briefing Cabin Crews.
- (ii) Co-ordinate time frame for cabin and passenger preparation.
- (iii) Adequately brief passengers on ditching procedures.
- (iv) Ensure cabin is prepared, including the securing of carry-on baggage, lavatories, and galleys.

- (v) Demonstrate how to properly deploy and inflate sliderafts and liferafts.
 - (vi) Remove, position, attach sliderafts to aircraft.
 - (vii) Inflate rafts.
 - (viii) Use escape ropes at overwing exits.
 - (ix) Command helpers to assist.
 - (x) Use slides and life vests or seat cushions as flotation devices.
 - (xi) Remove appropriate emergency equipment from aircraft.
 - (xii) Board rafts properly.
 - (xiii) Initiate raft management procedures (i.e., Disconnecting rafts from aircraft, applying immediate first aid, rescuing persons in water, salvaging floating rations and equipment, deploying sea anchor, tying rafts together, activating or ensuring operation of emergency locator transmitter).
 - (xiv) Initiate basic survival procedures (i.e., Removing and utilising survival kit items, repairing and maintaining raft, ensuring protection from exposure, erecting canopy, communicating location, providing continued first aid, providing sustenance).
 - (xv) Use heaving line to rescue persons in water.
 - (xvi) Tie sliderafts or rafts together.
 - (xvii) Use life line on edge of slideraft or raft as a handhold.
 - (xviii) Secure survival kit items.
- (d) An aircraft crew member shall accomplish additional emergency drill requirements during initial and recurrent training including observing the following emergency drills—

- (1) LIFERAFT REMOVAL AND INFLATION DRILL, IF APPLICABLE—
 - (i) Removal of a liferaft from the aircraft or training device.
 - (ii) Inflation of a liferaft.
- (2) SLIDERAFT TRANSFER DRILL—
 - (i) Transfer of each type of slideraft pack from an unusable door to a usable door.
 - (ii) Disconnect slideraft at unusable door.
 - (iii) Redirect passengers to usable slideraft.
 - (iv) Installation and deployment of slideraft at usable door.
- (3) SLIDE AND SLIDERAFT DEPLOYMENT, INFLATION, AND DETACHMENT DRILL—
 - (i) Engage slide girt bar in floor brackets.
 - (ii) Inflate slides with and without quick-release handle (manually and automatically).
 - (iii) Disconnecting slide from aircraft for use as a flotation device.
 - (iv) Arm sliderafts for automatic inflation.
 - (v) Disconnecting slideraft from the aircraft.
- (4) EMERGENCY EVACUATION SLIDE DRILL—
 - (i) Open armed exit with slide or slideraft deployment and inflation.
 - (ii) Egress from aircraft via the evacuation slide and run away to a safe distance.

IS: 8.10.1.14(1) INITIAL AIRCRAFT GROUND TRAINING - FLIGHT CREW

- (a) An AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown. Instructions shall include at least the following general subjects—

- (1) AOC holder's dispatch, flight release, or flight locating/flight following procedures,
- (2) Principles and methods for determining mass and balance, and runway limitations for takeoff;
- (3) AOC holder's operations specifications, authorisations and limitations.
- (4) Adverse weather recognition and avoidance, and flight procedures which shall be followed when operating in the following conditions—
 - (i) Icing.
 - (ii) Fog.
 - (iii) Turbulence.
 - (iv) Heavy precipitation.
 - (v) Thunderstorms.
 - (vi) Low-level windshear and microburst.
 - (vii) Low visibility.
 - (viii) Contaminated runways
- (5) Normal and emergency communications procedures and navigation equipment including the AOC holder's communications procedures and ATC clearance requirements, and the clarification and acceptance of ATC clearances, particularly where terrain clearance is involved;
- (6) Navigation procedures and terrain minimum safe altitudes used in area departure, en route, area arrival, approach and landing phases, to include visual cues prior to and during descent below DH or MDA;
- (7) Approved crew resource management training;
- (8) Air traffic control systems, procedures, and phraseology;
- (9) Aircraft performance characteristics during all flight regimes, including—

- (i) the use of charts, tables, tabulated data and other related manual information.
 - (ii) normal, abnormal, and emergency performance problems.
 - (iii) meteorological and mass limiting performance factors (such as temperature, pressure, contaminated runways, precipitation, climb/runway limits).
 - (iv) inoperative equipment performance limiting factors (such as MEL/CDL, inoperative antiskid).
 - (v) special operational conditions (such as unpaved runways, high altitude aerodromes and drift down requirements).
- (10) Normal, abnormal and emergency procedures on the aircraft type to be used;
- (11) (For Helicopter PIC) Search and rescue procedures;
- (12) (For Helicopter PIC) Procedures applicable to flight paths over heavily populated areas and areas of high air traffic density, obstructions, physical layout, lighting, approach aids and arrival, departure, holding and instrument approach procedures, and applicable operating minima.
- (b) An AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown, including at least the following aircraft systems—
 - (1) AIRFRAME—
 - (i) Aircraft.
 - (ii) Aircraft dimensions, turning radius, panel layouts, flight deck and cabin configurations.
 - (iii) Other major systems and components or appliances of the aircraft.
 - (iv) Operating limitations.
 - (v) Approved AFM / RFM.

(2) POWERPLANTS—

- (i) Basic engine description.
- (ii) Engine thrust ratings.
- (iii) Engine components such as accessory drives, ignition, oil, fuel control, hydraulic, and bleed air features.

(3) ELECTRICAL.

- (i) Sources of aircraft electrical power (engine driven generators, APU generator, and external power);
- (ii) Electrical buses;
- (iii) Circuit breakers;
- (iv) Aircraft battery; and
- (v) Standby power systems.

(4) HYDRAULIC.

- (i) Hydraulic reservoirs, pumps, accumulators; filters, check valves, interconnects and actuators; and
- (ii) Other hydraulically operated components.

(5) FUEL.

- (i) Fuel tanks (location and quantities);
- (ii) Engine driven pumps;
- (iii) Boost pumps;
- (iv) System valves and crossfeeds;
- (v) Quantity indicators; and
- (vi) Provisions for fuel jettisoning.

- (6) PNEUMATIC.
 - (i) Bleed air sources (APU or external ground air); and
 - (ii) Means of routing, venting and controlling bleed air via valves, ducts, chambers, and temperature and pressure limiting devices
- (7) AIR CONDITIONING AND PRESSURISATION.
 - (i) Heaters, air conditioning packs, fans, and other environmental control devices;
 - (ii) Pressurisation system components such as outflow and negative pressure relief valves; and
 - (iii) Automatic, standby, and manual pressurisation controls and annunciators.
- (8) FLIGHT CONTROLS.
 - (i) Primary controls (yaw, pitch, and roll devices);
 - (ii) Secondary controls (leading/trailing edge devices, flaps, trim, and damping mechanisms);
 - (iii) Means of actuation (direct/indirect or fly by wire); and
 - (iv) Redundancy devices.
- (9) LANDING GEAR.
 - (i) Landing gear extension and retraction mechanism including the operating sequence of struts, doors, and locking devices, and brake and antiskid systems, if applicable;
 - (ii) Steering (nose or body steering gear);
 - (iii) Bogie arrangements; (iv) Air/ground sensor relays; and
 - (iv) Visual downlock indicators.
- (10) ICE AND RAIN PROTECTION.
 - (i) Rain removal systems; and

- (ii) Anti-icing and/or de-icing system(s) affecting flight controls, engines, pitot static probes, fluid outlets, flight deck windows, and aircraft structures.

(11) EQUIPMENT AND FURNISHINGS.

- (i) Exits;
- (ii) Galleys;
- (iii) Water and waste systems;
- (iv) Lavatories;
- (v) Cargo areas;
- (vi) Crew member and passenger seats;
- (vii) Bulkheads;
- (viii) Seating and/or cargo configurations; and
- (ix) Non-emergency equipment and furnishings.

(12) NAVIGATION EQUIPMENT.

- (i) Flight directors;
- (ii) Horizontal situation indicator;
- (iii) Radio magnetic indicator;
- (iv) Navigation receivers (GPS, ADF, VOR, OMEGA, LORAN-C, RNAV, Marker Beacon, DME);
- (v) Inertial systems (INS, IRS);
- (vi) Functional displays;
- (vii) Fault indications and comparator systems;
- (viii) Aircraft transponders;
- (ix) Radio altimeters;
- (x) Weather radar; and

- (xi) Cathode ray tube or computer generated displays of aircraft position and navigation information.
- (13) AUTO FLIGHT SYSTEM.
 - (i) Autopilot;
 - (ii) Autothrottles;
 - (iii) Flight director and navigation systems;
 - (iv) Automatic approach tracking;
 - (v) Autoland; and
 - (vi) Automatic fuel and performance management systems.
- (14) FLIGHT INSTRUMENTS.
 - (i) Panel arrangement;
 - (ii) Flight instruments (attitude indicator, directional gyro, magnetic compass, airspeed indicator, vertical speed indicator, altimeters, standby instruments); and
 - (iii) Instrument power sources, and instrument sensory sources (e.g., Pitot static pressure).
- (15) DISPLAY SYSTEMS.
 - (i) Weather radar; and
 - (ii) Other CRT displays (e.g., checklist, vertical navigation or longitudinal navigation displays).
 - (iii) Heads-up displays and/or enhanced vision systems
- (16) COMMUNICATION EQUIPMENT.
 - (i) VHF/HF/SATCOM radios;
 - (ii) Audio panels;
 - (iii) Inflight interphone and passenger address systems;

- (iv) Voice recorder; and
- (v) Air/ground passive communications systems (ACARS).

(17) WARNING SYSTEMS.

- (i) Aural, visual, and tactile warning systems (including the character and degree of urgency related to each signal); and
- (ii) Warning and caution annunciator systems (including ACAS and ground proximity and takeoff configuration warning systems).

(18) FIRE PROTECTION.

- (i) Fire and overheat sensors, loops, modules, or other means of providing visual and/or aural indications of fire or overheat detection;
- (ii) Procedures for the use of fire handles, automatic extinguishing systems and extinguishing agents; and
- (iii) Power sources necessary to provide protection for fire and overheat conditions in engines, APU, cargo bay/wheel well, flight deck, cabin and lavatories.

(19) OXYGEN.

- (i) Passenger, crew, and portable oxygen supply systems;
- (ii) Sources of oxygen (gaseous or solid);
- (iii) Flow and distribution networks;
- (iv) Automatic deployment systems;
- (v) Regulators, pressure levels and gauges; and (vi) Servicing requirements.

(20) LIGHTING.

- (i) Flight deck, cabin, and external lighting systems;
- (ii) Power sources;
- (iii) Switch positions; and

- (iv) Spare lightbulb locations.
- (21) EMERGENCY EQUIPMENT.
 - (i) Fire and oxygen bottles;
 - (ii) First aid and medical kits;
 - (iii) Liferafts and life preservers;
 - (iv) Crash axes;
 - (v) Emergency exits and lights;
 - (vi) Slides and sliderafts;
 - (vii) Escape straps or handles; and
 - (viii) Hatches, ladders and movable stairs.
 - (ix) Survival suits, if applicable to the operation
- (22) AUXILIARY POWER UNIT (APU).
 - (i) Electric and bleed air capabilities;
 - (ii) Interfaces with electrical and pneumatic systems;
 - (iii) Inlet doors and exhaust ducts;
 - (iv) Fuel supply.
- (23) PERFORMANCE.
- (24) ELECTRONIC FLIGHT BAG (if applicable).
- (c) An AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown, including at least the following aircraft systems integration items—
 - (1) USE OF CHECKLIST.
 - (i) Safety checks;

- (ii) Flight deck preparation (switch position and checklist flows);
 - (iii) Checklist callouts and responses; and
 - (iv) Checklist sequence.
- (2) FLIGHT PLANNING.
 - (i) Pre-flight and in-flight planning
 - (ii) Performance limitations (meteorological, mass, and MEL/CDL items);
 - (iii) Required fuel loads;
 - (iv) Weather planning (lower than standard takeoff minimums or alternate requirements)
- (3) DISPLAY SYSTEMS
 - (i) Weather Radar
 - (ii) CRT displays (e.g. checklists, vertical and longitudinal navigation displays)
- (4) NAVIGATION AND COMMUNICATION SYSTEMS.
 - (i) Pre-flight and operation of applicable receivers;
 - (ii) Onboard navigation systems; and
 - (iii) Flight plan information input and retrieval.
- (5) AUTOFLIGHT/FLIGHT DIRECTORS
 - (i) Autopilot;
 - (ii) Autothrust;
 - (iii) Flight director systems, including the appropriate procedures, normal and abnormal indications, and annunciators.

- (6) FLIGHT DECK FAMILIARISATION
 - (i) Activation of aircraft system controls and switches to include normal, abnormal and emergency switches; and
 - (ii) Control positions and relevant annunciators, lights, or other caution and warning systems.
- (d) Each AOC holder shall ensure that initial ground training for flight crew consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority—
 - (1) FOR PILOTS AND FEs
 - (i) Reciprocating-engine aeroplane – 64 hours
 - (ii) Turbopropeller-powered aeroplane – 80 hours
 - (iii) Turbojet aeroplane – 120 hours
 - (iv) Helicopter – 64 hours
 - (v) Powered-lift – 80 hours
 - (vi) Other aircraft – 64 hours

IS: 8.10.1.14 (2) INITIAL AIRCRAFT GROUND TRAINING - CABIN CREW

- (a) An AOC holder shall have an initial ground training curriculum for Cabin Crew applicable to the type of operations conducted and aircraft flown, including at least the following general subjects—
 - (1) AIRCRAFT FAMILIARISATION.
 - (i) Aircraft characteristics and description;
 - (ii) Flight deck configuration;
 - (iii) Cabin configuration;
 - (iv) Galleys;
 - (v) Lavatories; and
 - (vi) Stowage areas.

- (2) AIRCRAFT EQUIPMENT AND FURNISHINGS.
 - (i) Cabin Crew stations;
 - (ii) Cabin Crew panels;
 - (iii) Passenger seats;
 - (iv) Passenger service units and convenience panels;
 - (v) Passenger information signs;
 - (vi) Aircraft markings; and
 - (vii) Aircraft placards.
 - (viii) Bassinets and bayonet tables
- (3) AIRCRAFT SYSTEMS.
 - (i) Air conditioning and pressurisation system;
 - (ii) Aircraft communication systems (call, interphone and passenger address);
 - (iii) Lighting and electrical systems;
 - (iv) Oxygen systems (flightcrew, observer and passenger);
 - (v) Water system; and
 - (vi) Entertainment and convenience items.
- (4) AIRCRAFT EXITS.
 - (i) General information;
 - (ii) Exits with slides or sliderafts (pre-flight and normal operation);
 - (iii) Exits without slides (pre-flight and normal operations); and
 - (iv) Window exits (pre-flight and normal operations).

- (5) CREW MEMBER COMMUNICATION AND CO-ORDINATION.
 - (i) Authority of PIC;
 - (ii) Routine and discrete communication signals and procedures; and
 - (iii) Crew member briefing.
- (6) ROUTINE CREW MEMBER DUTIES AND PROCEDURES.
 - (i) Crew member general responsibilities;
 - (ii) Awareness of other crew members duties and responsibilities;
 - (iii) Reporting duties and procedures for specific aircraft;
 - (iv) Predeparture duties and procedures prior to passenger boarding;
 - (v) Passenger boarding duties and procedures;
 - (vi) Prior to movement on the surface duties and procedures;
 - (vii) Prior to takeoff duties and procedures applicable to specific aircraft;
 - (viii) Inflight duties and procedures;
 - (ix) Prior to landing duties and procedures;
 - (x) Movement on the surface and arrival duties and procedures;
 - (xi) After arrival duties and procedures; and
 - (xii) Intermediate stops.
- (7) PASSENGER HANDLING RESPONSIBILITIES.
 - (i) Crew member general responsibilities;
 - (ii) Infants, children, and unaccompanied minors;
 - (iii) Passengers needing special assistance;

- (iv) Passengers needing special accommodation;
 - (v) Carry-on stowage requirements;
 - (vi) Passenger seating requirements; and
 - (vii) Smoking and no smoking requirements.
- (8) APPROVED CREW RESOURCE MANAGEMENT (CRM) TRAINING FOR CABIN CREW.
- (b) An AOC holder shall have an initial ground training curriculum for Cabin Crew applicable to the type of operations conducted and aircraft flown, including at least the following aircraft specific emergency subjects—
 - (1) EMERGENCY EQUIPMENT.
 - (i) Emergency and discrete communication and notification systems;
 - (ii) Aircraft exits;
 - (iii) Exits with slides or sliderafts (emergency operation);
 - (iv) Slides and sliderafts in a ditching;
 - (v) Exits without slides (emergency operation);
 - (vi) Window exits (emergency operation);
 - (vii) Exits with tailcones (emergency operation);
 - (viii) Flight deck exits (emergency operation);
 - (ix) Ground evacuation and ditching equipment;
 - (x) First aid equipment;
 - (xi) Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE));
 - (xii) Firefighting equipment;
 - (xiii) Emergency lighting systems;

- (xiv) Universal precaution kits
 - (xv) Automated external defibrillators
 - (xvi) Survival suits (if applicable); and
 - (xvii) Additional emergency equipment.
- (2) EMERGENCY ASSIGNMENTS AND PROCEDURES.
- (i) General types of emergencies specific to aircraft, including crew coordination and communication;
 - (ii) Emergency and discrete communication signals and procedures;
 - (iii) Rapid decompression;
 - (iv) Insidious decompression and cracked window and pressure seal leaks;
 - (v) Fires;
 - (vi) Ditching;
 - (vii) Ground evacuation;
 - (viii) Unwarranted evacuation (i.e., passenger initiated);
 - (ix) Illness or injury;
 - (x) Abnormal situations involving passengers or crew members;
 - (xi) Hijacking and acts of unlawful interference;
 - (xii) Bomb threat;
 - (xiii) Turbulence;
 - (xiv) Other unusual situations including an awareness of other crewmembers' assignments and functions as they pertain to the cabin crewmember's own duties; and
 - (xv) Previous aircraft accidents and incidents.

- (3) AIRCRAFT SPECIFIC EMERGENCY DRILLS.
 - (i) Emergency exit drill;
 - (ii) Hand fire extinguisher drill;
 - (iii) Emergency oxygen system drill;
 - (iv) Flotation device drill;
 - (v) Ditching drill, if applicable;
 - (vi) Liferaft removal and inflation drill, if applicable;
 - (vii) Slideraft pack transfer drill, if applicable;
 - (viii) Slide or slideraft deployment, inflation, and detachment drill, if applicable; and
 - (ix) Emergency evacuation slide drill, if applicable.
- (c) An AOC holder shall ensure that initial ground training for Cabin Crew includes a competence check given by the appropriate supervisor or ground instructor to determine his or her ability to perform assigned duties and responsibilities.
- (d) An AOC holder shall ensure that initial ground training for Cabin Crew consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority—
 - (1) Turbojet aircraft: - 16 hours;
 - (2) Turbopropeller powered aircraft: - 8 hours
 - (3) Reciprocating-engine aircraft: - 8 hours.
 - (4) Other aircraft including, if applicable, helicopter and powered lift: - 8 hours

IS: 8.10.1.14 (3) INITIAL AIRCRAFT GROUND TRAINING -FLIGHT OPERATIONS OFFICER

- (a) An AOC holder shall provide initial aircraft ground training for flight operations officers that include instruction in at least the following general dispatch subjects.

- (1) GENERAL DISPATCH SUBJECTS.
 - (i) Civil air law and regulations
 - (ii) Aviation instruction
 - (iii) AOC holder's OM
 - (iv) AOC holder's operations specifications
 - (v) Weather reports: interpretation, available sources, actual and prognostic, seasonal variations
 - (vi) Communications, to include normal and emergency
 - (vii) Meteorology, to include effects on radio reception
 - (viii) Adverse weather
 - (ix) NOTAMs
 - (x) Navigational charts and publications
 - (xi) Joint dispatcher/pilot responsibilities
 - (xii) ATC coordination procedures
 - (xiii) Familiarisation with operations area, including classes of airspace and special areas of navigation
 - (xiv) Emergency response plan
 - (xv) Flight observation
 - (xvi) Characteristics of special aerodromes
- (2) AIRCRAFT CHARACTERISTICS.
 - (i) Aircraft specific flight preparation
 - (ii) Aircraft operating and performance characteristics
 - (iii) Navigation equipment, including peculiarities and limitations

- (iv) Instrument approach and communication equipment
 - (v) Emergency equipment
 - (vi) Aircraft Flight Manual or Rotorcraft Flight Manual provisions applicable to the aircraft duties
 - (vii) MEL/CDL
 - (viii) Applicable equipment training
- (3) OPERATIONS PROCEDURES.
- (i) Adverse weather phenomena (wind-shear, clear air turbulence and thunderstorms)
 - (ii) Mass and balance computations and load control procedures
 - (iii) Aircraft performance computations, to include take-off-mass limitations based on departure runway, arrival runway, and en route limitations, and also engine-out limitations
 - (iv) Flight planning procedures, to include route selection, flight time, and fuel requirements analysis
 - (v) Dispatch release preparation
 - (vi) Crew briefings
 - (vii) Flight monitoring procedures
 - (viii) MEL and CDL procedures
 - (ix) Manual performance of all required procedures in case of the loss of automated capabilities
 - (x) Training in appropriate geographic areas
 - (xi) ATC and instrument procedures, ground hold and central flow control procedures
 - (xii) Radio/telephone procedures

- (4) ABNORMAL AND EMERGENCY PROCEDURES.
 - (i) Assisting flight crew in an emergency
 - (ii) Alerting of appropriate governmental, company and private agencies
- (b) An AOC holder shall provide initial ground training for flight operations officers that include instruction in—
 - (1) CREW RESOURCE MANAGEMENT

Note: IS 8.10.1.12 contains CRM training items.
 - (2) DANGEROUS GOODS

Note: IS 8.10.1.10 contains dangerous goods training items.
 - (3) SECURITY

Note: IS 8.10.1.11 contains security training items.
 - (4) DIFFERENCES TRAINING

Note: IS 8.10.1.17 contains items on differences training.
- (c) An AOC holder shall ensure that initial ground training for flight operations officers includes a competence check given by an appropriate supervisor or ground instructor that demonstrates the required knowledge and abilities
- (d) Each AOC holder shall ensure that initial ground training for FOOs consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority—
 - (1) Reciprocating-engine aircraft – 30 hours
 - (2) Turbopropeller-powered aircraft – 40 hours
 - (3) Turbojet aircraft – 40 hours
- (e) An AOC holder shall ensure that a flight operations officer assigned to duty should maintain complete familiarization with all features of the operation which are pertinent to such duties, including knowledge and skills related to human performance.

IS: 8.10.1.15 INITIAL AIRCRAFT FLIGHT TRAINING

- (a) An AOC holder shall ensure that proper flight crew coordination and training includes at least the following training and practice in procedures related to the carrying out of pilot duties and functions. This training and practice may be accomplished either in-flight or in an FSTD, as appropriate to the category and class of aircraft and as approved by the Authority.
 - (1) PREPARATION
 - (i) Visual inspection (for FSTD, use of pictorial display authorised)
 - (ii) Pre-taxi procedures
 - (iii) Performance limitations
 - (iv) Surface operation
 - (v) Pushback
 - (vi) Powerback taxi, if applicable to type of operation to be conducted
 - (vii) Starting
 - (viii) Taxi
 - (ix) Pre take-off checks
 - (2) TAKEOFF
 - (i) Normal
 - (ii) Crosswind
 - (iii) Rejected
 - (iv) Power failure after V1
 - (v) Lower than standard minimum, if applicable to type of operation to be conducted
 - (3) CLIMB
 - (i) Normal

- (ii) One-engine inoperative during climb to en route altitude
- (4) EN ROUTE
 - (i) Steep turns
 - (ii) Approaches to stalls (takeoff, en route, and landing configurations)
 - (iii) Inflight powerplant shutdown
 - (iv) Inflight powerplant restart
 - (v) High speed handling characteristics
- (5) DESCENT
 - (i) Normal
 - (ii) Maximum rate
- (6) APPROACHES
 - (i) VFR procedures
 - (ii) Visual approach with 50% loss of power. (2 engines inoperative on 3-engine aeroplanes)
 - (iii) Visual approach with slat/flap malfunction
 - (iv) IFR precision approaches (ILS normal and ILS with one-engine inoperative)
 - (v) IFR non-precision approaches (NDB normal and VOR normal)

Note 1: Non-precision approach with one engine inoperative (LOC backcourse procedures, SDF/LDA, GPS, TACAN and circling approach procedures) as applicable to the operator's authorisations.
Note 2: FSTD shall be qualified for training/checking on the circling manoeuvre.
 - (vi) Missed approach from precision approach

- (vii) Missed approach from non-precision approach
- (viii) Missed approach with powerplant failure
- (7) LANDINGS
 - (i) Normal with a pitch mistrim (small aircraft only)
 - (ii) Normal from precision instrument approach
 - (iii) Normal from precision instrument approach with most critical engine inoperative
 - (iv) Normal with 50% loss of power. (2 engines inoperative on 3-engine aeroplanes)
 - (v) Normal with flap/slat malfunction
 - (vi) Rejected landings
 - (vii) Crosswind
 - (viii) Manual reversion/degraded control augmentation
 - (ix) Short/soft field (small aircraft only)
 - (x) Glassy/rough water (seaplanes only)
 - (xi) Autorotation (helicopters only)
- (8) AFTER LANDING
 - (i) Parking
 - (ii) Emergency evacuation
 - (iii) Docking, mooring, and ramping (seaplanes only)
- (9) OTHER FLIGHT PROCEDURES DURING ANY AIRBORNE PHASE
 - (i) ACAS: use and avoidance manoeuvres
 - (ii) Holding

- (iii) Ice accumulation on airframe
 - (iv) Air hazard avoidance
 - (v) Windshear/mircoburst
 - (vi) Upset prevention and recovery.
- (10) NORMAL, ABNORMAL AND ALTERNATE SYSTEMS PROCEDURES DURING ANY PHASE
- (i) Pneumatic/pressurisation
 - (ii) Air conditioning
 - (iii) Fuel and oil
 - (iv) Electrical
 - (v) Hydraulic
 - (vi) Flight controls
 - (vii) Anti-icing and de-icing systems
 - (viii) Autopilot
 - (ix) Flight management guidance systems and/or automatic or other approach and landing aids
 - (x) Stall warning devices, stall avoidance devices, and stability augmentation systems
 - (xi) Airborne weather radar
 - (xii) Flight instrument system malfunction
 - (xiii) Communications equipment
 - (xiv) Navigation systems
- (11) EMERGENCY SYSTEMS PROCEDURES DURING ANY PHASE
- (i) Aircraft fires
 - (ii) Smoke control

- (iii) Powerplant malfunctions
 - (iv) Fuel jettison
 - (v) Electrical, hydraulic, pneumatic systems
 - (vi) Flight control system malfunction
 - (vii) Landing gear and flap system malfunction
- (b) An AOC Holder shall ensure that FE flight training includes at least the following training and practice in procedures related to the carrying out of FE duties and functions. This training and practice may be accomplished either in-flight or in an FSTD, as approved by the Authority.

Note: The flight training events for FEs listed in this IS are generic in nature for a type-rated aeroplane training curriculum. Additional training events may need to be added, changed or deleted. The events listed are typically conducted in an FSTD, except as noted, and may be conducted in aircraft when appropriate.

- (1) PREPARATION.
 - (i) Aeroplane pre-flight
 - (ii) Logbook procedures
 - (iii) Safety checks
 - (iv) Cabin/interiors
 - (v) Exterior Walkaround
 - (vi) Servicing/de-icing
 - (vii) Use of oxygen
- (2) GROUND OPERATIONS.
 - (i) Performance Data
 - (A) TO/LND Data
 - (B) Aerodrome Analysis

- (C) Mass and balance
 - (ii) Use of Checklist
 - (A) Panel setup
 - (iii) Starting
 - (A) External power
 - (B) External air
 - (C) APU
 - (iv) Communications
 - (A) Station procedures
 - (B) ACARS
 - (v) Taxi
- (3) TAKE-OFF.
- (i) Powerplant control
 - (ii) Flaps/landing gear
 - (iii) Fuel management
 - (iv) Other systems operation
 - (v) Aircraft performance
 - (vi) Checklist completion
- (4) CLIMB.
- (i) Powerplant control
 - (ii) Fuel management
 - (iii) Pressurisation
 - (iv) Electrical system

- (v) Air conditioning
 - (vi) Flight controls
 - (vii) Other systems
- (5) EN ROUTE.
 - (i) Powerplant operation
 - (ii) Fuel management
 - (iii) Performance management
 - (iv) High altitude performance
 - (v) Other systems operation
- (6) DESCENT.
 - (i) Powerplant operation
 - (ii) Other systems operation
 - (iii) Performance management
- (7) APPROACH.
 - (i) Landing data
 - (ii) Landing gear operation
 - (iii) Flat/slat/spoiler operation
 - (iv) Approach monitoring
- (8) LANDINGS.
 - (i) Powerplant operation
 - (ii) Aircraft configuration
 - (iii) System operation
 - (A) Emergency evacuation

- (9) PROCEDURES DURING ANY GROUND OR AIRBORNE PHASE.
 - (i) Flight deck equipment
 - (ii) Flap slats/gear
 - (iii) Powerplant
 - (iv) Pressurisation
 - (v) Pneumatic
 - (vi) Air Conditioning
 - (vii) Fuel and oil
 - (viii) Electrical
 - (ix) Hydraulic
 - (x) Flight controls
 - (xi) Anti-Icing and de-icing
 - (xii) Other checklist procedures
- (c) An AOC holder shall ensure that initial flight training for pilots and FEs consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority—
 - (1) For one pilot in either an aircraft or an FSTD—
 - (i) Reciprocating-engine aircraft – PIC: 14 hours; CP: 14 hours; and FE: 12 hours
 - (ii) Turbopropeller-powered aircraft – PIC: 15 hours; CP: 15 hours; and FE: 12 hours
 - (iii) Turbojet aircraft – PIC: 20 hours; CP: 16 hours; and FE; 12 hours
 - (iv) Other aircraft – PIC and CP: 14 hours

- (2) For two pilots in an FSTD—
 - (i) Reciprocating-engine aircraft – PIC: 24 hours; CP: 24 hours; and FE: 20 hours
 - (ii) Turbopropeller-powered aircraft – PIC: 24 hours; CP: 24 hours; and FE: 20 hours
 - (iii) Turbojet aircraft – PIC: 28 hours; CP: 28 hours; and FE: 20 hours
 - (iv) Other aircraft – PIC and CP: 24 hours

IS: 8.10.1.16 INITIAL SPECIALISED OPERATIONS TRAINING

- (a) An AOC holder shall provide initial specialised operations training to ensure that pilots and flight operations officers are qualified in the type of operation in which they serve and in any specialised or new equipment, procedures, and techniques, such as—
 - (1) CLASS II NAVIGATION
 - (i) Knowledge of specialised navigation procedures, such as MNPS
 - (ii) Knowledge of specialised equipment, such as INS, LORAN, OMEGA
 - (2) CAT II AND CAT III APPROACHES
 - (3) SPECIAL EQUIPMENT, PROCEDURES AND PRACTICE
 - (4) A DEMONSTRATION OF COMPETENCY
 - (5) LOWER THAN STANDARD MINIMUM TAKEOFFS (LVTO)
 - (i) Runway and lighting requirements
 - (ii) Rejected takeoffs at, or near, V1 with a failure of the most critical engine
 - (iii) Taxi operations
 - (iv) Procedures to prevent runway incursions under low visibility conditions

- (6) EXTENDED RANGE OPERATIONS WITH TWO ENGINE AEROPLANES
- (7) AIRBORNE RADAR APPROACHES
- (8) AUTOPILOT INSTEAD OF CO-PILOT

IS: 8.10.1.17 AIRCRAFT DIFFERENCES - FLIGHT OPERATIONS OFFICER

- (a) An AOC holder shall provide aircraft differences training for flight operations officers when the operator has aircraft variances within the same type of aircraft, which includes at least the following—
 - (1) OPERATIONS PROCEDURES—
 - (i) Operations under adverse weather phenomena conditions, including clear air turbulence, windshear, and thunderstorms;
 - (ii) Mass and balance computations and load control procedures;
 - (iii) Aircraft performance computations, to include takeoff mass limitations based on departure runway, arrival runway, and en route limitations, and also engine-out limitations;
 - (iv) Flight planning procedures, to include route selection, flight time, and fuel requirements analysis;
 - (v) Dispatch release preparation;
 - (vi) Crew briefings;
 - (vii) Flight monitoring procedures;
 - (viii) Flightcrew response to various emergency situations, including the assistance the aircraft flight operations officer can provide in each situation;
 - (ix) MEL and CDL procedures;
 - (x) Manual performance of an required procedures in case of the loss of automated capabilities;
 - (xi) Training in appropriate geographic areas;

- (xii) ATC and instrument procedures, to include ground hold and central flow control procedures; and
- (xiii) Radio/telephone procedures.
- (2) EMERGENCY PROCEDURES—
 - (i) Actions taken to aid the flightcrew; and
 - (ii) AOC holder and Authority notification.

IS: 8.10.1.20 PILOT PROFICIENCY CHECKS—

- (a) Satisfactory completion of a proficiency check following completion of an approved air carrier training program for the particular type aircraft, satisfies the requirement for an aircraft type rating practical test, if—
 - (1) That proficiency check includes all manoeuvres and procedures required for a type rating practical test as prescribed by the applicable Standard Form; and
 - (2) Proficiency checks are conducted by an examiner approved by the Authority.
- (b) Proficiency checks for PIC and co-pilot must include the operations and procedures listed in the applicable Standard Forms. As noted, examiners may waive certain events on the flight test based on an assessment of the pilot's demonstrated level of performance.
- (c) When the examiner determines that an applicant's performance is unsatisfactory, the examiner may terminate the flight test immediately or, with the consent of the applicant, continue with the flight test until the remaining events are completed.
- (d) If the check must be terminated (for mechanical or other reasons) and there are events which still need to be repeated, the examiner shall issue a letter of discontinuance, valid for 60 days, listing the specific areas of operation that have been successfully completed.

IS: 8.10.1.22 PAIRING OF LOW EXPERIENCE PILOTS—

- (a) Situations designated as critical by the Authority at special aerodromes designated by the Authority or at special aerodromes designated by the AOC holder include—

- (1) The prevailing visibility value in the latest weather report for the aerodrome is at or below 3/4 mile;
 - (2) The runway visual range for the runway to be used is at or below 4,000 feet;
 - (3) The runway to be used has water, snow, slush or similar conditions that may adversely affect aeroplane performance;
 - (4) The braking action on the runway to be used is reported to be less than "good";
 - (5) The crosswind component for the runway to be used is in excess of 15 knots;
 - (6) Windshear is reported in the vicinity of the aerodrome; or
 - (7) Any other condition in which the PIC determines it to be prudent to exercise the PIC's prerogative.
- (b) Circumstances which would be routinely be considered for deviation from the required minimum line operating flight time include—
- (1) A newly certified AOC holder does not employ any pilots who meet the minimum flight time requirements;
 - (2) An existing AOC holder adds to its fleet a type aircraft not before proven for use in its operations; or
 - (3) An existing AOC holder establishes a new domicile to which it assigns pilots who will be required to become qualified on the aircraft operated from that domicile.

IS: 8.10.1.23 FLIGHT ENGINEER PROFICIENCY CHECKS

- (a) Examiners shall include during proficiency checks for flight engineers an oral or written examination of the normal, abnormal, and emergency procedures listed below—
- (1) NORMAL PROCEDURES—
 - (i) Interior pre-flight
 - (ii) Panel set-up

- (iii) Fuel load
 - (iv) Engine start procedures
 - (v) Taxi and before takeoff procedures
 - (vi) Takeoff and climb Pressurisation
 - (vii) Cruise and fuel management
 - (viii) Descent and approach
 - (ix) After landing and securing
 - (x) Crew co-ordination
 - (xi) Situational awareness, traffic scan, etc.
 - (xii) Performance computations
 - (xiii) Anti-ice, de-ice
- (2) ABNORMAL AND EMERGENCY PROCEDURES—
- (i) Troubleshooting
 - (ii) Knowledge of checklist
 - (iii) Ability to perform procedures
 - (iv) Crew co-ordination
 - (v) Minimum equipment list (MEL) and configuration deviation list (CDL)
 - (vi) Emergency or alternate operation of aeroplane flight systems

IS: 8.10.1.24 COMPETENCE CHECKS: CABIN CREW

- (a) Evaluators shall conduct competency checks for Cabin Crew to demonstrate that the candidate's proficiency level is sufficient to successfully perform assigned duties and responsibilities.
- (b) A qualified supervisor or inspector, approved by the Authority, shall observe and evaluate competency checks for Cabin Crew.

- (c) Evaluators shall include during a Cabin Crew competency check a demonstrated knowledge of—
- (1) EMERGENCY EQUIPMENT—
 - (i) Emergency communication and notification systems;
 - (ii) Aircraft exits;
 - (iii) Exits with slides or sliderafts (emergency operation);
 - (iv) Slides and sliderafts in a ditching;
 - (v) Exits without slides (emergency operation);
 - (vi) Window exits (emergency operation);
 - (vii) Exits with tailcones (emergency operation);
 - (viii) Flight deck exits (emergency operation);
 - (ix) Ground evacuation and ditching equipment;
 - (x) First aid equipment;
 - (xi) Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE));
 - (xii) Firefighting equipment;
 - (xiii) Emergency lighting systems; and
 - (xiv) Additional emergency equipment.
 - (2) EMERGENCY PROCEDURES—
 - (i) General types of emergencies specific to aircraft;
 - (ii) Emergency communication signals and procedures;
 - (iii) Rapid decompression;
 - (iv) Insidious decompression and cracked window and pressure seal leaks;

- (v) Fires;
 - (vi) Ditching;
 - (vii) Ground evacuation;
 - (viii) Unwarranted evacuation (i.e., Passenger initiated);
 - (ix) Illness or injury;
 - (x) Abnormal situations involving passengers or crew members;
 - (xi) Turbulence; and
 - (xii) Other unusual situations.
- (3) EMERGENCY DRILLS—
- (i) Location and use of all emergency and safety equipment carried on the aircraft;
 - (ii) The location and use of all types of exits;
 - (iii) Actual donning of a lifejacket where fitted;
 - (iv) Actual donning of protective breathing equipment; and
 - (v) Actual handling of fire extinguishers.
- (4) CREW RESOURCE MANAGEMENT—
- (i) Decision making skills;
 - (ii) Briefings and developing open communication;
 - (iii) Inquiry, advocacy, and assertion training;
 - (iv) Workload management; and
 - (v) Awareness of other crewmembers' assignments and functions as they pertain to the cabin crewmember's own duties.

- (5) DANGEROUS GOODS—
 - (i) Recognition of and transportation of dangerous goods;
 - (ii) Proper packaging, marking, and documentation; and
 - (iii) Instructions regarding compatibility, loading, storage and handling characteristics.
- (6) SECURITY—
 - (i) Hijacking; and
 - (ii) Disruptive passengers.

IS: 8.10.1.25 COMPETENCE CHECKS: FLIGHT OPERATIONS OFFICERS

- (a) A check FOO, approved by the Authority, shall conduct competency checks for FOOs in at least the following areas to demonstrate that each candidate's competency level is sufficient to successfully perform assigned duties and responsibilities.
 - (1) Use of communications systems including the characteristics of those systems and the appropriate normal and emergency procedures;
 - (2) Meteorology, including various types of meteorological information and forecasts, interpretation of weather data (including forecasting of en route and terminal temperatures and other weather conditions), frontal systems, wind conditions, and use of actual and prognostic weather charts for various altitudes;
 - (3) The NOTAM system;
 - (4) Navigational aids and publications;
 - (5) Joint dispatcher-pilot responsibilities;
 - (6) Characteristics of appropriate aerodromes;
 - (7) Prevailing weather phenomena and the available sources of weather information;
 - (8) Air traffic control and IAPs; and
 - (9) Approved dispatcher resource management initial training.

- (b) The Authority requires special operations competency checks before an aircraft dispatcher is qualified in EDTO or other special operations authorised by the Authority.

IS: 8.10.1.33 RECURRENT TRAINING: FLIGHT CREW

- (a) An AOC holder shall establish a recurrent training program for all flight crew members in the AOC holder's operations manual and shall have it approved by the Authority.
- (b) A flight crew member shall undergo recurrent training relevant to the type or variant of aircraft on which he or she is certified to operate and for the crew member position involved.
- (c) An AOC holder shall have all recurrent training conducted by suitably qualified personnel.
- (d) An AOC holder shall ensure that flight crew member recurrent ground training includes at least the following—

(1) GENERAL SUBJECTS

- (i) Flight locating procedures
- (ii) Principles and method for determining mass/balance and runway limitations
- (iii) Meteorology to ensure practical knowledge of weather phenomena including the principles of frontal system, icing, fog, thunderstorms, windshear, and high altitude weather situations
- (iv) ATC systems and phraseology
- (v) Navigation and use of navigational aids
- (vi) Normal and emergency communication procedures
- (vii) Visual cues before descent to MDA
- (viii) Accident/incident and occurrence review
- (ix) Other instructions necessary to ensure the pilot's competence

- (2) AIRCRAFT SYSTEMS AND LIMITATIONS
 - (i) Normal, abnormal, and emergency procedures
 - (ii) Aircraft performance characteristics
 - (iii) Engines and or propellers
 - (iv) Major aircraft components
 - (v) Major aircraft systems (i.e., flight controls, electric, hydraulic and other systems as appropriate)
- (3) GROUND ICING AND DE-ICING PROCEDURES AND REQUIREMENTS
- (4) EMERGENCY EQUIPMENT AND DRILLS
 - (i) Every 12 months—
 - (A) Location and use of all emergency and safety equipment carried on the aircraft;
 - (B) The location and use of all types of exits;
 - (C) Actual donning of a lifejacket where fitted;
 - (D) Actual donning of protective breathing equipment; and
 - (E) Actual handling of fire extinguishers.
 - (ii) Every 3 years—
 - (A) Operation of all types of exits;
 - (B) Demonstration of the method used to operate a slide, where fitted; and
 - (C) Fire-fighting using equipment representative of that carried in the aircraft on an actual or simulated fire;

Note: With halon extinguishers, an alternative method acceptable to the authority may be used.

- (D) Effects of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment;
 - (E) Actual handling of pyrotechnics, real or simulated, where fitted;
 - (F) Demonstration in the use of the life-raft(s), where fitted;
 - (G) An emergency evacuation drill;
 - (H) A ditching drill, if applicable; and
 - (I) A rapid decompression drill, if applicable.
- (5) CREW RESOURCE MANAGEMENT (EVERY 12 MONTHS)—
- (i) Decision making skills;
 - (ii) Briefings and developing open communication;
 - (iii) Inquiry, advocacy, and assertion training;
 - (iv) Workload management; and
 - (v) Situational awareness.
- (6) DANGEROUS GOODS (EVERY 2 YEARS)—
- (i) Recognition of and transportation of dangerous goods;
 - (ii) Proper packaging, marking, and documentation; and
 - (iii) Instructions regarding compatibility, loading, storage and handling characteristics.
- (7) SECURITY (EVERY 12 MONTHS)—
- (i) Hijacking; and
 - (ii) Disruptive passengers.

(8) SAFETY MANAGEMENT SYSTEM (EVERY 12 MONTHS)

- (e) An AOC holder shall verify knowledge of the recurrent ground training by an oral or written examination.
- (f) An AOC holder shall ensure that proper flight crew coordination and training includes at least the following—

Note: Flight training may be conducted in an appropriate aircraft or an approved FSTD with landing capability.

(1) PREPARATION—

- (i) Visual inspection (use of pictorial display authorised); and
- (ii) Pre-taxi procedures.

(2) SURFACE OPERATION—

- (i) Performance limitations;
- (ii) Flight deck management;
- (iii) Securing cargo;
- (iv) Pushback;
- (v) Powerback taxi, if applicable;
- (vi) Starting;
- (vii) Taxi; and
- (viii) Pre take-off checks.

(3) TAKEOFF—

- (i) Normal;
- (ii) Crosswind;
- (iii) Rejected;
- (iv) Power failure after V1;
- (v) Powerplant failure during second segment; and

- (vi) Lower than standard minimum.
- (4) CLIMB—
 - (i) Normal; and
 - (ii) One-engine inoperative during climb to en route altitude.
- (5) EN ROUTE—
 - (i) Steep turns;
 - (ii) Approaches to stalls (takeoff, en route, and landing configurations);
 - (iii) Inflight powerplant shutdown;
 - (iv) Inflight powerplant restart; and
 - (v) High speed handling characteristics.
- (6) DESCENT—
 - (i) Normal; and
 - (ii) Maximum rate.
- (7) APPROACHES—
 - (i) VFR procedures;
 - (ii) Visual approach with 50% loss of power.(2 engines inoperative on 3-engine aeroplanes) (PIC only);
 - (iii) Visual approach with slat/flap malfunction;
 - (iv) IFR precision approaches (ILS normal and ILS with one-engine inoperative);
 - (v) IFR non-precision approaches (NDB normal and VOR normal);
 - (vi) Non-precision approach with one engine inoperative (LOC backcourse, SDF/LDA, GPS, TACAN and circling approach procedures);

Note: FSTD shall be qualified for training/checking on the circling manoeuvre.

- (vii) Missed approach from precision approach;
 - (viii) Missed approach from non-precision approach; and
 - (ix) Missed approach with powerplant failure.
- (8) LANDINGS—
- (i) Normal with a pitch mistrim (small aircraft only);
 - (ii) Normal from precision instrument approach;
 - (iii) Normal from precision instrument approach with most critical engine inoperative;
 - (iv) Normal with 50% loss of power. (2 engines inoperative on 3-engine aeroplanes) (PIC only);
 - (v) Normal with flap/slat malfunction;
 - (vi) Rejected landings;
 - (vii) Crosswind;
 - (viii) Short/soft field (small aircraft only); and
 - (ix) Glassy/rough water (seaplanes only).
 - (x) Autorotation (helicopter only)
- (9) AFTER LANDING—
- (i) Parking;
 - (ii) Emergency evacuation; and
 - (iii) Docking, mooring, and ramping (seaplanes only).
- (10) OTHER FLIGHT PROCEDURES DURING ANY AIRBORNE PHASE—
- (i) ACAS: use and avoidance manoeuvres

- (ii) Holding;
 - (iii) Ice accumulation on airframe;
 - (iv) Air hazard avoidance; and
 - (v) Windshear/microburst.
 - (vi) Upset prevention and recovery.
- (11) NORMAL, ABNORMAL AND ALTERNATE SYSTEMS PROCEDURES DURING ANY PHASE—
- (i) Pneumatic/pressurisation;
 - (ii) Air conditioning;
 - (iii) Fuel and oil;
 - (iv) Electrical;
 - (v) Hydraulic;
 - (vi) Flight controls;
 - (vii) Anti-icing and de-icing systems;
 - (viii) Flight management guidance systems and/or automatic or other approach and landing aids;
 - (ix) Stall warning devices, stall avoidance devices, and stability augmentation systems;
 - (x) Airborne weather radar;
 - (xi) Use of GPWS and avoidance of controlled flight into terrain
 - (xii) Flight instrument system malfunction;
 - (xiii) Communications equipment;
 - (xiv) Navigation systems;
 - (xv) Auto-pilot;

- (xvi) Approach and landing aids; and
- (xvii) Flight instrument system malfunction.
- (12) EMERGENCY SYSTEMS PROCEDURES DURING ANY PHASE—
 - (i) Aircraft fires;
 - (ii) Smoke control;
 - (iii) Powerplant malfunctions;
 - (iv) Fuel jettison;
 - (v) Electrical, hydraulic, pneumatic systems;
 - (vi) Flight control system malfunction; and
 - (vii) Landing gear and flap system malfunction.
- (g) An AOC holder shall ensure that flight engineer recurrent flight training includes at least the flight training specified in IS: 8.10.1.15(b).
- (h) The AOC holder may combine recurrent training with the AOC holder's proficiency check if approved by the Authority.
- (i) Recurrent ground and flight training curricula may be accomplished concurrently or intermixed, but completion of each of these curricula shall be recorded separately.

IS: 8.10.1.34 RECURRENT NORMAL AND EMERGENCY TRAINING: CABIN CREW

- (a) An AOC holder shall establish and have approved by the Authority a recurrent training program for all Cabin Crew.
- (b) A Cabin Crew shall undergo recurrent training in evacuation and other appropriate normal and emergency procedures and drills relevant to their assigned positions and the type(s) and/or variant(s) of aircraft on which they operate.
- (c) An AOC holder shall have all recurrent training conducted by suitably qualified personnel.

- (d) An AOC holder shall ensure that, every 12 months, Cabin Crews receive recurrent training in at least the following—
- (1) EMERGENCY EQUIPMENT—
 - (i) Emergency communication and notification systems;
 - (ii) Aircraft exits;
 - (iii) Exits with slides or sliderafts (emergency operation);
 - (iv) Slides and sliderafts in a ditching;
 - (v) Exits without slides (emergency operation);
 - (vi) Window exits (emergency operation);
 - (vii) Exits with tailcones (emergency operation);
 - (viii) Flight deck exits (emergency operation);
 - (ix) Ground evacuation and ditching equipment;
 - (x) First aid equipment;
 - (xi) Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE));
 - (xii) Firefighting equipment;
 - (xiii) Emergency lighting systems; and
 - (xiv) Additional emergency equipment.
 - (2) EMERGENCY PROCEDURES—
 - (i) General types of emergencies specific to aircraft;
 - (ii) Emergency communication signals and procedures;
 - (iii) Rapid decompression;
 - (iv) Insidious decompression and cracked window and pressure seal leaks;

- (v) Fires;
 - (vi) Ditching;
 - (vii) Ground evacuation;
 - (viii) Unwarranted evacuation (i.e., passenger initiated);
 - (ix) Illness or injury;
 - (x) Abnormal situations involving passengers or crew members;
 - (xi) Turbulence; and
 - (xii) Other unusual situations.
- (3) EMERGENCY DRILLS.
- (i) Every 12 months—
 - (A) Location and use of all emergency and safety equipment carried on the aircraft;
 - (B) The location and use of all types of exits;
 - (C) Actual donning of a lifejacket where fitted;
 - (D) Actual donning of protective breathing equipment; and
 - (E) Actual handling of fire extinguishers.
 - (ii) Every 3 years—
 - (A) Operation of all types of exits;
 - (B) Demonstration of the method used to operate a slide, where fitted;
 - (C) Fire-fighting using equipment representative of that carried in the aircraft on an actual or simulated fire;

Note: With Halon extinguishers, an alternative method acceptable to the Authority may be used.

- (D) Effects of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment;
 - (E) Actual handling of pyrotechnics, real or simulated, where fitted;
 - (F) Demonstration in the use of the life-raft(s), where fitted;
 - (G) An emergency evacuation drill;
 - (H) A ditching drill, if applicable;
 - (I) A rapid decompression drill, if applicable.
- (4) CREW RESOURCE MANAGEMENT (EVERY 12 MONTHS)—
- (i) Decision making skills;
 - (ii) Briefings and developing open communication;
 - (iii) Inquiry, advocacy, and assertion training; and
 - (iv) Workload management.
- (5) DANGEROUS GOODS (EVERY 2 YEARS)—
- (i) Recognition of and transportation of dangerous goods;
 - (ii) Proper packaging, marking, and documentation; and
 - (iii) Instructions regarding compatibility, loading, storage and handling characteristics.
- (6) SECURITY (EVERY 12 MONTHS)—
- (i) Hijacking; and
 - (ii) Disruptive passengers.
- (e) An AOC holder shall verify knowledge of the recurrent training by an oral or written examination.

- (f) An AOC holder may administer each of the recurrent training curricula concurrently or intermixed, but shall record completion of each of these curricula separately.

IS: 8.10.1.35 RECURRENT TRAINING - FLIGHT OPERATIONS OFFICER

- (a) An AOC holder shall establish and maintain a recurrent training program, approved by the Authority and established in the AOC holder's operations manual, to be completed annually by flight operations officers.
- (b) A flight operations officer shall undergo recurrent training relevant to the type(s) and/or variant(s) of aircraft and operations conducted by the AOC holder, and that training shall consist of at least the following hours of instruction—
 - (1) Reciprocating-engine aircraft – 8 hours
 - (2) Turbopropeller-powered aircraft – 10 hours
 - (3) Turbojet aircraft – 20 hours
 - (4) Other aircraft to include rotorcraft – 10 hours
- (c) An AOC holder shall conduct all recurrent training by suitably qualified personnel.
- (d) An AOC holder shall ensure that, every 12 months, each FOO receives recurrent training in the subjects required for initial training listed in IS 8.10.1.14(3) in sufficient detail to ensure competency in each specified area of training. Operators may choose to provide in-depth coverage of selected subjects on any one cycle of training. In such cases the operator's training programme shall cover all the subjects to the detail required for initial qualification within 3 years.
- (e) An AOC holder shall record completion of the required training
- (f) An AOC holder may administer each of the recurrent ground and flight training curricula concurrently or intermixed, but shall record completion of each of these curricula separately.

IS: 8.10.1.38 INSTRUCTOR TRAINING

- (a) FLIGHT CREW INSTRUCTOR TRAINING

- (1) An AOC holder shall not use a person, nor shall any person serve as a flight instructor in a training program unless—
 - (i) That person has satisfactorily completed initial or transition flight instructor training; and
 - (ii) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority, or an AOC holder's check personnel.
- (2) An AOC holder may accomplish the observation check for a flight instructor in part or in full, in an aircraft or an FSTD.
- (3) An AOC holder shall ensure that initial ground training for flight instructors includes the following—
 - (i) Flight instructor duties, functions, and responsibilities;
 - (ii) Applicable regulations and the AOC holder's policies and procedures;
 - (iii) Appropriate methods, procedures, and techniques for conducting the required checks;
 - (iv) Proper evaluation of student performance including the detection of—
 - (A) Improper and insufficient training;
 - (B) Personal characteristics of an applicant that could adversely affect safety;
 - (C) Appropriate corrective action in the case of unsatisfactory checks;
 - (D) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft.
 - (v) Except for flight instructors licenses—
 - (A) The fundamental principles of the teaching-learning process;
 - (B) Teaching methods and procedures; and

- (C) The instructor-student relationship.
- (4) An AOC holder shall ensure that the transition ground training for flight instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft to which the flight instructor is in transition.
- (5) An AOC holder shall ensure that the initial and transition flight training for flight instructors includes the following—
- (i) The safety measures for emergency situations that are likely to develop during instruction.
 - (ii) The potential results of improper, untimely, or non-execution of safety measures during instruction.
 - (iii) For pilot flight instructor (aircraft)—
 - (A) In-flight training and practice in conducting flight instruction from the left and right pilot seats in the required normal, abnormal, and emergency procedures to ensure competence as an instructor; and
 - (B) The safety measures to be taken from either pilot seat for emergency situations that are likely to develop during instruction.
- (6) For flight engineer instructors, in-flight training to ensure competence to perform assigned duties.
- (7) An AOC holder may accomplish the flight training requirements for flight instructors in full or in part inflight or in an FSTD, as appropriate.
- (8) An AOC holder shall ensure that the initial and transition flight training for flight instructors (FSTD) includes the following—
- (i) Training and practice in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight instruction required by this part. This training and practice shall be accomplished in full or in part in an FSTD.

- (ii) Training in the operation of FSTDs, to ensure competence to conduct the flight instruction required by this part.
- (9) The AOC holder shall record the training in each individual's training record maintained by the AOC holder.
- (b) CABIN CREW INSTRUCTOR TRAINING.
 - (1) An operator shall not use a person, nor shall any person serve as cabin instructor in a training programme unless—
 - (i) That person has satisfactorily completed initial or transition cabin instructor training; and
 - (ii) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder's check personnel.
 - (iii) An AOC holder may accomplish the observation check for a cabin instructor, in part or in full, in an aircraft or a cabin simulation training device.
 - (2) Each AOC holder shall ensure that initial ground training for cabin instructors includes the following—
 - (i) Cabin instructor duties, functions, and responsibilities.
 - (ii) Applicable regulations and the AOC holder's policies and procedures.
 - (iii) Appropriate methods, procedures, and techniques for conducting the required checks.
 - (iv) Proper evaluation of student performance including the detection of—
 - (A) Improper and insufficient training; and
 - (B) Personal characteristics of an applicant that could adversely affect safety.
 - (v) Appropriate corrective action in the case of unsatisfactory checks.

- (vi) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft, as applicable.
 - (vii) Except for existing cabin instructors—
 - (A) The fundamental principles of the teaching-learning process;
 - (B) Teaching methods and procedures; and
 - (C) The instructor-student relationship.
- (3) An AOC holder shall ensure that the transition ground training for cabin instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft, as appropriate to which the cabin instructor is in transition.
- (4) An AOC holder shall ensure that the initial and transition flight training for cabin instructors includes the following—
 - (i) The safety measures for emergency situations that are likely to develop during instruction.
 - (ii) The potential results of improper, untimely, or non-execution of safety measures during instruction.
- (5) The AOC holder shall record the training in each individual's training record maintained by the AOC holder.
- (c) FLIGHT OPERATIONS OFFICER INSTRUCTOR TRAINING.
 - (1) An operator shall not use a person, nor shall any person serve as FOO instructor in a training programme unless—
 - (i) That person has satisfactorily completed initial or transition FOO instructor training; and
 - (ii) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder's check FOO.

- (2) An AOC holder may accomplish the observation check for a FOO instructor, in part or in full, in a flight operations centre.
- (3) An AOC holder shall ensure that initial ground training for FOO instructors includes the following—
 - (i) FOO instructor duties, functions, and responsibilities.
 - (ii) Applicable regulations and the AOC holder's policies and procedures.
 - (iii) Appropriate methods, procedures, and techniques for conducting the required checks.
 - (iv) Proper evaluation of student performance including the detection of—
 - (A) Improper and insufficient training; and
 - (B) Personal characteristics of an applicant that could adversely affect safety.
 - (v) Appropriate corrective action in the case of unsatisfactory checks.
 - (vi) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures for the aircraft or position involved.
 - (vii) Except for holders of existing FOO instructor licences—
 - (A) The fundamental principles of the teaching-learning process;
 - (B) Teaching methods and procedures; and
 - (C) The instructor-student relationship.
- (4) An AOC holder shall ensure that the transition ground training for FOO instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft or position involved to which the FOO instructor is in transition.

- (5) An AOC holder shall ensure that the initial and transition training for FOO instructors includes the following—
 - (i) The safety measures for emergency situations that are likely to develop during instruction in a flight operations centre.
 - (ii) The potential results of improper, untimely, or non-execution of safety measures during instruction in a flight operations centre.
- (6) The AOC holder shall record the training in each individual's training record maintained by the AOC holder.
- (d) DANGEROUS GOODS INSTRUCTOR TRAINING.
 - (1) An operator shall not use a person, nor shall any person serve as dangerous goods instructor in a training programme unless—
 - (i) That person has satisfactorily completed dangerous goods training in the applicable dangerous goods category prior to delivering such a dangerous goods training programme.
 - (ii) That person has within the preceding 24 calendar months, satisfactorily conducted initial or recurrent instructions or in the absence undergoes recurrent training.
 - (2) The AOC holder shall record the training in each individual's training record maintained by the AOC holder.

IS: 8.10.1.40 CHECK PERSONNEL TRAINING (CABIN CREW AND FLIGHT OPERATIONS OFFICERS)

(a) CABIN CREW INSTRUCTOR TRAINING

- (1) An AOC holder shall not use a person, nor shall any person serve as cabin instructor in a training programme unless—
 - (i) That person has satisfactorily completed initial or recurrent cabin instructor training; and
 - (ii) That person satisfactorily conducts instruction under the observation of an inspector from the Authority;

- (iii) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder's check personnel.
- (2) An AOC holder may accomplish the observation check for a cabin instructor, in part or in full, in an aircraft or a cabin simulation training device.
- (3) An AOC holder shall ensure that initial ground training for cabin instructors includes the following—
 - (i) Cabin instructor duties, functions, and responsibilities.
 - (ii) Applicable regulations and the AOC holder's policies and procedures.
 - (iii) Appropriate methods, procedures, and techniques for conducting the required checks.
 - (iv) Proper evaluation of student performance including the detection of—
 - (A) Improper and insufficient training; and
 - (B) Personal characteristics of an applicant that could adversely affect safety.
 - (v) Appropriate corrective action in the case of unsatisfactory checks.
 - (vi) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft, as applicable.
 - (vii) Except for existing cabin instructors—
 - (A) The fundamental principles of the teaching-learning process;
 - (B) Teaching methods and procedures; and
 - (C) The instructor-student relationship.

- (4) An AOC holder shall ensure that the recurrent ground training for cabin instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft.
 - (5) An AOC holder shall ensure that the initial and recurrent flight training for cabin instructors includes the following—
 - (i) The safety measures for emergency situations that are likely to develop during instruction.
 - (ii) The potential results of improper, untimely, or non-execution of safety measures during instruction.
 - (6) An AOC holder shall record the training in each individual's training record maintained by the AOC holder.
- (b) FLIGHT OPERATIONS OFFICER INSTRUCTOR TRAINING
- (1) An AOC holder shall not use a person, nor shall any person serve as FOO instructor in a training programme unless—
 - (i) That person has satisfactorily completed initial or recurrent FOO instructor training; and
 - (ii) That person satisfactorily conducts instruction under the observation of an inspector from the Authority;
 - (iii) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder's check FOO.
 - (iv) An AOC holder may accomplish the observation check for a FOO instructor, in part or in full, in a flight operations centre.
 - (2) An AOC holder shall ensure that initial ground training for FOO instructors includes the following—
 - (i) FOO instructor duties, functions, and responsibilities.
 - (ii) Applicable regulations and the AOC holder's policies and procedures.

- (iii) Appropriate methods, procedures, and techniques for conducting the required checks.
 - (iv) Proper evaluation of student performance including the detection of—
 - (A) Improper and insufficient training; and
 - (B) Personal characteristics of an applicant that could adversely affect safety.
 - (v) Appropriate corrective action in the case of unsatisfactory checks.
 - (vi) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures for the aircraft or position involved.
 - (vii) Except for existing FOO instructors—
 - (A) The fundamental principles of the teaching-learning process;
 - (B) Teaching methods and procedures; and
 - (C) The instructor-student relationship.
- (3) An AOC holder shall ensure that the recurrent ground training for FOO instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft.
- (4) An AOC holder shall ensure that the initial and recurrent training for FOO instructors includes the following—
 - (i) The safety measures for emergency situations that are likely to develop during instruction in a flight operations centre.
 - (ii) The potential results of improper, untimely, or non-execution of safety measures during instruction in a flight operations centre.

- (5) The AOC holder shall record the training in each individual's training record maintained by the AOC holder.

IS: 8.10.1.42 CHECK AIRMAN TRAINING

- (a) A person may not use a person, nor may any person serve as a check airman in a training program unless, with respect to the aircraft type involved, that person has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training, that are required to serve as PIC or flight engineer, as applicable.
- (b) An AOC holder shall ensure that initial ground training for check airmen includes—
 - (1) Check airman duties, functions, and responsibilities;
 - (2) Applicable regulations and the AOC holder's policies and procedures;
 - (3) Appropriate methods, procedures, and techniques for conducting the required checks;
 - (4) Proper evaluation of student performance including the detection of—
 - (i) Improper and insufficient training,
 - (5) Personal characteristics of an applicant that could adversely affect safety;
 - (i) Appropriate corrective action in the case of unsatisfactory checks; and
 - (ii) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft.
- (c) Transition ground training for all check airmen shall include the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft to which the check airman is in transition.
- (d) An AOC holder shall ensure that the initial and transition flight training for check airmen (aeroplane/helicopter) includes—

- (1) Training and practice in conducting flight evaluations (from the left and right pilot seats for pilot check airmen) in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight checks;
 - (2) The potential results of improper, untimely, or non-execution of safety measures during an evaluation; and
 - (3) The safety measures (to be taken from either pilot seat for pilot check airmen) for emergency situations that are likely to develop during an evaluation.
- (e) For check persons an AOC holder shall ensure training to ensure competence to perform assigned duties to include—
 - (1) The safety measures for emergency situations that are likely to develop during a check;
 - (2) The potential results of improper, untimely or non-execution of safety measures during a check.
- (f) An AOC holder shall ensure that the initial and transition flight training for check airmen (FSTD) includes—
 - (1) Training and practice in conducting flight checks in the required normal, abnormal, and emergency procedures to ensure competence to conduct the evaluations checks required by this part (this training and practice shall be accomplished in an FSTD).
 - (2) Training in the operation of an FSTD, to ensure competence to conduct the evaluations required by this Part.
- (g) An AOC holder may accomplish flight training for check airmen in full or in part in an aircraft, in an FSTD, as appropriate.
- (h) The AOC holder shall record the training in each individual's training record maintained by the AOC holder.

IS: 8.11.1.4 DEFINITIONS

- (a) The following definitions shall apply—
 - (1) “Acclimatised”: When a crewmember has spent 3 consecutive local nights on the ground within a time zone, which is 2 hours wide and is able to take uninterrupted nights sleep. The

crewmember will remain acclimatised thereafter until a duty period finishes at a place where local time differs by more than 2 hours from that at the point of departure.

- (2) “Cabin Crew”: A person employed to facilitate the safety of passengers, whose duties are detailed by the AOC holder or the aircraft PIC.
- (3) “Contactable”: A short period of time during the day, other than a day-off, during which the AOC holder requires a crewmember to be contactable for the purpose of giving notification of a duty period which will commence not less than 10 hours ahead. The contactable period will be between () and () local time. (Times inserted must not cover more than 2.5 hours.)
- (4) “Crew Member”: A member of the flight crew or a Cabin Crew. Any person required to perform duties an aircraft in flight.
- (5) “Days Off”: Periods available for leisure and relaxation free from all duties. A single day off will include two local nights. Consecutive days off shall include a further local night for each additional consecutive day off. A rest period may be included as part of a day off.
- (6) “Deadheading”: Time spent in transportation on aircraft (at the insistence of the AOC holder) to or from a crew member’s home station.
- (7) “Dispatch Crew”: A fully qualified and current flight crew/Cabin Crew authorised to carry out pre-flight duties as defined by the AOC holder.
- (8) “Duty”: Any continuous period during which a crewmember is required to carry out any task associated with the business of the AOC holder.
- (9) “Flight Crew”: Those members of the crew of an aircraft who act as pilot or flight engineer.
- (10) “Flying Duty Period” or “FDP”: Any time during which a person operates an aircraft as a member of its crew. It starts when the crewmember is required by the AOC holder to report for a flight and finishes at on-chocks or engine off at the end of the final sector.

- (11) "Late Finish/Early Start": Any duty that is carried out within any part of the period 01:00 to 06:59 hours local time, to which a crewmember is acclimatised.
- (12) "Local Night": A period of 8 hours falling between 21:00 and 07:00 hours local time.
- (13) "Reporting Time": The time at which a crew member is required by the AOC holder to report for any duty.
- (14) "Rest Period": A period of time before starting a flying duty period which is designed to give crewmembers adequate opportunity to rest before a flight.
- (15) "Rostered / Planned Duty": A duty period, or series of duty periods, which stipulated start and finish times, notified to crews in advance, by the AOC holder.
- (16) "Rostering Period": () consecutive weeks (2 to 6 weeks normally 4 weeks)
- (17) "Scheduled Duty": The allocation of a specific flight or flights or other duties to a crew member within the pre-notified rostered series of duty periods.
- (18) "Sector": The time between the aircraft first moving under its own power until it next comes to rest after landing, on the designated parking position.
- (19) "Split Duty": Flying Duty Period that consists of two or more sectors, separated by less than a minimum rest period.
- (20) "Standby Duty": period during which the company places restraints on a crewmember who would otherwise be off duty. (If using the Contactable clause, the following must be included) However, it shall not include any time during which a crewmember is contactable for the purpose of giving notification of a duty which is due to start 10 hours or more ahead.
- (21) "Suitable Accommodation": well-furnished bedroom, which is subject to minimum noise, is well ventilated and has the facility to control the level of light and temperature.
- (22) "Travelling time": All time spent by a crewmember transiting between the place of rest and the place of reporting for duty.

- (23) “Week”: A period of 7 consecutive days starting at (..) time Local on a (..) day of the week. (Insert time and day of the week, as required.)

IS: 8.11.1.5 FLIGHT DUTY PERIOD

- (b) Maximum FDP. The maximum FDP in hours and fractions of hours will be in accordance with Table A or Table B as applicable.
- (b) The Standard reporting times prior to flight will be—
- (1) Large Commercial Operators (above 5,700kg) : Minimum 45 minutes .
 - (2) Air Taxi / Charter / Helicopter (5,700kg and below)— Minimum 30 minutes
- (c) Pre-flight duties form part of the FDP. A minimum of 30 minutes duty will be allowed for post flight activities.

Note: The time spent between reporting for a flight and the completion of the post flight tasks determines the length of the subsequent rest period.

IS: 8.11.1.6 FLIGHT DUTY PERIOD TABLES

- (b) An AOC holder and a pilot shall use the following tables to determine the maximum allowable flight duty period.
- (1) LARGE COMMERCIAL OPERATORS – above 5,700kg.
 - (i) Table A – FDP starts at a place where the crew member is Acclimatised

Maximum FDP – Two or more Flight Crew				
Local Start Time	S E C T O R S			
	1 to 3	4 to 6	7 to 8	9
0500 – 0759	12 hrs	11 hrs	10½ hrs	9½ hrs
0800 – 1259	12½ hrs	11½ hrs	10½ hrs	9½ hrs
1300 – 1759	12 hrs	11 hrs	10½ hrs	9½ hrs
1800 – 2159	11½ hrs	10½ hrs	10 hrs	9 hrs
2200 – 0459	11 hrs	10½ hrs	10 hrs	9 hrs

- (ii) Table B – When the crew member is not Acclimatised
Maximum FDP – Two or more Flight Crew

	S E C T O R S						
Length of preceding rest (hrs)	1	2	3	4	5	6	7 or more
Up to 18 or over 30	13 hrs	12½ hrs	11½ hrs	10½ hrs	10 hrs	9½ hrs	9 hrs
Between 18 and 30	11½ hrs	11 hrs	10½ hrs	9½ hrs	9 hrs	9 hrs	9 hrs

Note: The limitations of Table A and Table B shall be applied to all Cabin Crew and not only to those Cabin Crew carried to meet the provisions of the Civil Aviation Regulations.

- (2) AIR TAXI / CHARTER OPERATORS – 5,700kg and below.

- (b) Table A – Maximum FDP. Two or more Flight Crew

Local Start Time	SECTORS
Max 15	
0600 – 0659	13 hrs
0700 – 1259	14 hrs
1300 – 1759	13 hrs
1800 – 2159	12 hrs
2200 – 0559	11 hrs

- (ii) Table B – Maximum FDP. Single Flight Crew

Local Start Time	SECTORS
Max 15	
0600 – 0659	10 hrs
0700 – 1259	11 hrs
1300 – 1759	11 hrs
1800 – 2159	10 hrs
2200 – 0559	9 hrs

Note: Flight crew operating as single crew during any part of an FDP shall be limited to the requirements set out in Table B.

(3) HELICOPTERS OPERATORS.

(i)

Local Time	Start Time	SINGLE PILOT		TWO PILOT	
		Max Length of FDP (Hrs)	Max Flying Time (Hrs)	Max Length of FDP (Hrs)	Max Flying Time (Hrs)
	0600 – 0659	9	6	10	7
	0700 – 1259	10	7	11	8
	1300 – 1759	10	7	12	8
	1800 – 2159	9	6	10	7
	2200 – 0559	8	5	9	6

Note: Helicopter crews flying repetitive short sectors at an average of more than 10 landings per hour, will have a break of at least 30 minutes away from the helicopter within any period of 3 hours.

IS: 8.11.1.7 LIMITS ON TWO FLIGHT CREW LONG RANGE OPERATIONS

- (a) When an aeroplane flight crew is only two pilots, the allowable FDP shall be calculated as follows—

- (1) A sector scheduled for more than 7 hours is considered as a multi-sector flight, as in the table below—

Scheduled Sector Times	Sectors	
	Acclimatised	Not-Acclimatised
Sector Length over 7 hrs but not more than 9 hrs	2	4
Sector Length over 9 hrs but not more than 11 hrs	3	4
Sector length over 11 hrs	4	Not Applicable

- (2) The appropriate table in IS: 8.11.1.6 is then entered with the start time of the duty period and the “modified” number of sectors, to determine the allowable FDP.
- (b) When an additional, current, type rated pilot is carried then the limits of paragraph (a) do not apply and the permissible FDP is determined by entering the appropriate table in IS: 8.11.1.6 with time of start and the actual sectors planned.

IS: 8.11.1.8 EXTENSION OF FLYING DUTY PERIOD BY IN-FLIGHT RELIEF

- (a) When any additional crew member is carried to provide in-flight relief, with the intent of extending an FDP, that individual shall hold qualifications which are equal or superior to those held by the crew member who is rested. The division of duty and rest between those crew members being relieved will be kept in balance. It is unnecessary for the relieving crew member to rest in between the times relief is provided for other crew members.
- (b) When in-flight relief is authorized there will be for the crew member resting a comfortable reclining seat, or bunk, separated and screened from the flight deck and passengers, and free from disturbance.
- (c) A total in-flight rest of less than 3 hours does not allow for the extension of an FDP, but where the total in-flight rest, which need not be consecutive, is 3 hours or more, then the FDP may be extended as follows—
 - (1) IF REST IS TAKEN IN A BUNK. A period equal to one half of the total of rest taken, provided that the FDP shall not exceed 18 hours;
 - (2) IF REST IS TAKEN IN A SEAT. A period equal to one third of the total of rest taken, provided that the FDP permissible shall not exceed 15 hours.

IS: 8.11.1.9 CALCULATION OF DELAY REPORTING TIMES IN A SINGLE FDP

- (a) When a crewmember is informed of a delay to the reporting time due to a changed schedule, before leaving the place of rest, the FDP shall be calculated as follows—
 - (1) LESS THAN 4 HOURS: the maximum FDP allowed would be based on the original report time and the FDP will start at the actual report time.
 - (2) 4 HOURS OR MORE: the maximum FDP shall be calculated using the more limiting of the planned and actual reporting times and the FDP will start 4 hours after the original report time.

- (b) When the AOC holder informs a crew member before leaving the place of rest of a delay in reporting time of 10 hours or more ahead, and that crew member is not further disturbed by the AOC holder until a mutually agreed hour, then that elapsed time is classed as a rest period. If, upon the resumption of duty, further delays occur then the appropriate criteria in paragraph (a) above will be applied to the re-arranged reporting time.

IS: 8.11.1.10 AIRCRAFT PIC’S DISCRETION TO EXTEND AN FDP

- (a) An aircraft PIC may, at his discretion, and after taking note of the circumstances of other members of the crew, extend an FDP beyond that permitted in Table A or Table B of IS 8.11.1.6, provided he is satisfied that the flight can be made safely. Extensions of more than 3 hours are only permitted in the case of an emergency. (see note)
- (1) A PIC is 1080authorized to exercise his discretion in the following circumstances and to the limits set—
- (i) In a Flying Duty Period involving 2 sectors or less up to a maximum of 3 hours;
- (ii) In a Flying Duty Period involving more than 2 sectors, up to a maximum of 2 hours.
- (b) A PIC may exercise discretion to extend an FDP following a reduced rest period, only exceptionally, and then only to the extent necessary to allow for unforeseen circumstances that become apparent during the last sector.

Note: In respect of an extension of a flying duty period, an emergency is a situation which in the judgement of the PIC presents a serious risk to the health or safety of crew and passengers, or endangers the lives of others.

IS: 8.11.1.11 SPLIT DUTY EXTENSIONS

- (a) When a FDP consists of two or more sectors - one of which can be a deadheading journey counted as a sector - but separated by less than the minimum rest period, then the FDP may be extended by the amounts indicated below.

Consecutive Hours Rest	Maximum Extension of FDP

Less than 3 hours	Nil
3 - 10 hours	A period equal to half the consecutive hours rest taken

- (b) The rest period shall not include the time allowed for the immediate post-flight and pre-flight duties. When the rest period is less than 6 hours it will suffice if a quiet and comfortable place, not open to the public, is available. If rest is taken in the aircraft on the ground, the crew must have adequate control of the temperature and ventilation within the aircraft, either by use of a ground power unit or the aircraft internal power units. The passengers must not be on board. If the rest period is more than 6 hours, then a suitable accommodation will be provided by the AOC holder.

IS: 8.11.1.12 REPORTING EXERCISE OF DISCRETION TO AN EXTENSION OF A FDP

- (a) Whenever a PIC extends an FDP it shall be reported to (Specify reporting point, i.e. Operations Manager) on a Discretion Report Form, in the format of (Specify Company form). If the extension is greater than 2 hours, then the AOC holder shall submit the PIC's written report, together with the AOC holder's comments, to the Authority, within 14 days of the aircraft's return to base.

IS: 8.11.1.13 LATE FINISHES/EARLY STARTS

- (a) This paragraph only applies to crew members who are acclimatized and does not apply to those on Reserve duty except when required to report for duty during the times specified below.
- (1) Sleep deprivation, leading to the onset of fatigue, can arise if a crewmember is required to report early for duty on a number of consecutive days. Therefore, not more than 3 consecutive duties that occur in any part of the period 0100 to 0659 local time shall be undertaken, nor will there be more than 4 such duties in any 7 consecutive days.
 - (2) When a crewmember is in suitable accommodation provided by the company, which is within 15 minutes travelling time of the reporting point, then 0659 will be changed to 0559 local time.

- (3) Notwithstanding IS: 8.11.1.13 (a) crewmembers who are employed on a regular early morning duty for a maximum of 5 consecutive duties will work to the following—
 - (i) The minimum rest period before the start of such a series of duties will be 24 hours.
 - (ii) The duty will not exceed 9 hours, irrespective of the sectors flown.
 - (iii) At the finish of such a series of duties, crewmembers will have a minimum of 63 hours free of all duties
- (4) Should any duties be scheduled to be carried out in any part of the period between 0200 and 0459 local time, for a minimum of 2 and a maximum of 3 consecutive nights, then crewmembers will finish the duty preceding this series of duties by 2100 hours local time before covering the block of consecutive night duties, such that crewmembers can take a rest period during a local night.
- (5) Notwithstanding IS: 8.11.1.13 (a) crewmembers who are employed on a regular night duty for a maximum of 5 consecutive nights will work to the following—
 - (i) The minimum rest period before the start of such a series of duties will be 24 hours.
 - (ii) The duty will not exceed 8 hours, irrespective of the sectors flown.
 - (iii) At the finish of such a series of duties crewmembers will have a minimum of 54 hours free of all duties.

Note: AOC holders are given the option of omitting paragraphs (3) and (5) of IS 8.11.1.13.

IS: 8.11.1.14 STANDBY DUTY

- (a) The time of start, end and nature of the standby duty will be defined and notified to crew members. The time a standby duty starts determines the allowable FDP, except that when the actual FDP starts in a more limiting time band, then that FDP limit will apply.

- (b) When a crewmember is on standby duty on immediate readiness at an airport, then the allowable FDP is calculated using the start time of the standby duty.
- (c) If a crewmember is called out from standby, the standby duty will cease when the crewmember reports at the designated reporting point.
- (d) The following limits apply—

Duty	Maximum Duration
Standby Duty (all Cases)	12 hours
Standby followed by FDP	Time on standby (up to a maximum of 6 hours) plus the allowable FDP obtained from Table A or B in IS: 8.11.1 6

IS: 8.11.1.15 MIXED DUTIES

- (a) When a crewmember is required to report for duty in advance of the stipulated report time for a scheduled flight, to carry out a task at the behest of the AOC holder, then the time spent on that task shall be part of the subsequent FDP.
- (b) When a flight crew member flies in the simulator, either on check or training flight, or as a Check Airman or Instructor, and then within the same duty period flies as a flight crew member on a commercial air transport flight, all the time spent in the simulator is counted in full toward the subsequent FDP and for helicopters towards the daily flying hour maxima. Simulator flying does not count as a sector, but the FDP allowable is calculated from the report time of the simulator detail.

IS: 8.11.1.16 DEADHEADING

- (a) All the time spent on deadheading at the behest of the AOC holder will count as duty, but deadheading does not count as a sector when calculating the FDP. In these circumstances the FDP commences not later than the time at which the crew member reports for the deadheading journey, or deadheads in accordance with IS 8.11.1.17.

- (b) If, after a deadheading journey, and prior to a FDP, if split duty is invoked the deadheading journey must be counted as a sector when calculating the allowable FDP.
- (c) On occasion, with the agreement of the Authority the AOC holder can recover a crew member to main base from an overseas airfield by means of a deadheading flight on the eighth consecutive day of duty.

IS: 8.11.1.17 TRAVELLING TIME

- (a) Travelling time, other than that spent on deadheading shall not be counted as duty.
- (b) Travelling time, from home to departure aerodrome, if long distances are involved, is a factor influencing any subsequent onset of fatigue. If the journey time from home to normal departure airfield is usually in excess of (1½ hours Max), crewmembers should make arrangements for temporary accommodation nearer to base.
- (c) When crewmembers are required to travel from their home to an aerodrome other than the one from which they normally operate, any travelling time in excess of 30 minutes over and above the journey time from home to the usual operating aerodrome will count as deadheading.

Note 1: Notwithstanding the above, time spent in transportation in excess of 30 minutes and away from base, that is required by the AOC holder to position crew members to or from flights is not considered part of a rest period.

Note 2: Time spent in transportation on aircraft (at the behest of the AOC holder) to or from a crew member's home station is not considered part of a rest period.

IS: 8.11.1.18 REST PERIODS

- (a) Crew members will be notified in good time of a flying duty period so that sufficient and uninterrupted pre-flight rest can be obtained. A flying duty period for cabin crew can be 1 hour longer than that permitted for flight crew. When away from base opportunities and facilities for adequate pre-flight rest will be provided by the AOC holder in suitable accommodation. When flights are carried out at such short notice that it is impracticable for the AOC holder to arrange suitable accommodation, then this responsibility devolves to the aircraft PIC.

- (1) The minimum rest period which will be provided before undertaking a flying duty period shall be—
 - (i) At least as long as the preceding duty period, or
 - (ii) 12 hours, whichever is the greater.
- (2) For cabin crew the minimum rest period which will be provided before undertaking a flying duty period shall be—
 - (i) At least as long as the preceding duty period, or
 - (ii) 11 hours, whichever is the greater
- (3) In the case when the rest period earned by a crewmember is 12 hours, and suitable accommodation is provided by the AOC holder, then that rest period will be reduced by one hour. In such circumstances, if the travelling time between the aerodrome and the accommodation is more than 30 minutes each way then the rest period will be increased by the amount the total time spent travelling exceeds one hour. In both situations the accommodation allocated to the crewmember must be available for occupation for a minimum of 10 hours. (This sub-paragraph does not apply to rest periods that exceed 12 hours.)
- (4) If the preceding duty period, which includes any time spent on deadheading, exceeds (18 hours max), then the ensuing rest period must include a local night.
- (5) Following a sequence of reduced rest and an extended FDP the subsequent rest period cannot be reduced.
- (6) After being called out from a standby duty the length of the minimum rest period will be determined by the length of standby duty, plus any time spent on deadheading, and any FDP completed.
- (7) Crewmembers who are having difficulty in achieving adequate pre-flight rest shall inform their manager, and then be given the opportunity to consult an aviation medical specialist.

IS: 8.11.1.19 AIRCRAFT PIC'S DISCRETION TO REDUCE A REST PERIOD

- (a) An aircraft PIC may, at his discretion, and after taking note of the circumstances of other crewmembers of the crew, reduce a rest period, but only insofar as the room allocated to the crew member must be available for occupation for a minimum of (not less than 10) hours. The exercise of such discretion will be exceptional and must not be used to reduce successive rest periods. If the preceding FDP was extended, the rest period may be reduced, provided that the subsequent allowable FDP is also reduced by the same amount. In no circumstances shall a PIC exercise discretion to reduce a rest period below 10 hours at accommodation.

IS: 8.11.1.20 REPORTING EXERCISE OF DISCRETION TO REDUCE A REST PERIOD

- (a) Whenever a PIC reduces a rest period, it shall be reported to (Specify reporting point, i.e. Operations Manager) on a Discretion Report Form, in the format of (Specify Company form). If the reduction is more than 1 hour, then the company shall submit the PIC's written report, together with the AOC holder's comments, to the Authority, within 14 days of the aircraft's return to base.

IS: 8.11.1.21 DAYS OFF

- (a) Wherever possible, days off will be taken in the home environment.
- (1) A single day off will include 2 local nights, and will last at least 34 hours.
 - (2) A planned rest period may be included as part of a day off.
 - (3) Crewmembers shall—
 - (i) not be on duty more than 7 consecutive days between days off.
 - (ii) have 2 consecutive days off in any consecutive 14 days following the previous 2 consecutive days off
 - (iii) have a minimum of 7 days off in any consecutive 28 days.
 - (iv) have an average of 8 days off in a consecutive 4-week period, averaged over three such periods.

IS: 8.11.1.22 ABSOLUTE LIMIT ON FLYING HOURS

- (a) The Maximum flying hours for flight crew is 100 hours (90 hours Helicopter) in 28 consecutive days, expiring at the end of the day on which the flight begins.
- (b) The Maximum flying hours for flight crew is 1000 hours (800 hours Helicopter) in any period of 12 consecutive months, expiring at the end of the day on which the flight begins.

IS: 8.11.1.23 CUMULATIVE DUTY HOURS

- (a) The maximum duty hours for flight crews will not exceed—
 - (1) 55 hours in 1 week, but this figure can be increased to 60 hours when a rostered duty covering a series of duty periods has commenced and is subject to unforeseen delays
 - (2) 95 hours in any 2 consecutive weeks
 - (3) 190 hours in any 4 consecutive weeks
- (b) The maximum duty hours for Cabin Crew will not exceed—
 - (1) 60 hours in 1 week, but can be increased to 65 hours under similar circumstances applicable to flight crew
 - (2) 105 hours in any 2 consecutive weeks
 - (3) 210 hours in any 4 consecutive weeks
- (c) When a crewmember is not rostered for either standby or flying duties for 28 or more consecutive days then any duty hours worked will not be added to cumulative totals. However, when a crewmember is anticipated to return to either standby or flying duties then the duty hours worked in the 28 days preceding that duty must be recorded. Those hours worked will be used to ensure that the crew member complies with the requirements of this scheme.

IS: 8.11.1.24 CALCULATION OF CUMULATIVE DUTY HOURS

- (a) Duty hours will be added to cumulative totals in accordance with the following—
 - (1) to count in full—

- (i) Duty periods and flying duty periods, plus subsequent post flight duties
 - (ii) All standby duty, except that specified in (b) below
 - (iii) The time spent deadheading
- (2) to count as half the time on duty—
- (i) The standby duty, when the period of notice given to the crew member by the company before reporting for duty is at least treble the time of IS: 8.11.1.5 (b).
 - (ii) Any standby duty when undertaken at home, or in suitable accommodation provided by the AOC holder, that takes place during the period 22:00 to 08:00 hours, and the crewmember can take undisturbed rest and is not called out for duty.

IS: 8.11.1.25 RECORDS TO BE MAINTAINED

- (a) Records for duty and rest periods of all flying staff shall include—
- (1) FOR A CREWMEMBER.
 - (i) The beginning, end and duration of a duty or flying duty period, and function performed during that period. Duration of a rest period prior to a flying duty or standby duty period. Dates of days off. Weekly totals of duty.
 - (2) FOR A FLIGHT CREWMEMBER.
 - (i) Daily and weekly flying hours
 - (ii) Records shall be preserved for at least 24 calendar months from the date of the last relevant entry.
 - (iii) Additionally, copies of all aircraft PIC's discretion reports of extended flying duty periods and reduced rest periods will be retained for a period of at least six months after the event.
 - (3) FOR A FLIGHT OPERATIONS OFFICER/FLIGHT DISPATCHER.

- (i) Each AOC holder shall maintain records for each FOO/flight dispatcher of duty periods and rest periods for a period of 24 months.

**IS: 8.11.1.26 DUTY AND REST PERIODS FLIGHT OPERATIONS
OFFICERS/FLIGHT DISPATCHERS**

- (a) No AOC holder shall schedule—
 - (1) An FOO/aircraft dispatcher for more than 10 consecutive hours of duty within a 24-consecutive-hour period, unless that person is given an intervening rest period of at least 8 hours at or before the end of the 10 hours duty, except in cases where circumstances or emergency conditions beyond the control of the AOC holder require otherwise.
 - (2) Each AOC holder shall establish the daily duty period for a FOO/aircraft dispatcher so that it begins at a time that allows him or her to become thoroughly familiar with existing and anticipated weather conditions along the route before he or she dispatches any aircraft.
 - (3) He or she shall remain on duty until each aircraft dispatched by him or her has completed its flight or has gone beyond his or her jurisdiction or until he or she is relieved by another qualified dispatcher.
- (b) The AOC holder shall relieve the FOO/flight dispatcher from all duties for 24 consecutive hours during any 7 consecutive day period.
- (c) No AOC holder shall assign, nor shall any person—
 - (1) Perform duties in commercial air transportation unless that person has had at least the minimum rest period applicable to those duties as prescribed by the Authority; or
 - (2) Accept an assignment to any duty with the AOC holder during any required rest period.

PART 9
AIR OPERATOR CERTIFICATION AND ADMINISTRATION

9.1 AIR OPERATOR CERTIFICATE

9.1.1.1 APPLICABILITY

- (a) This part applies to the carriage of passengers, cargo or mail for remuneration or hire by persons or organisations whose principal place of business or permanent residence is located in Grenada.
- (b) This part prescribes requirements for the original certification and continued validity of air operator certificates (AOC) issued by Grenada.
- (c) Except where specifically noted, this part applies to all commercial air transport operations by AOC holders for which Grenada is the State of the Operator under the definitions provided in Annex 6 to the Chicago Convention and Part 1 of these regulations.

9.1.1.2 DEFINITIONS

- (a) For the purpose of this part, the applicable definitions are contained in Part 1 of these regulations – “General Policies, Procedures and Definitions.”

9.1.1.3 ACRONYMS

- (a) The following acronyms are used in this part.
 - (1) **AC** – Advisory Circular
 - (2) **ACAS** – Airborne Collision Avoidance System
 - (3) **AD** – Airworthiness Directive
 - (4) **AFM** – Aircraft Flight Manual
 - (5) **AMO** – Approved Maintenance Organisation
 - (6) **AMT** – Aviation Maintenance Technician
 - (7) **AOC** – Air Operator Certificate
 - (8) **AOM** – Aircraft Operating Manual

- (9) **ATC** – Air Traffic Control
- (10) **ATPL** – Air Transport Pilot Licence
- (11) **ATS** – Air Traffic Service
- (12) **CAST** – Commercial Aviation Safety Team
- (13) **CAT I** – Category I
- (14) **CAT II** – Category II
- (15) **CAT III** – Category III
- (16) **CDL** – Configuration Deviation List
- (17) **DH** – Decision Height
- (18) **EDTO** – Extended Diversion Time Operation
- (19) **EFB** – Electronic Flight Bag
- (20) **EVS** – Enhanced Vision System
- (21) **FDAP** – Flight Data Analysis Programme
- (22) **FDR** – Flight Data Recorder
- (23) **FOO** – Flight Operations Officer
- (24) **FRMS** – Fatigue Risk Management System
- (25) **HUD** – Head-Up Display
- (26) **ICAO** – International Civil Aviation Organization
- (27) **IMC** – Instrument Meteorological Conditions
- (28) **IS** – Implementing Standard
- (29) **MCM** – Maintenance Control Manual
- (30) **MEL** – Minimum Equipment List
- (31) **OM** – Operations Manual

- (32) **PBN** – Performance-Based Navigation
- (33) **PIC** – Pilot-In-Command
- (34) **RFFS** – Rescue And Fire Fighting Service
- (35) **RNP** – Required Navigation Performance
- (36) **RVR** – Runway Visual Range
- (37) **SMM** – Safety Management Manual
- (38) **SMS** – Safety Management System
- (39) **SOP** – Standard Operating Procedure
- (40) **ULD** – Unit Load Device
- (41) **VFR** – Visual Flight Rules

9.1.1.4 ADVERTISING

- (a) A person shall not advertise as a certificated air operator under this part until the Authority of Grenada has issued an AOC and associated operations specifications to that person.
- (b) A certificated air operator shall not make, either orally or in writing, any statement about itself that is false or designed to mislead any person.
- (c) Whenever the advertising of an air operator indicates that the air operator is certificated under this part, the advertisement shall clearly state the AOC number.

9.1.1.5 COMPLIANCE WITH AN AIR OPERATOR CERTIFICATE

- (a) An operator shall not operate as a certificated air operator without, or in violation of, an AOC and its associated operations specifications issued under this part.
- (b) Each certificated air operator shall, at all times, continue in compliance with the AOC terms, conditions of issuance, and maintenance requirements in order to hold that certificate. Failure to comply may result in the revocation or suspension of the AOC.

- (c) An AOC holder shall develop policies and procedures for third parties that perform work on its behalf.
- (d) Failure to comply with Paragraphs 9.1.1.5(a) to (c) may result in the revocation or suspension of the AOC.

9.1.1.6 APPLICATION FOR AN AIR OPERATOR CERTIFICATE

- (a) An operator applying to the Authority for an AOC shall submit an application—
 - (1) in a form and manner prescribed by the Authority; and
 - (2) containing any information the Authority requires the applicant to submit.
- (b) An applicant shall submit proof in writing from the Minister Responsible for Civil Aviation signifying that he does not object to the application.
- (c) An applicant shall make the application for an initial issue of an AOC at least 90 days before the date of intended operation, except the Operations Manual specified in Section 9.3.1.4 and Maintenance Control Manual specified in Section 9.4.1.4 which may be submitted later than but not less than 60 days before the date of intended operation.
- (d) At the time of application, the applicant shall provide all the information and manuals required under this part, the SMS documentation required by Part 1 of these regulations, and any additional information the Authority requires the applicant to submit.

9.1.1.7 ISSUANCE OR DENIAL OF AIR OPERATOR CERTIFICATE

- (a) The issue of an AOC by Grenada shall be dependent upon the operator demonstrating compliance with the requirements of this part and the relevant safety management requirements of Part 1 of these regulations, and any additional information required by the Authority.
- (b) The Authority may issue an AOC if, after investigation, the Authority finds that the applicant—

- (1) is a citizen of the Antigua and Barbuda;
 - (2) has its principal place of business and its registered office, if any, located in Antigua and Barbuda;
 - (3) meets the applicable regulations and standards for the holder of an AOC;
 - (4) is properly and adequately equipped for safe operations in commercial air transport and maintenance of the aircraft; and
- (c) The Authority may deny application for an AOC if the Authority finds that—
 - (1) the applicant is not properly or adequately equipped or is not able to conduct safe operations in commercial air transport;
 - (2) the person is unfit, having regard in particular to his previous conduct, or if there is evidence of unlawful conduct in aviation or previous breaches of aviation regulations;
 - (3) the applicant previously held an AOC which was revoked; or
 - (4) an individual that contributed to the circumstances causing the revocation process of an AOC obtains a substantial ownership or is employed in a position required by this regulation.

9.1.1.8 CONTENTS OF AIR OPERATOR CERTIFICATE

- (a) The AOC issued to an operator by Grenada shall consist of two documents—
 - (1) A one-page certificate for public display signed by the Authority, and
 - (2) Operations specifications signed by the accountable manager and the Authority.
- (b) The Authority shall issue an AOC that will contain—
 - (1) The State of the Operator and the Issuing Authority;
 - (2) The AOC number and its expiration date;

- (3) The operator name, trading name (if different), and address of the principal place of business;
 - (4) Telephone, facsimile, and email;
 - (5) The location, in a controlled document carried on board, where the contact details of operational management can be found; and
 - (6) The date of issue and the name, signature, and title of the Authority representative.
- (c) The Authority shall issue operations specifications that will contain—
- (1) The Issuing Authority contact details;
 - (2) The operator name, trading name (if different), and AOC number;
 - (3) The date of issue and signature of the Authority representative;
 - (4) The make, model, and series of each aircraft in the operator's fleet;
 - (5) Types and areas of operation; and
 - (6) The special limitations and specific approvals.

Note: If the specific approvals and special limitations are identical for two or more models, these models may be grouped in a single list.

- (d) An AOC holder shall carry on board its aircraft a certified true copy of the AOC and a copy of the associated operations specifications relevant to the aircraft type.

9.1.1.9 DURATION AND RENEWAL OF AN AIR OPERATOR CERTIFICATE

- (a) An AOC, or any portion of the AOC, issued by the Authority is effective for 12 months unless—
- (1) the Authority amends, suspends, revokes or otherwise terminates the certificate;

- (2) the AOC holder surrenders the certificate to the Authority; or
 - (3) the AOC holder suspends operations for more than 60 days.
- (b) An AOC holder shall make application for renewal of an AOC at least 30 days prior to the end of the existing period of validity.

9.1.1.10 AMENDMENT OF AN AIR OPERATOR CERTIFICATE

- (a) The Authority may amend any AOC if—
 - (1) the Authority determines that safety in commercial air transport and the public interest require the amendment; or
 - (2) the AOC holder applies for an amendment, and the Authority determines that safety in commercial air transport and the public interest allows the amendment.
- (b) If the Authority stipulates in writing that an emergency exists requiring immediate amendment in the public interest with respect to safety in commercial air transportation, such an amendment is effective without stay on the date the AOC holder receives notice.
- (c) An AOC holder may appeal the amendment, but shall operate in accordance with it, unless it is subsequently withdrawn.
- (d) Amendments proposed by the Authority, other than emergency amendments, become effective 30 days after notice to the AOC holder, unless the AOC holder appeals the proposal in writing prior to the effective date. The filing of an appeal stays the effective date until the appeal process is completed.
- (e) Amendments proposed by the AOC holder shall be made at least 30 days prior to the intended date of any operation under that amendment.
- (f) A person shall not perform a commercial air transport operation for which an AOC amendment is required, unless it has received notice of the approval from the Authority.

9.1.1.11 ACCESS FOR INSPECTION

- (a) At any time or place, permit the Authority to conduct an inspection or test to determine whether an AOC holder certificated under this part is in continued compliance with the Civil Aviation Safety Act,

as amended, the applicable regulations, the AOC, or the AOC holder's operations specifications.

- (b) Each AOC holder shall—
 - (1) grant the Authority access to and cooperation with any of the AOC holder's organisations, facilities, and aircraft;
 - (2) ensure that the Authority is granted access to and cooperation with any organisation or facilities that the AOC holder has contracted for services associated with commercial air transport operations or maintenance; and
 - (3) grant the Authority free and uninterrupted access to the flight deck of the aircraft during flight operations.
- (c) Each AOC holder shall provide to the Authority a forward observer's seat on each of the AOC holder's aircraft, from which the flight crew's actions and conversations may be easily observed.

Note: The suitability of the seat location and the ability to monitor crewmember actions, conversations and radio communications will be determined by the Authority.

9.1.1.12 AUTHORITY TO INSPECT

- (a) The Authority shall conduct on-going validation of the AOC holder's continued eligibility to hold its AOC and associated approvals.
- (b) The AOC holder shall allow the Authority to conduct tests and inspections, at any time or place, to determine whether an AOC holder is complying with the applicable laws, regulations and the specific approvals, conditions, and limitations issued to the AOC holder.
- (c) The AOC holder shall make available at its principal base of operations—
 - (1) all portions of its current Air Operator Certificate;
 - (2) all portions of its Operations and Maintenance Manuals; and
 - (3) a current listing that includes the location and individual positions responsible for each record, document and report required to be kept by the AOC holder under the applicable aviation law, regulations or standards.

- (d) Failure by any AOC holder to make available to the Authority upon request, all portions of the AOC, Operations and Maintenance Manuals and any required record, document or report is grounds for suspension of all or part of the AOC.

9.1.1.13 CONTINUED VALIDITY OF AN AIR OPERATORS CERTIFICATE

- (a) Unless an AOC has previously been surrendered, superseded, suspended, or revoked, or has expired by virtue of exceeding any expiration date that may be specific in the certificate, the continued validity of the AOC issued by Grenada shall depend on—
 - (1) the operator maintaining the requirements of the original certification, as amended, under the supervision of Grenada; and
 - (2) the operator remaining in compliance with the requirements of this part and the relevant safety management requirements of Part 1 of these regulations, and any additional information required by the Authority.

9.1.1.14 EXEMPTION AUTHORITY

- (a) The Authority may, upon consideration of the circumstances of a particular operator, issue an exemption providing relief from specified sections of this part, provided that the Authority finds that the circumstances presented warrant the exemption and that a level of safety will be maintained equal to that provided by the rule from which the exemption is sought.
- (b) The Authority may terminate or amend an exemption at any time.
- (c) A request for exemption shall be made in accordance with the requirements of Part 1 of these regulations.
- (d) Each operator that receives an exemption shall have a means of notifying the appropriate management and personnel of the exemption.

9.2 AIR OPERATOR CERTIFICATION

9.2.1 APPLICABILITY

- (a) This subpart prescribes the requirements for the administration of an AOC holder, including the AOC holder's organisational structure,

policy and procedures, facilities, management personnel, aircraft to be used, quality system, SMS, record keeping and documents systems, and operational or emergency demonstrations.

9.2.2 ADMINISTRATION

9.2.2.1 PRINCIPAL BASE OF OPERATIONS

- (a) An AOC holder shall maintain a principal base of operations.
- (b) An AOC holder shall provide written notification of intent to the Authority at least 30 days before it proposes to establish or change the location of its base.

9.2.2.2 MANAGEMENT PERSONNEL REQUIRED FOR COMMERCIAL AIR TRANSPORT OPERATIONS

- (a) An AOC holder shall have an accountable manager, acceptable to the Authority, who has corporate authority for ensuring that all flight operations and maintenance activities can be financed and carried out to the highest degree of safety standards required by the Authority.
- (b) When conducting commercial air transport operations, the AOC holder shall have qualified personnel, with proven competency in civil aviation, available and serving full time in the following positions or their equivalent—
 - (1) Director of Operations;
 - (2) Chief pilot;
 - (3) Director of Safety;
 - (4) Director of Maintenance; and
 - (5) Quality Manager.

Note: “Competency in civil aviation” means that an individual shall have a technical qualification and management experience acceptable to the Authority for the position served.

- (c) The Authority may approve positions or numbers of positions, other than those listed in Paragraph 9.2.2.2(b) of this section, if the AOC holder is able to show that it can perform the operations with the

highest degree of safety under the direction of fewer or different categories of management personnel due to the—

- (1) the types of operation involved;
- (2) the number and type of aircraft used; and
- (3) the areas of operation.

Implementing Standard: See IS: 9.2.2.2 for additional management personnel requirements.

- (d) The persons who serve in the positions required or approved under this subsection and any person in a position to exercise control over operations conducted under the AOC shall.
 - (1) be qualified through training, experience, and expertise;
 - (2) discharge their duties to meet applicable legal requirements and to maintain safe operations; and
 - (3) to the extent of their responsibilities, have a full understanding of the following materials with respect to the AOC holder's operation—
 - (i) Aviation safety standards and safe operating practices;
 - (ii) These regulations;
 - (iii) The AOC holder's operations specifications;
 - (iv) All appropriate maintenance and airworthiness requirements of this part; and
 - (v) The manuals required by this part.
 - (4) Each AOC holder shall—
 - (i) state in the general policy provisions of its Operations Manual the duties, responsibilities, and authority of the positions required by this subsection;
 - (ii) list in its Operations Manual the names and business addresses of the persons assigned to those positions; and

- (iii) notify the Authority within 10 days of any change in personnel or any vacancy in any position listed.

9.2.2.3 QUALITY SYSTEM (AOC)

- (a) An AOC holder, depending on the scope of the operation, shall establish a quality system and designate a quality manager to monitor compliance with, and the adequacy of, procedures required to ensure safe operational practices and airworthy aircraft. Compliance monitoring shall include a feedback system to the accountable manager to ensure corrective action as necessary.
- (b) An AOC holder shall ensure that each quality system includes a quality assurance programme that contains procedures designed to verify that all operations are being conducted in accordance with all applicable requirements, standards and procedures.
- (c) The quality system, and the quality manager, shall be acceptable to the Authority.
- (d) An AOC holder shall describe its quality system in relevant documentation.

Implementing Standard: See IS: 9.2.2.3 for description of quality system to be contained in relevant documentation.

- (e) Where the AOC holder is also an AMO holder, the AOC holder's quality system may be combined with the requirements of an AMO and submitted for acceptance to the Authority and, for aircraft not registered in Grenada, to the State of Registry.

9.2.2.4 SUBMISSION AND REVISION OF POLICY AND PROCEDURE MANUALS

- (a) An AOC holder shall establish a flight safety documents system, for the use and guidance of operational personnel as part of its safety management system.
- (b) A manual required by this part must—
 - (1) include instructions and information necessary to allow the personnel concerned to perform their duties and responsibilities with a high degree of safety;

- (2) be in a form that is easy to revise and contains a system which allows personnel to determine the current revision status of a manual;
 - (3) have a date and revision number of the last revision on each page concerned;
 - (4) not be contrary to any applicable Antigua and Barbuda regulation and the AOC holder's specific operating provisions; and
 - (5) include references to appropriate civil aviation regulations.
- (c) A person shall not cause the use of any policy or procedure for flight operations or airworthiness functions prior to co-ordination with the Authority.
- (d) An AOC holder shall submit each proposed policy or procedure to the Authority at least 30 days prior to the date of intended implementation.

9.2.2.5 RETENTION AND MAINTENANCE OF RECORDS

- (a) An AOC holder shall maintain current records which detail the qualifications and training of all its employees, and contract employees, involved in the operational control, flight operations, ground operations and maintenance of the air operator.
- (b) An AOC holder shall maintain records for those employees performing crew member or flight operations officer duties in sufficient detail to determine whether the employee meets the experience and qualification for duties in commercial air transport operations.
- (c) An AOC holder shall retain the following records—
- (1) Flight crew records, including—
 - (i) Flight, duty, and rest time;
 - (ii) Licence and medical certificate;
 - (iii) Ground and flight training (all types);
 - (iv) Route and aerodrome/heliport qualification training;

- (v) Dangerous goods training;
 - (vi) Security training; and
 - (vii) Proficiency and qualification checks (all types).
- (2) Cabin crew records, including—
- (i) Flight, duty, and rest time;
 - (ii) Licence, if applicable;
 - (iii) Ground and flight training (all types) and qualification checks;
 - (iv) Dangerous goods training;
 - (v) Security training; and
 - (vi) Competency checks.
- (3) AOC holder personnel records, including—
- (i) Training and qualification of other personnel for whom an approved training programme is required in these regulations;
 - (ii) Licence, if required, and medical certificate, if required; and
 - (iii) Proficiency or competency checks, if required.
- (4) Flight preparation forms, including—
- (i) Completed load manifests;
 - (ii) Mass and balance reports;
 - (iii) Dispatch releases;
 - (iv) Flight plans;
 - (v) Passenger manifests; and
 - (vi) Weather reports.

- (5) An aircraft technical log, including a—
 - (i) Journey records section;
 - (ii) Continuing airworthiness records section; and
 - (iii) Fuel and oil records.
- (6) Aircraft continuing airworthiness records, including—
 - (i) The total time in service (hours, calendar time, and cycles, as appropriate) of the aircraft and all life-limited parts;
 - (ii) The current status of compliance with all mandatory continuing airworthiness information;
 - (iii) Appropriate details of modifications and repairs to the aircraft and aeronautical products;
 - (iv) The total time in service (hours, calendar time, and cycles, as appropriate) since the last overhaul of the aircraft or aeronautical products subject to a mandatory overhaul life;
 - (v) The current status of the aeroplane's compliance with the maintenance programme; and
 - (vi) Detailed maintenance records to show all requirements for approval to return to service have been met.
 - (vii) Flight recorder records—
 - (A) Cockpit voice recordings; and
 - (B) Flight data records.
- (7) Other records, including—
 - (i) Operational flight plan;
 - (ii) Quality system records;
 - (iii) Dangerous goods transport documents;
 - (iv) Dangerous goods acceptance checklists;

- (v) Records on cosmic and solar radiation dosage, if the AOC holder operates aircraft that fly above 15,000m. (49,000ft); and
 - (vi) Monitoring and Reporting of Carbon Dioxide Emissions documents (if required).
- (d) Each AOC holder shall maintain records in a manner acceptable to the Authority.

Implementing Standard: See IS: 9.2.2.5 for the periods of retention of the above records.

9.2.2.6 FLIGHT DECK VOICE AND FLIGHT DATA RECORDER RECORDS

- (a) An AOC holder shall retain—
 - (1) the most recent flight data recorder calibration, including the recording medium from which this calibration is derived; and
 - (2) the flight data recorder correlation for one aircraft of any group of aircraft operated by the AOC holder—
 - (i) That are of the same type;
 - (ii) On which the model flight recorder and its installation are the same; and
 - (iii) On which there is no difference in type design with respect to the original installation of instruments associated with the recorder.

Note: The FDR calibration and the FDR correlation will be kept as part of the continuing airworthiness records for the aircraft and aeronautical products.

- (b) In the event of an accident or occurrence requiring immediate notification of the Authority, the AOC holder shall remove and keep recorded information from the flight deck voice recorder and flight data recorder for at least 60 days or, if requested by the Authority, for a longer period.

9.2.2.7 AIRCRAFT OPERATED BY THE AOC HOLDER

- (a) The AOC holder shall list in its operations specifications the following—
 - (1) Issuing Authority contact details;
 - (2) Operator name and AOC number;
 - (3) Date of issue and signature of the Authority representative;
 - (4) Aircraft make, model, and series;
 - (5) Types and areas of operation; and
 - (6) The special limitations and specific approvals issued.
- (b) Each AOC holder shall apply to the Authority for an amendment to its operations specifications in advance of any intended change of aircraft.
- (c) Aircraft of another certificate holder operated under an interchange agreement shall be incorporated into the AOC holder's operations specifications as required by Paragraph 9.2.2.7(a) of this section.

9.2.2.8 AIRCRAFT TECHNICAL LOG

- (a) An AOC holder shall have an aircraft technical log that is carried on the aircraft that contains a journey records section and an aircraft maintenance record section. The journey records section is further described in Section 9.3.1.5 of this part and the aircraft maintenance record section is further described in Section 9.4.1.9 of this part.

Implementing Standard: See IS: 9.2.2.8 for an example of an aircraft technical log.

9.2.2.9 COMPANY PROCEDURES INDOCTRINATION

- (a) A person shall not serve in an AOC holder's employ, nor may any AOC holder use a person in its employ, unless that person has completed the approved company indoctrination curriculum appropriate to that person's duties and responsibilities.
- (b) The indoctrination curriculum shall include training in knowledge and skills related to human performance, including coordination with other air operator personnel.

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- (c) An AOC holder shall ensure that the Quality Manager and the Director of Maintenance are provided company indoctrination training that covers the following areas—
- (1) AOC holder's organisation, scope of operation and maintenance, and administrative practices as applicable to their assignments and duties.
 - (2) appropriate provisions of these regulations and other applicable regulations and guidance materials.
 - (3) AOC holder policies and procedures.
 - (4) appropriate portions of the AOC holder's operations manual and maintenance control manual.

Note: Indoctrination, initial, recurrent, and other training required for crew members and FOOs/flight dispatchers are contained in Part 8 of these regulations.

9.2.2.10 SAFETY MANAGEMENT SYSTEM

- (a) An AOC holder shall implement a Safety Management System acceptable to the Authority as outlined in Part 1, Subpart 1.4 of the Schedule.
- (b) An AOC holder operating an aeroplane with a maximum certificated take-off mass over 27,000 kg shall establish and maintain an FDAP for the use and guidance of operational personnel as part of its SMS.
- (c) An AOC holder operating a helicopter with a maximum certificated take-off mass over 7,000 kg or having a passenger seating configuration of more than nine and fitted with an FDR shall establish and maintain a Flight Data Analysis Programme for the use and guidance of operational personnel as part of its SMS.
- (d) The AOC holder's FDAP shall be non-punitive and shall contain adequate safeguards to protect the source(s) of data.

Note: An operator may contract the operation of an FDAP to another party while retaining overall responsibility for the maintenance of such a programme.

9.2.2.11 FLIGHT SAFETY DOCUMENTS SYSTEM

- (a) An AOC holder shall establish a flight safety documents system for the use and guidance of operational personnel as part of its SMS.

Implementing Standard: See IS: 9.2.2.11 for the minimum elements to be contained in an AOC holder's flight safety documents system.

9.2.3 AIRCRAFT**9.2.3.1 AUTHORISED AIRCRAFT**

- (a) A person shall not operate an aircraft in commercial air transport unless that aircraft has an appropriate current airworthiness certificate, is in an airworthy condition, and meets the applicable airworthiness requirements for these operations, including those related to identification and equipment.
- (b) A person shall not operate any specific type of aircraft in commercial air transport until it has completed satisfactory initial certification, which includes the issuance of operations specifications to the AOC holder listing that type of aircraft.
- (c) A person shall not operate additional or replacement aircraft of a type for which the AOC Holder is currently authorised unless it can show that an aircraft has completed an evaluation process for inclusion in the AOC holder's fleet.

9.2.3.2 DRY LEASING OF FOREIGN REGISTERED AIRCRAFT

- (a) An AOC holder may dry-lease a foreign-registered aircraft for commercial air transport as authorised by the Authority.
- (b) A person shall not operate a foreign registered aircraft unless—
- (1) there is in existence a current agreement between the Authority and the State of Registry that, while the aircraft is operated by the Grenada AOC holder, the operations regulations of Grenada are applicable;
 - (2) there is in existence a current agreement between the Authority and the State of Registry acknowledging that—
 - (i) while the aircraft is operated by the AOC holder, the airworthiness regulations of the State of Registry are applicable; or,

- (ii) if the State of Registry agrees to transfer some or all of the responsibility for airworthiness to the Authority of Grenada under Article 83 *bis* of the Chicago Convention, the airworthiness regulations of Grenada shall apply to the extent agreed upon by the Authority and State of Registry.
- (3) the agreement acknowledges that the State of Registry shall have free and uninterrupted access to the aircraft at any place and at any time.

Implementing Standard: See IS: 9.2.3.2 for additional requirements for dry leasing of foreign-registered aircraft.

9.2.3.3 AIRCRAFT INTERCHANGE

- (a) A person shall not interchange aircraft with another AOC holder without the approval of the Authority.

Implementing Standard: See IS: 9.2.3.3 for requirements pertaining to aircraft interchange agreements approved by the Authority.

9.2.3.4 WET-LEASING

- (a) A person shall not conduct wet-lease operations on behalf of another AOC holder except in accordance with the applicable laws and regulations of the country in which the operation occurs and in accordance with the special approvals, conditions, and limitations imposed by the Authority of Grenada.
- (b) A person shall not allow another AOC holder to conduct wet-lease operations on its behalf unless—
 - (1) that person or organisation holds an AOC or its equivalent from a Contracting State that authorises those operations; and
 - (2) the AOC holder advises the Authority of (STATE) of such operations and provides a copy of the AOC under which the operation is to be conducted.

Implementing Standard: See IS: 9.2.3.4 for additional requirements when wet leasing aircraft.

9.2.3.5 EMERGENCY EVACUATION DEMONSTRATION

- (a) A person shall not use an aircraft type and model in commercial air transport passenger-carrying operations unless that person has first conducted, for the Authority, an actual full capacity emergency evacuation demonstration for the configuration in 90 seconds or less.
- (b) The full capacity actual emergency evacuation demonstration may not be required, if the AOC holder provides a written petition for deviation with evidence that—
 - (1) A satisfactory full-capacity emergency evacuation for the aircraft to be operated was demonstrated during the aircraft type certification or during the certification of another air operator; and
 - (2) There is an engineering analysis that shows that an evacuation is still possible within the 90-second standard if the AOC holder's aircraft configuration differs with regard to the number of exits or the exit type or the number of cabin crew members or the location of the cabin crew members.
- (c) If a full capacity emergency evacuation demonstration is not required, a person shall not use an aircraft type and model in commercial air transport passenger-carrying operations unless that person has first demonstrated to the Authority that its available personnel, procedures and equipment could provide sufficient open exits for evacuation in 15 seconds or less.
- (d) A person shall not use a land plane in extended overwater operations unless that person has first demonstrated to the Authority that it has the ability and equipment to efficiently carry out its ditching procedures.

Implementing Standard: See IS: 9.2.3.5 for additional requirements concerning emergency evacuation demonstrations.

9.2.3.6 DEMONSTRATION FLIGHTS

- (a) A person shall not operate an aircraft type in commercial air transport unless that person first conducts satisfactory demonstration flights for the Authority in that aircraft type on its scheduled routes.
- (b) A person shall not operate an aircraft in a designated special area, or using a specialised navigation system, unless that person conducts a satisfactory demonstration flight for the Authority.

- (c) Demonstration flights required by Paragraph 9.2.3.6(a) of this section shall be conducted in accordance with the regulations applicable to the type of operation and aircraft type used.
- (d) The Authority may authorise deviations from this section if the Authority finds that special circumstances make full compliance with this section unnecessary.

Implementing Standard: See IS: 9.2.3.6 for additional requirements concerning demonstration flights.

9.2.4 FACILITIES AND OPERATIONS SCHEDULES

9.2.4.1 FACILITIES

- (a) Each AOC holder shall maintain operational and airworthiness support facilities at its principal base of operations, appropriate for the type(s) and area(s) of operation.
- (b) Each AOC holder shall arrange appropriate ground handling facilities at each aerodrome used to ensure the safe servicing and loading of its flights.
- (c) No AOC holder may commence a flight unless it has ascertained by every reasonable means available that the ground and/or water facilities available and directly required on such flight, for the safe operation of the aircraft and the protection of the passengers, are adequate for the type of operation under which the flight is to be conducted and are adequately operated for this purpose.

Note: "Reasonable means" is intended to denote the use, at the point of departure, of information available to the AOC holder either through official information published by the aeronautical information services or readily available from other sources.

- (d) Each AOC holder shall ensure that any inadequacy of facilities observed in the course of operations is reported to the authority responsible without delay.
- (e) Each AOC holder shall, as part of its Safety Management System, assess the level of Rescue and Fire Fighting Service protection available at any aerodrome intended to be specified in the operational flight plan in order to ensure that an acceptable level of protection is available for the aircraft intended to be used.

- (f) Each AOC holder shall include in its Operations Manual information related to the level of RFFS protection that is deemed acceptable.

9.2.4.2 OPERATIONS SCHEDULES

- (a) In establishing flight operations schedules, an AOC holder conducting scheduled operations shall allow enough time for the proper servicing of aircraft at intermediate stops, and shall consider the prevailing winds en route and the cruising speed of the type of aircraft used. This cruising speed may not be more than that resulting from the specified cruising output of the engines.

9.3 AOC FLIGHT OPERATIONS MANAGEMENT

9.3.1.1 APPLICABILITY

- (a) This subpart provides those certification requirements that apply to the management of flight operations personnel and their functions.

9.3.1.2 OPERATIONS MANUAL

- (a) An AOC holder shall issue to the crewmembers and persons assigned operational control functions, an Operations Manual acceptable to the Authority.
- (b) The Operations Manual shall contain the overall (general) company policies and procedures regarding the flight operations the AOC holder conducts.
- (c) An AOC holder shall prepare and keep current an Operations Manual which contains the AOC procedures and policies for the use and guidance of its personnel.
- (d) An AOC holder shall issue the Operations Manual, or pertinent portions of the Operations Manual, together with all amendments and revisions to all personnel that are required to use it.
- (e) An AOC holder shall not provide for use by its personnel in commercial air transport, any Operations Manual or portion of this manual which has not been reviewed and found acceptable or approved for the AOC holder by the Authority.
- (f) An AOC holder shall ensure that the contents of the Operations Manual includes at least those subjects designated by the Authority that are applicable to the AOC holder's operations.

- (g) Unless otherwise acceptable to the Authority, an AOC holder shall provide an Operations Manual containing information on operations administration and supervision, safety management systems, personnel training, flight crew and Cabin Crew fatigue and flight time limitations, flight operations, aircraft performance, routes, guides and charts, minimum flight altitudes, aerodrome operating minima, search and rescue, dangerous goods, navigation, communications, security, and human factors. The operations manual shall encompass the matters set forth above. The operations manual may be published in parts, as a single document, or as a series of volumes. Specific subjects are listed below. Subjects presented with reference to a specific section shall be addressed in accordance with the requirements of the referenced section—
- (1) Flight dispatching and monitoring system. (Section 9.3.1.23);
 - (2) Flight crew succession of command. (Section 9.3.1.6);
 - (3) Procedures for operating in adverse weather. (Part 8, Section 8.6.2.3);
 - (4) Procedures for refuelling. (8.9.1.2);
 - (5) Pilot and dispatcher route and airport qualification procedures. (Part 8, Sections 8.10.1.29 & 8.10.1.30);
 - (6) Organisation and maintenance arrangements. (Part 6);
 - (7) Airworthiness release and aircraft log entry procedures (Part 5, Section 5.6.1.4 & Part 8, Section 8.6.2.19)
 - (8) Aircraft Operating Manual. (Section 9.3.1.4)
 - (9) Minimum Equipment List and Configuration Deviation List. (Section 9.3.1.12)
 - (10) Training Programme. (Section 9.3.1.3)
 - (11) Aircraft Performance Planning Manual. (Section 9.3.1.13)
 - (12) Route Guide. (Section 9.3.1.20)
 - (13) Dangerous Goods Procedures. (Subpart 9.6)
 - (14) Accident Reporting Procedures. (Civil Aviation (Accident and Incident Investigation) Regulations)

- (15) Security Procedures. (Section 9.5.1.3)
- (16) Aircraft Loading and Handling Manual. (Section 9.3.1.15)
- (17) Cabin Crew Manual (if required). (Section 9.3.1.17)
- (18) Cargo Manual (if required)
- (19) Monitoring and Reporting of Carbon Dioxide Emissions (if required). (Section 9.3.1.29)

Implementing Standard: See IS: 9.3.1.2 for a sample Operations Manual.

9.3.1.3 TRAINING MANUAL

- (a) An AOC holder shall ensure that all operations personnel are properly instructed in their duties and responsibilities and the relationship of such duties to the operation as a whole.
- (b) An AOC holder shall have a training programme manual approved by the Authority containing the general training, checking and record keeping policies.
- (c) An AOC holder shall have approval of the Authority prior to using a training curriculum for the purpose of qualifying a crewmember, or a person performing operational control functions, for duties in commercial air transport.
- (d) An AOC holder shall submit to the Authority any revision to an approved training programme, and shall receive written approval from the Authority before that revision can be used.

Implementing Standard: See IS 9.3.1.3 for a training manual outline.

9.3.1.4 AIRCRAFT OPERATING MANUAL

- (a) An AOC holder or applicant shall submit proposed aircraft operating manuals for each type and variant of aircraft operated, containing the normal, abnormal and emergency procedures relating to the operation of the aircraft for approval by the Authority.
- (b) An Aircraft Operating Manual shall be based upon the aircraft manufacturer's data for the specific aircraft type and variant operated by the AOC holder and shall include specific operating

parameters, details of the aircraft systems and of the checklists to be used applicable to the operations of the AOC holder that are approved by the Authority. The design of the manual shall observe human factors principles.

- (c) The Aircraft Operating Manual shall be issued to the flight crewmembers and persons assigned operational control functions to each aircraft operated by the AOC holder.

Implementing Standard: See IS: 9.3.1.4 for an outline of an Aircraft Operating Manual that combines numerous manual requirements.

9.3.1.5 AOC HOLDER'S AIRCRAFT TECHNICAL LOG - JOURNEY RECORDS SECTION

- (a) An AOC holder shall use an aircraft technical log containing a journey records section which includes the following information for each flight. (See Section 9.4.1.9 of this part for maintenance section of the aircraft technical log)
- (1) aircraft nationality and registration;
 - (2) date;
 - (3) names of crewmembers;
 - (4) duty assignments of crewmembers;
 - (5) place of departure;
 - (6) place of arrival;
 - (7) time of departure;
 - (8) time of arrival;
 - (9) hours of flight;
 - (10) nature of flight (private, aerial work, scheduled, non-scheduled);
 - (11) fuel and oil records;
 - (12) incidents, observations, if any; and
 - (13) signature of person in charge.

- (b) Entries in the journey records section shall be made currently and in ink or indelible pencil.
- (c) Completed journey records sections shall be retained to provide a continuous record of the last 2 years of operations.

9.3.1.6 DESIGNATION OF PIC FOR COMMERCIAL AIR TRANSPORT

- (a) An AOC holder shall, for each commercial air transport operation, designate in writing one pilot as the PIC and shall establish a procedure for the succession of command.

9.3.1.7 REQUIRED CABIN CREW

- (a) The AOC holder shall schedule, and the PIC shall ensure that the minimum number of required Cabin Crew are on board passenger-carrying flights.
- (b) The number of Cabin Crew shall not be less than the minimum prescribed by the Authority in the AOC holders' operations specifications or the following, whichever is greater—
 - (1) For a seating capacity of 20 to 50 passengers: 1 Cabin Crew; and
 - (2) One additional Cabin Crew for each unit, or part of a unit of 50 passenger seat capacity.
- (c) When passengers are on board a parked aircraft, the minimum number of Cabin Crew shall be one-half that required for the flight operation, but never less than one Cabin Crew (or another person qualified in the emergency evacuation procedures for the aircraft).

Note: Where one-half would result in a fractional number, it is permissible to round down to the next whole number.

9.3.1.8 CARRIAGE OF SPECIAL SITUATION PASSENGERS

- (a) An AOC holder shall not allow the transportation of special situation passengers except—
 - (1) as provided in the AOC holder's Operations Manual procedures; and
 - (2) with the knowledge and concurrence of the PIC.

9.3.1.9 CREW MEMBER CHECKING AND STANDARDISATION PROGRAMME

- (a) An AOC holder shall have a programme of checking and standardisation of crewmembers approved by the Authority.

Note: A standardised process is defined to address the operator-unique fleet differences and compliance methods.

- (b) An AOC holder shall check pilots' proficiency on those manoeuvres and procedures that are prescribed by the Authority for pilot proficiency checks, which shall include emergency procedures and, where applicable, instrument flight rules.

Note: See Part 8 of these regulations for specific checking requirements.

9.3.1.10 TRAINING TO PROFICIENCY: PILOTS

- (a) An AOC holder may train its pilots to proficiency on those manoeuvres and procedures that are prescribed by the Authority for pilot proficiency checks, during every proficiency check following the initial check.

Implementing Standard: See IS: 9.3.1.10 for requirements pertaining to aircraft simulator training used in a proficiency check.

9.3.1.11 FLIGHT DECK CHECK PROCEDURE

- (a) An AOC holder shall issue to its flight crews and shall make available on each aircraft, the flight deck condensed checklist procedures approved by the Authority and appropriate for the type and variant of aircraft.
- (b) An AOC holder shall ensure that approved procedures include each item necessary for flight crew members to check for safety before starting engines, taking off, or landing, and for engine and systems abnormalities and emergencies.
- (c) An AOC holder shall ensure that the checklist procedures are designed so that a flight crew member will not need to rely upon his or her memory for items to be checked.

- (d) An AOC holder shall make the approved procedures readily useable in the flight deck of each aircraft and the flight crew shall be required to follow the approved procedures when operating the aircraft.

Note: Checklists are part of the AOM, which is a part of the AOC holder's OM and is approved by the Authority.

9.3.1.12 MINIMUM EQUIPMENT LIST AND CONFIGURATION DEVIATION LIST

- (a) An AOC holder shall provide for the use of the flight crewmembers, maintenance personnel and persons assigned operational control function during the performance of their duties, an MEL approved by the Authority.
- (b) The operator's MEL, which is derived from the State of Design's MMEL, shall be specific to the aircraft type and variant and shall contain the circumstances, limitations and procedures for the release or continuance of flight of the aircraft with inoperative components, equipment or instruments.
- (c) An AOC holder shall provide for the use of flight crew, maintenance personnel and persons assigned operational control functions during the performance of their duties a Configuration Deviation List (CDL) specific to the aircraft type if one is provided and approved by the State of Design. An AOC Holder operations manual shall contain those procedures acceptable to the Authority for operations in accordance with the CDL requirements.

Note: The MEL constitutes an integral part of the Operations Manual.

9.3.1.13 PERFORMANCE PLANNING MANUAL

- (a) An AOC holder shall provide for the use of the flight crewmembers and persons assigned operational control functions during the performance of their duties, a performance planning manual acceptable to the Authority.
- (b) The performance planning manual shall be specific to aircraft type and variant and shall contain adequate performance information to accurately calculate the performance in all normal phases of flight operation.

9.3.1.14 PERFORMANCE DATA CONTROL SYSTEM

- (a) An AOC holder shall have a system approved by the Authority for obtaining, maintaining and distributing to appropriate personnel current performance data for each aircraft, route and airport that it uses.
- (b) The system approved by the Authority shall provide current obstacle data for departure and arrival performance calculations.

9.3.1.15 AIRCRAFT LOADING AND HANDLING MANUAL

- (a) An AOC holder shall provide for the use of the flight crewmembers, ground handling personnel and persons assigned operational control functions during the performance of their duties, an aircraft handling and loading manual acceptable to the Authority.
- (b) This manual shall be specific to the aircraft type and variant and shall contain the procedures and limitations for servicing and loading of the aircraft.

Note: Depending on the size and scope of the AOC holder's operations, the Aircraft Loading and Handling Manual may be a stand-alone document or may be contained in the OM.

9.3.1.16 MASS AND BALANCE DATA CONTROL SYSTEM

- (a) An AOC holder shall have a system approved by the Authority for obtaining, maintaining and distributing to appropriate personnel current information regarding the mass and balance of each aircraft operated.

9.3.1.17 CABIN CREW MANUAL

- (a) The AOC holder shall issue to the Cabin Crews a Cabin Crew manual acceptable to the Authority and provide applicable excerpts to passenger agents during the performance of their duties.
- (b) The Cabin Crew manual shall contain those operational policies and procedures applicable to Cabin Crews and the carriage of passengers.
- (c) The AOC holder shall issue to the Cabin Crews, a manual specific to the aircraft type and variant which contains the details of their normal, abnormal and emergency procedures and the location and operation of emergency equipment.

Note: These manuals may be combined into one manual for use by the Cabin Crews.

9.3.1.18 PASSENGER BRIEFING CARDS

- (a) An AOC holder shall carry on each passenger carrying aircraft, in convenient locations for the use of each passenger, printed cards supplementing the oral briefing and containing—
 - (1) diagrams and methods of operating the emergency exits;
 - (2) other instructions necessary for use of the emergency equipment, and
 - (3) information regarding the restrictions and requirements associated with sitting in an exit seat row.
- (b) An AOC holder shall ensure that each passenger briefing card contains information that is pertinent only to the type and variant of aircraft used for that flight.

Implementing Standard: See IS: 9.3.1.18 for specific information to be included on passenger briefing cards.

9.3.1.19 AERONAUTICAL DATA CONTROL SYSTEM

- (a) An AOC holder shall have a system approved by the Authority for obtaining, maintaining and distributing to appropriate personnel current aeronautical data for each route and airport that it uses.

Implementing Standard: See IS: 9.3.1.19 for the specific airport information to be contained in the aeronautical data control system.

9.3.1.20 ROUTE GUIDE - AREAS, ROUTES, AERODROMES AND HELIPORTS

- (a) An AOC holder shall provide for the use of the flight crewmembers and persons assigned operational control functions during the performance of their duties, information on areas, routes, aerodromes and heliports as well as aeronautical charts approved by the Authority.
- (b) The AOC holder shall keep the route guide and aeronautical charts current and appropriate for the proposed types and areas of operations to be conducted by the AOC holder.

Implementing Standard: See IS: 9.3.1.20 for the minimal information to be contained in the route guide.

9.3.1.21 WEATHER REPORTING SOURCES

- (a) An AOC holder shall use sources approved the Authority for the weather reports and forecasts used for decisions regarding flight preparation, routing and terminal operations.
- (b) For passenger carrying operations on a published schedule, the AOC holder shall have an approved system for obtaining forecasts and reports of adverse weather phenomena that may affect safety of flight on each route to be flown and each aerodrome to be used.

Implementing Standard: See IS: 9.3.1.21 for sources of weather reports satisfactory for flight planning or controlling flight movement.

9.3.1.22 DE-ICING AND ANTI-ICING PROGRAMME

- (a) An AOC holder planning to operate an aircraft in conditions where frost, ice, or snow may reasonably be expected to adhere to the aircraft shall—
 - (1) use only aircraft adequately equipped for such conditions;
 - (2) ensure flight crew is adequately trained for such conditions; and
 - (3) have an approved ground de-icing and anti-icing programme.

Implementing Standard: See IS: 9.3.1.22 for detailed requirements pertaining to the AOC holder's de-icing and antiicing programme.

9.3.1.23 FLIGHT DISPATCH AND MONITORING SYSTEM

- (a) An AOC holder shall have an adequate system approved by the Authority for proper dispatch and monitoring of flights, considering the operations to be conducted.
 - (1) The AOC holder's dispatch and monitoring system shall have enough dispatch centres adequate for the operations to be conducted, located at points necessary to ensure adequate flight preparation, dispatch, and in-flight contact with flight operations.

- (2) Each AOC holder shall provide enough qualified FOOs at each dispatch centre to ensure proper operational control of each flight.
- (b) An AOC holder conducting charter operations may arrange to have flight following facilities provided by persons other than its employees, but, in such a case, the AOC holder shall continue to be primarily responsible for operational control of each flight.
 - (1) Each AOC holder conducting charter operations using a flight following system shall show that the system has adequate facilities and personnel to provide to the following persons the information necessary for the initiation and safe conduct of each flight—
 - (i) The flight crew of each aircraft; and
 - (ii) The persons designated by the AOC holder to perform the function of operational control of the aircraft.
- (2) Each AOC holder conducting charter operations shall show that the personnel required to perform the function of operational control are able to perform their duties.

9.3.1.24 FATIGUE RISK MANAGEMENT SYSTEM

- (a) A fatigue risk management system is not applicable. An AOC holder shall adhere to flight time, flight duty period, duty period, and rest period limitations stated in Part 8, Subpart 8.11 of these regulations.

9.3.1.25 COMMUNICATIONS FACILITIES

- (a) An AOC holder's flights shall be able to have two-way radio communications with all ATC facilities along the routes and alternate routes to be used.
- (b) For passenger carrying operations on a published schedule, an AOC holder shall be able to have rapid and reliable radio communications with all flights over the AOC holder's entire route structure under normal operating conditions.
- (c) Each AOC holder engaged in international air navigation shall at all times have available for immediate communication to rescue coordination centres, information on the emergency and survival

equipment carried on board any of its aircraft, including, as applicable—

- (1) the number, colour, and type of life rafts and pyrotechnics;
- (2) details of emergency water and medical supplies; and
- (3) the type and frequencies of the emergency portable radio equipment.

9.3.1.26 ROUTES AND AREAS OF OPERATION

- (a) An AOC holder shall conduct operations only along such routes and within such areas for which—
 - (1) ground facilities and services, including meteorological services, are provided which are adequate for the planned operation;
 - (2) the performance of the aircraft intended to be used is adequate to comply with minimum flight altitude requirements;
 - (3) the equipment of the aircraft intended to be used meets the minimum requirements for the planned operation;
 - (4) appropriate and current maps and charts are available;
 - (5) if two-engine aircraft are used, adequate airports are available with the time/distance limitations; and
 - (6) if single-engine aircraft are used, surfaces are available which permit a safe forced landing to be executed.
- (b) A person shall not conduct commercial air transport operations on any route or area of operation unless those operations are conducted in accordance with any restrictions imposed by the Authority.

9.3.1.27 NAVIGATIONAL ACCURACY

- (a) An AOC holder shall have, for each proposed route or area, navigational systems and facilities capable of navigating the aircraft—
 - (1) within the degree of accuracy required for ATC; and

- (2) to the airports in the operational flight plan within the degree of accuracy necessary for the operation involved.
- (b) In situations without adequate navigation systems reference, the Authority may authorise day VFR operations that can be conducted safely by pilotage because of the characteristics of the terrain.
- (c) Except for those navigational aids required for routes to alternate airports, the Authority will list in the AOC holder's operations specifications, non-visual ground aids required for approval of routes outside of controlled airspace.
- (d) Operations on route segments where celestial or other specialised means of navigation are used shall be approved by the Authority.

9.3.1.28 AIRCRAFT TRACKING

- (a) The AOC holder shall establish an aircraft tracking capability to track aeroplanes throughout its areas of operation.
- (b) The AOC holder shall track the position of an aeroplane through automated reporting at least every 15 minutes for the portion(s) of the in-flight operation(s) under the following conditions—
 - (1) The aeroplane has a maximum certificated take-off mass of over 27,000 kg and a seating capacity greater than 19; and
 - (2) Where an ATS unit obtains aeroplane position information at greater than 15-minute intervals.
- (c) The AOC holder shall track the position of an aeroplane through automated reporting at least every 15 minutes for the portion(s) of the in-flight operation(s) planned in an oceanic area under the following conditions—

Note: For the purpose of aircraft tracking, “oceanic area” is the airspace that overlies waters outside the territory of a State.

- (1) The aeroplane has a maximum certificated take-off mass of over 45,500 kg and a seating capacity greater than 19; and
 - (2) Where an ATS unit obtains aeroplane position information at greater than 15-minute intervals.
- (d) Notwithstanding the provisions in Paragraphs 9.3.1.27(b) and (c) of this section, the Authority may, based on the results of an approved

risk assessment process implemented by the AOC holder, allow for variations to automated reporting intervals. The process shall demonstrate how risks to the operation resulting from such variations may be managed and shall include at least the following—

- (1) the capability of the AOC holder's operational control systems and processes, including those for contacting ATS units;
 - (2) the overall capability of the aeroplane and its systems;
 - (3) the available means to determine the position of, and to communicate with, the aeroplane;
 - (4) the frequency and duration of gaps in automated reporting;
 - (5) human factors consequences resulting from changes to flight crew procedures; and
 - (6) specific mitigation measures and contingency procedures.
- (e) The AOC holder shall establish procedures, approved by the Authority, for the retention of aircraft tracking data to assist search and rescue in determining the last known position of the aircraft.

9.3.1.29 MONITORING AND REPORTING OF CARBON DIOXIDE EMISSIONS

- (a) AOC holders with fixed winged aircraft having a maximum certified takeoff mass greater than 5,700kg, producing carbon dioxide emissions greater than 10,000 tonnes while conducting international flights, shall—
- (1) Develop an emissions monitoring plan (EMP) to be approved by the Authority;
 - (2) Using the approved EMP, create an annual emissions report (ER);
 - (3) Have the ER verified by an accredited verification body which has been deemed acceptable to the Authority;
 - (4) Submit the verified report to the Authority.

Note: Humanitarian, medical and firefighting flights are excluded from the reporting requirements

9.4 AOC CONTINUING AIRWORTHINESS REQUIREMENTS**9.4.1.1 APPLICABILITY**

- (a) This Subpart provides those certification and continuing airworthiness requirements that apply to an AOC holder utilising an AMO.

9.4.1.2 CONTINUING AIRWORTHINESS RESPONSIBILITY

- (a) An AOC holder shall ensure the airworthiness of the aircraft and the serviceability of both operational and emergency equipment by—
 - (1) assuring the accomplishment of pre-flight inspections;
 - (2) assuring the correction of any defect and/or damage affecting safe operation of an aircraft to an approved standard, taking into account the MEL and CDL if available for the aircraft type;
 - (3) assuring the accomplishment of all maintenance in accordance with the operator's aircraft maintenance programme approved by the Authority;
 - (4) the analysis of the effectiveness of the AOC holder's approved aircraft maintenance programme;
 - (5) assuring the accomplishment of any operational directive, airworthiness directive and any other continued airworthiness requirement made mandatory by the Authority; and
 - (6) assuring the accomplishment of modifications in accordance with an approved standard and, for nonmandatory modifications, the establishment of an embodiment policy.
- (b) An AOC holder shall ensure that the Certificate of Airworthiness for each aircraft operated remains valid in respect to—
 - (1) the requirements in Paragraph 9.4.1.2(a) of this subsection;
 - (2) the expiration date of the Certificate; and
 - (3) any other maintenance condition specified in the Certificate.
- (c) An AOC holder shall ensure that the requirements specified in Paragraph 9.4.1.2(a) of this section are performed in accordance with procedures approved by or acceptable to the Authority.

- (d) An AOC holder shall ensure that the maintenance, overhaul, modification, repair and inspection of its aircraft/aeronautical products are performed in accordance with its maintenance control manual and/or current instructions for continued airworthiness, and applicable aviation regulations.
- (e) An AOC holder may make an arrangement with another person or entity for the performance of any maintenance, overhaul, modification, repair and inspection; but shall remain responsible for all work performed under such arrangement.

9.4.1.3 APPROVAL AND ACCEPTANCE OF AOC CONTINUING AIRWORTHINESS SYSTEMS AND MAINTENANCE PROGRAMMES

- (a) An AOC holder shall not operate an aircraft, except for pre-flight inspections, unless it is maintained and released to service by an AMO or equivalent system that is approved by the State of Registry and is acceptable to the Authority.
- (b) For aircraft registered in Grenada, an AMO or an equivalent system shall be approved by the Authority.
- (c) For aircraft not registered in Grenada, an AMO or an equivalent system will be approved by the State of Registry of the aircraft, and such approval will be accepted by the Authority.
- (d) When the Authority or the State of Registry accepts an equivalent system, the persons designated to sign a maintenance release or airworthiness release shall be licensed in accordance with the regulations to certify that maintenance work performed has been completed satisfactorily and in accordance with approved data and procedures acceptable to the State of Registry.

9.4.1.4 MAINTENANCE CONTROL MANUAL

- (a) An Grenada AOC holder shall provide to the Authority, and to the State of Registry of the aircraft, if different from the Authority, an AOC holder's maintenance control manual and subsequent amendments using human factors principles for the use and guidance of maintenance and operational personnel concerned, containing details of the organisation's structure including—

- (1) the accountable manager and designated person(s) responsible for the maintenance system as required by Section 9.2.2.2 of this part;
 - (2) procedures to be followed to satisfy the maintenance responsibility of Section 9.4.1.2 of this part, except where the AOC holder is also an AMO holder, and the quality functions of Section 9.4.1.6 of this part. Such procedures may be included in the AMO procedures manual;
 - (3) procedures for the reporting of failures, malfunctions, and defects in accordance with Part 5, Section 5.5.1.4 of these regulations, to the Authority, State of Registry and the State of Design within 72 hours of discovery; in addition, items that warrant immediate notification to the Authority by telephone, facsimile, or email, with a written follow-on report as soon as possible but no later than within 72 hours of discovery, are—
 - (i) primary structural failure;
 - (ii) control system failure;
 - (iii) fire in the aircraft;
 - (iv) engine structure failure; or
 - (v) any other condition considered an imminent hazard to safety.
- (b) The AOC holder's maintenance control manual shall contain the following information which may be issued in separate parts—
- (1) a description of the administrative agreements between the AOC holder and the AMO, or a description of the maintenance procedures and the procedures for completing and signing an approval for return to service when maintenance is based on a system other than that of an AMO;
 - (2) a description of the procedures to ensure each aircraft they operate is in an airworthy condition;
 - (3) a description of the procedures to ensure the operational emergency equipment for each flight is serviceable;

- (4) the names and duties of the person or persons required to ensure that all maintenance is carried out in accordance with the maintenance control manual;
 - (5) a reference to the maintenance programme required in Section 9.4.1.12 of this part;
 - (6) a description of the methods for completion and retention of the operator's continuing airworthiness records required by Section 9.4.1.8 of this part;
 - (7) a description of the procedures for monitoring, assessing and reporting maintenance and operational experience for all aircraft over 5,700 kg maximum certificated take-off mass;
 - (8) A description of the procedures for obtaining and assessing continuing airworthiness information from the organisation responsible for the type design and implementing any resulting actions considered necessary by the State of Registry for all aircraft over 5,700 kg maximum certificated take-off mass;
 - (9) a description of the procedures for implementing mandatory continuing airworthiness information as required in Paragraph 9.4.1.2(a)(5) of this part;
 - (10) a description of establishing and maintaining a system of analysis and continued monitoring of the performance and efficiency of the maintenance programme in order to correct any deficiency in that programme;
 - (11) a description of aircraft types and models to which the manual applies;
 - (12) a description of procedures for ensuring that unserviceabilities affecting airworthiness are recorded and rectified; and
 - (13) a description of the procedures for advising the State of Registry of significant in-service occurrences.
- (c) Copies of all amendments of the operators Maintenance Control Manual shall be furnished promptly to all organisations or persons to whom the manual has been issued.

- (d) A person shall not provide for use of its personnel in commercial air transport any Maintenance Control Manual or portion of this manual which has not been reviewed and approved for the AOC holder by the Authority.

Implementing Standard: See IS: 9.4.1.4 for an outline of specific subjects to be contained as appropriate in the AOC holder's maintenance control manual.

9.4.1.5 MAINTENANCE MANAGEMENT

- (a) The AOC holder, that is also an AMO holder, may carry out the requirements specified in Paragraphs 9.4.1.2 (a)(2), (a)(3), (a)(5) and (a)(6) of this part;
- (b) If the AOC holder is not an AMO, the AOC holder shall meet its responsibilities under in Paragraphs 9.4.1.2 (a)(2), (a)(3), (a)(5) and (a)(6) of this part—
 - (1) through an arrangement with an AMO with a written maintenance contract agreed between the AOC holder and the contracting AMO and approved by the Authority, detailing the required maintenance functions and defining the support of the quality functions approved or accepted by the Authority.
- (c) An AOC holder shall employ a person or group of persons, acceptable to the Authority, to ensure that all maintenance is carried out to an approved standard such that the maintenance requirements of Section 9.4.1.2 of this part and requirements of the AOC holder's maintenance control manual are satisfied, and to ensure the functioning of the quality system.
- (d) An AOC holder shall provide suitable office accommodation at appropriate locations for the personnel specified in Paragraph 9.4.1.5(c) of this subsection.
- (e) Each AOC holder shall establish for the maintenance of aircraft an SMS that is in accordance with Subsection 9.2.2.10 of this part and is acceptable to the Authority.

9.4.1.6 QUALITY SYSTEM (AMO)

- (a) For maintenance purposes, an AOC holder's quality system required by Section 9.2.2.3 of this part shall additionally include at least the following functions—

- (1) monitoring that the activities of Section 9.4.1.2 of this part are being performed in accordance with the accepted procedures;
 - (2) ensure that all contracted maintenance is carried out in accordance with the contract;
 - (3) monitoring the continued compliance with the requirements of Subpart 9.4; and
- (b) For maintenance purposes, an AOC holder's quality system required by Section 9.2.2.3 of this part shall include a quality assurance programme that contains procedures designed to verify that all maintenance operations are being conducted in accordance with all applicable requirements, standards and procedures.
- (c) Where the AOC holder is also an AMO holder, the AOC holder's quality management system may be combined with the requirements of an AMO and submitted for acceptance to the Authority, and State of Registry for aircraft not registered in Grenada.

Implementing Standard: See IS: 9.4.1.6 for additional quality system requirements for maintenance activities.

9.4.1.7 AIRCRAFT TECHNICAL LOG ENTRIES: AOC HOLDERS

- (a) A person who takes action in the case of a reported or observed failure or malfunction of an aircraft/ aeronautical product, that is critical to the safety of flight shall make, or have made, a record of that action in the maintenance section of the aircraft technical log.
- (b) An AOC holder shall have a procedure for keeping adequate copies of required records to be carried aboard, in a place readily accessible to each flight crewmember and shall put that procedure in the AOC holder's operations manual.

9.4.1.8 CONTINUING AIRWORTHINESS RECORDS

- (a) An AOC holder shall ensure that a system acceptable to the Authority, has been established to keep, in a form and format that ensures readability, security and integrity of the records at all times, the following records—
 - (1) the total time in service (hours, calendar time and cycles, as appropriate) of the aircraft and all lifelimited components;

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- (2) the current status of compliance with all mandatory continuing airworthiness information;
 - (3) appropriate details of modifications and repairs to the aircraft and its major components;
 - (4) the time in service (hours, calendar time and cycles, as appropriate) since last overhaul of the aircraft or its components subject to mandatory overhaul life;
 - (5) the current aircraft status of compliance with the maintenance programme; and
 - (6) the detailed maintenance records to show that all requirements for signing of a maintenance release and airworthiness release have been met.
- (b) An AOC holder shall ensure that items in Paragraph 9.4.1.8(a)(1) through (a)(5) of this subsection shall be kept for a minimum of 90 days after the unit to which they refer has been permanently withdrawn from service, and the records in Paragraph 9.4.1.8(a)(6) of this subsection shall be kept for a minimum of 1 year after the signing of the maintenance release and/or airworthiness release.
 - (c) An AOC holder shall ensure that in the event of temporary change of operator, the records specified in Paragraph 9.4.1.8(a) of this subsection shall be made available to the new operator.
 - (d) An AOC holder shall ensure that when an aircraft is permanently transferred from one operator to another operator, the records specified in Paragraph 9.4.1.8(a) of this subsection are also transferred.

Note: The form and format of the records may include, for example, paper records, film records, electronic records or any combination thereof.

9.4.1.9 AOC HOLDER'S AIRCRAFT TECHNICAL LOG - MAINTENANCE RECORD SECTION

- (a) An AOC holder shall use an aircraft technical log which includes an aircraft maintenance record section containing the following information for each aircraft: (See Subsection 9.3.1.5 of this part for operations section of the aircraft technical log)—

- (1) information about each previous flight necessary to ensure continued flight safety;
- (2) the current aircraft maintenance release and/or an airworthiness release;
- (3) the current inspection status of the aircraft, to include inspections due to be performed on an established schedule and inspections that are due to be performed that are not on an established schedule, except that the Authority may agree to the maintenance statement being kept elsewhere;
- (4) the current maintenance status of the aircraft, to include maintenance due to be performed on an established schedule and maintenance that is due to be performed that is not on an established schedule, except that the Authority may agree to the maintenance statement being kept elsewhere;
- (5) all deferred defects that affect the operation of the aircraft.

Note: Defects which are not airworthiness items may be deferred to a later date for rectification. When this is done, there must be a method of recording such a deferral, and normally the aircraft technical log has a section solely for this purpose. Some operators have a system of classifying deferred defects so as to allow different lengths of time, either in hours flown, number of sectors, or on return to a maintenance base, until a defect must be rectified before further flight.

- (b) The aircraft technical log and any subsequent amendment shall be approved by the Authority.

9.4.1.10 RELEASE TO SERVICE OR MAINTENANCE SECTION RECORDS OF THE TECHNICAL LOG

- (a) An AOC holder shall not operate an aircraft unless it is maintained and released to service by an organisation approved in accordance with Part 6 of these regulations.
- (b) An AOC holder using an AMO shall not operate an aircraft after release under Paragraph 9.4.1.10(a) of this subsection unless an appropriate entry is made in accordance with the AOC maintenance control manual procedures acceptable to the Authority.
- (c) The AOC holder shall ensure that a maintenance release and/or airworthiness release is made in the maintenance section of the aircraft technical log.

- (d) The AOC holder shall ensure that the PIC of the aircraft has reviewed the maintenance records section of the aircraft technical log and has determined that any maintenance performed has been appropriately documented.
- (e) An AOC holder shall not operate an aircraft unless the PIC is in possession of a valid logbook entry in the maintenance records section of the aircraft technical log to indicate that any maintenance performed on the aircraft has been satisfactorily performed and appropriately documented.

9.4.1.11 MODIFICATION AND REPAIRS

- (a) All modifications and repairs shall comply with airworthiness requirements acceptable to the State of Registry. Procedures shall be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained. However, in the case of a major repair or major modification, the work must have been done in accordance with technical data approved by the Authority.
- (b) An AOC holder shall, promptly upon its completion, prepare a report of each major modification or major repair of an airframe, aircraft engine, propeller, or appliance of an aircraft operated by it.
- (c) The AOC holder shall submit a copy of each report of a major modification to the Authority, and shall keep a copy of each report of a major repair available for inspection.
- (d) The Authority issuing an approval for the design of a modification, repair, or replacement part shall do so on the basis of satisfactory evidence that the aircraft is in compliance with airworthiness requirements used for the issuance of the type certificate, its amendments, or later requirements, when determined by the State of Registry.

9.4.1.12 AIRCRAFT MAINTENANCE PROGRAMME

- (a) An AOC holder's aircraft maintenance programme and any subsequent amendment shall be submitted to the State of Registry for approval; acceptance by the Authority will be conditioned upon prior approval by the State of Registry, or where appropriate, upon the AOC holder complying with recommendations provided by the State of Registry.

- (b) The Authority shall require an operator to include a reliability programme when the Authority determines that such a reliability programme is necessary. When such a determination is made by the Authority the AOC holder shall provide such procedures and information in the AOC holder's maintenance control manual.
- (c) An AOC holder shall ensure that each aircraft is maintained in accordance with the AOC holder's aircraft approved maintenance programme as required by Section 9.4.1.2 of this part which shall include—
 - (1) maintenance tasks and the intervals in which these are to be performed, taking into account the anticipated utilisation of the aircraft when applicable, a continuing structural integrity programme;
 - (2) procedures for changing or deviating from Paragraphs 9.4.1.12(c)(1) and (c)(2); and
 - (3) when applicable, condition monitoring and reliability programmes, descriptions for aircraft systems, components, and power plants.
- (d) The design and application of the AOC holder's maintenance programme shall observe Human Factors principles.
- (e) Repetitive maintenance tasks that are specified in mandatory intervals as a condition of approval of the type design shall be identified as such.

Note: The maintenance programme should be based on maintenance programme information made available by the State of Design or by the organisation responsible for the type design, and any additional applicable experience.

- (f) A person shall not provide for use of its personnel in commercial air transport a maintenance programme or portion thereof which has not been reviewed and approved for the AOC holder by the Authority.
- (g) Approval by the Authority of an AOC holder's maintenance programme and any subsequent amendments shall be noted in the AOC certificate pursuant to Section 9.1.1.8(c) of this part.
- (h) An AOC holder shall have an inspection programme and a programme covering other maintenance, preventive maintenance, and modifications to ensure that—

- (i) maintenance, preventive maintenance, and modifications, are performed in accordance with the AOC holder's maintenance control manual;
 - (ii) each aircraft released to service is airworthy and has been properly maintained for operation.
- (i) The Authority may amend any specifications issued to an AOC holder to permit deviation from those provisions of this Subpart that would prevent the return to service and use of airframe components, powerplants, appliances, and spare parts thereof because those items have been maintained, altered, or inspected by persons employed outside Grenada who do not hold a Grenada technician's license. An AOC holder who is granted authority under this deviation shall provide for surveillance of facilities and practices to assure that all work performed on these parts is accomplished in accordance with the AOC holder's maintenance control manual.
- (j) An AOC holder shall provide, for the use and guidance of maintenance and operational personnel concerned, a maintenance programme, approved by the Authority. Copies of all amendments to the Maintenance Programme shall be furnished promptly to all organisations or persons to whom the Maintenance Programme has been issued.

Implementing Standard: See IS: 9.4.1.12 for the requirements for an Approved Continuous Maintenance Programme

9.4.1.13 RELIABILITY PROGRAMME

- (a) A maintenance programme for each aeroplane shall contain, when applicable, condition monitoring and reliability programme descriptions for aircraft systems, components, and powerplants.
- (b) A reliability programme shall be developed for the aircraft maintenance programme if the maintenance programme is based upon Maintenance Steering Group logic, includes condition-monitored components, or does not contain overhaul time periods for all significant system components.
- (c) A reliability programme need not be developed for aircraft not considered large aircraft or that contain overhaul time periods for all significant aircraft system components.

- (d) The purpose of a reliability programme is to ensure that the aircraft maintenance programme tasks are effective and that their periodicity is adequate.
- (e) A reliability programme may result in the escalation or deletion of maintenance tasks, as well as deescalation or addition of maintenance tasks.
- (f) A reliability programme provides an appropriate means of monitoring the effectiveness of the maintenance programme.

9.4.1.14 AUTHORITY TO PERFORM AND APPROVE MAINTENANCE, PREVENTIVE MAINTENANCE AND MODIFICATIONS

- (a) An AOC holder shall make arrangements with an AMO (appropriately rated) for the performance of maintenance, preventive maintenance, or modifications of any aircraft, airframe, aircraft engine, propeller, appliance, or component, or part thereof as provided in its maintenance programme and maintenance control manual.

9.4.1.15 RESERVED

9.4.1.16 REST AND DUTY LIMITATIONS FOR PERSONS PERFORMING MAINTENANCE FUNCTIONS ON AOC HOLDER AIRCRAFT

- (a) A person shall not assign, or perform maintenance functions for aircraft certified for commercial air transport, unless that person has complied with the rest and duty limitations of Part 6, Section 6.4.1.2 of the Schedule.

9.5 AOC SECURITY MANAGEMENT

9.5.1.1 APPLICABILITY

- (a) This Subpart provides those certification requirements that apply to the AOC holder's protection of aircraft, facilities and personnel from unlawful interference.

9.5.1.2 SECURITY REQUIREMENTS

- (a) An AOC holder shall ensure that all appropriate personnel are familiar with, and comply with, the relevant requirements of the national security programmes of the State of the operator.

9.5.1.3 SECURITY TRAINING PROGRAMMES

- (a) An AOC holder shall establish, maintain, and conduct approved security training programmes that enable the operator's personnel to take appropriate action to prevent acts of unlawful interference, such as sabotage, or unlawful seizure of aircraft and to minimise the consequences of such events should they occur.
- (b) Each AOC holder that is responsible for aerodrome screening of passengers, baggage, and cargo shall include screening training in its security training programme.
- (c) The AOC holder shall also establish and maintain a recurrent training programme (every 12 months) to reacquaint all relevant persons with preventive measures and techniques in relation to passengers, baggage, cargo, mail, equipment, stores and supplies intended for carriage on an aircraft so that they contribute to the prevention of acts of sabotage or other forms of unlawful interference.
- (d) An AOC holder's security training programme shall include the items as listed in Part 8, Section 8.10.1.11 of these regulations.

9.5.1.4 REPORTING ACTS OF UNLAWFUL INTERFERENCE

- (a) Following an act of unlawful interference on board an aircraft the PIC or, in his or her absence, the AOC holder shall submit, without delay, a report of such an act to the designated local authority and the Authority in the State of the operator.

9.5.1.5 AIRCRAFT SEARCH PROCEDURE CHECKLIST

- (a) An operator shall ensure that all its aircraft have a checklist of the procedures to be followed in searching for a bomb in case of suspected sabotage and for inspecting aircraft for concealed weapons, explosives or other dangerous devices when a well-founded suspicion exists that the aircraft may be the object of an act of unlawful interference. The checklist shall be supported by guidance on the appropriate course of action to be taken should a bomb or suspicious object be found and information on the least-risk bomb location specific to the aircraft.

9.5.1.6 FLIGHT CREW COMPARTMENT DOORS, IF INSTALLED, - SECURITY PROCEDURES

- (a) The flight crew compartment door on a passenger-carrying aircraft shall be capable of being locked from within the compartment in order to prevent unauthorised access.

- (b) Each AOC holder shall have an approved means by which the cabin crew can discreetly notify the flight crew in the event of suspicious activity or security breaches in the cabin.
- (c) All passenger-carrying aeroplanes shall be equipped with an approved flight crew compartment door, where practicable, that is designed to resist penetration by small arms fire and grenade shrapnel and to resist forcible intrusion by unauthorised persons. This door shall be capable of being locked and unlocked from either pilot's station.
- (d) The door shall be closed and locked from the time all external doors are closed following embarkation until any such door is opened for disembarkation, except when necessary to permit access and egress by authorised persons; and
- (e) Means shall be provided for monitoring from either pilot's station the entire door area outside the flight crew compartment to identify persons requesting entry and to detect suspicious behaviour or potential threat.

9.5.1.7 FLIGHT CREW COMPARTMENT DOORS, LARGE AEROPLANES – SECURITY PROCEDURES

- (a) All passenger carrying aeroplanes of a maximum certificated take-off mass in excess of 54 500 kg; or of a maximum certificated take-off mass in excess of 45 500 kg with a passenger seating capacity greater than 19; or with a passenger seating capacity greater than 60, shall be equipped with an approved flight crew compartment door that is designed to resist penetration by small arms fire and grenade shrapnel and to resist forcible intrusions by unauthorised persons. This door shall be capable of being locked and unlocked from either pilot's station.
 - (1) The door shall be closed and locked from the time all external doors are closed following embarkation until any such door is opened for disembarkation, except when necessary to permit access and egress by authorised persons; and
 - (2) Means shall be provided for monitoring from either pilot's station the entire door area outside the flight crew compartment to identify persons requesting entry and to detect suspicious behaviour or potential threat.

9.5.1.8 CARRIAGE OF WEAPONS

- (a) Where an operator accepts the carriage of weapons removed from passengers, the aeroplane shall have provision for stowing such weapons in a place so that they are not accessible to any person during flight time.

9.6 AOC DANGEROUS GOODS MANAGEMENT**9.6.1.1 APPLICABILITY**

- (a) Subpart 9.6 provides those certification requirements that apply to the management and transport of dangerous goods by air.

9.6.1.2 APPROVAL TO TRANSPORT DANGEROUS GOODS

- (a) An AOC holder shall not transport dangerous goods unless approved to do so by the Authority.

9.6.1.3 SCOPE

- (a) Each AOC holder shall comply with the provisions contained in ICAO Doc. 9284, *Technical Instructions for the Safe Transport of Dangerous Goods By Air*, hereinafter referred to as “Technical Instructions” on all occasions when dangerous goods are carried, irrespective of whether the flight is wholly or partly within or wholly outside the territory of Grenada. Where dangerous goods are to be transported outside the territory of Grenada, the AOC holder shall review and comply with the appropriate variations noted by Contracting States contained in Attachment 3 to the Technical Instructions.
- (b) Articles and substances which would otherwise be classed as dangerous goods are excluded from the provisions of Subpart 9.6 to the extent specified in the Technical Instructions, provided they are—
 - (1) required to be aboard the aircraft for operating reasons;
 - (2) carried as catering or cabin service supplies;
 - (3) carried for use in flight as a veterinary aid or as a humane killer for an animal; or
 - (4) carried for use in flight for medical aid for a patient, provided that—

- (i) gas cylinders have been manufactured specifically for the purpose of containing and transporting that particular gas;
 - (ii) drugs, medicines and other medical matter are under the control of trained personnel during the time when they are in use in the aircraft;
 - (iii) equipment containing wet cell batteries is kept and, when necessary secured, in an upright position to prevent spillage of the electrolyte; and
 - (iv) proper provision is made to stow and secure all the equipment during take-off and landing and at all other times when deemed necessary by the PIC in the interests of safety; or
 - (v) they are carried by passengers or crewmembers.
- (c) Articles and substances intended as replacements for those described in Paragraph 9.6.1.3(b)(1) of this section shall be transported on an aircraft as specified in the Technical Instructions.

9.6.1.4 LIMITATIONS ON THE TRANSPORT OF DANGEROUS GOODS

- (a) An AOC holder shall take all reasonable measures to ensure that articles and substances that are specifically identified by name or generic description in the Technical Instructions as being forbidden for transport under any circumstances, are not carried on any aircraft.
- (b) An AOC holder shall take all reasonable measures to ensure that articles and substances or other goods that are identified in the Technical Instructions as being forbidden for transport in normal circumstances, or infected live animals, are transported only when—
 - (1) they are exempted by the States concerned under the provisions of the Technical Instructions; or
 - (2) the Technical Instructions indicate they may be transported under an approval issued by the State of Origin.

9.6.1.5 CLASSIFICATION

- (a) An AOC holder shall take all reasonable measures to ensure that articles and substances are classified as dangerous goods as specified in the Technical Instructions.

9.6.1.6 PACKAGING

- (a) Each AOC holder shall ensure that dangerous goods are packaged as specified in the Technical Instructions.
- (b) Packages used for the transport of dangerous goods by air shall—
 - (1) be of good quality and shall be constructed and securely closed so as to prevent leakage that might be caused in normal conditions of transport, by vibration, or by changes in temperature, humidity, or pressure;
 - (2) be suitable for the contents. Packages in direct contact with dangerous goods shall be resistant to any chemical or other action of such goods;
 - (3) meet the material and construction specifications in the Technical Instructions; and
 - (4) be tested in accordance with the provisions of the Technical Instructions.
- (c) Packages for which retention of a liquid is a basic function shall be capable of withstanding, without leaking, the pressure stated in the Technical Instructions.
- (d) Inner packages shall be so packed, secured, or cushioned as to prevent breakage or leakage and to control their movement within the outer packaging(s) during normal conditions of air transport. Cushioning and absorbent materials shall not react dangerously with the contents of the packages.
- (e) No packaging shall be reused until it has been inspected and found free from corrosion or other damage. Where a packaging is reused, all necessary measures shall be taken to prevent contamination of subsequent contents.
- (f) If, because of the nature of their former contents, uncleaned empty packages may present a hazard, they shall be tightly closed and treated according to the hazard they constitute.

- (g) No harmful quantity of a dangerous substance shall adhere to the outside of packages.

9.6.1.7 LABELLING AND MARKING

- (a) An AOC holder shall ensure that packages, overpacks and freight containers are labelled and marked as specified in the Technical Instructions.
- (b) Each AOC holder shall ensure that packages, overpacks, and freight containers are marked with—
 - (1) the proper shipping name of their contents;
 - (2) the United Nations number, when assigned; and
 - (3) other such markings as may be specified in the Technical Instructions.
- (c) Each AOC holder shall ensure that packages manufactured to a specification contained in the Technical Instructions shall be so marked in accordance with the Technical Instructions.
- (d) Where dangerous goods are carried on a flight that takes place wholly or partly outside the territory of Grenada, the AOC holder shall ensure that labelling and marking are in the English language in addition to any other language requirements.

9.6.1.8 DANGEROUS GOODS TRANSPORT DOCUMENT

- (a) An AOC holder shall ensure that, except when otherwise specified in the Technical Instructions, dangerous goods are accompanied by a dangerous goods transport document.
- (b) Where dangerous goods are carried on a flight which takes place wholly or partly outside the territory of a State, the AOC holder shall ensure that the English language is used for the dangerous goods transport document in addition to any other language requirements.

9.6.1.9 ACCEPTANCE OF DANGEROUS GOODS

- (a) An AOC holder shall not accept dangerous goods for transport until the packaging, overpack or freight container has been inspected in accordance with the acceptance procedures in the Technical Instructions.

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- (b) An AOC holder, or its handling agent, shall use an acceptance check list that—
- (1) shall allow for all relevant details to be checked; and
 - (2) shall be in such form as will allow for the recording of the results of the acceptance check by manual, mechanical or computerised means.
- (c) Each designated postal operator shall have the procedure for controlling the introduction of dangerous goods in mail into air transport approved by the Authority where the mail is accepted.

Note: Guidance for approving the procedures established by designated postal operators to control the introduction of dangerous goods into air transport may be found in the Supplement to the Technical Instructions, Part S-1, Chapter 3.

9.6.1.10 INSPECTION FOR DAMAGE, LEAKAGE OR CONTAMINATION

- (a) An AOC holder shall ensure that—
- (1) packages, over packs and freight containers are inspected for evidence of leakage or damage immediately prior to loading on an aircraft or into a unit load device, as specified in the Technical Instructions;
 - (2) a unit load device is not loaded on an aircraft unless it has been inspected as required by the Technical Instructions and found free from any evidence of leakage from, or damage to, the dangerous goods contained therein;
 - (3) leaking or damaged packages, over packs or freight containers are not loaded on an aircraft;
 - (4) any packaging of dangerous goods found on an aircraft and which appears to be damaged or leaking is removed or arrangements made for its removal by an appropriate authority or organisation.
 - (5) after removal of any leaking or damaged goods, the remainder of the consignment is inspected to ensure it is in a proper condition for transport and that no damage or contamination has occurred to the aircraft or its load; and

- (6) packages, over packs and freight containers are inspected for signs of damage or leakage upon unloading from an aircraft or from a unit load device and, if there is evidence of damage or leakage, the area where the dangerous goods were stowed is inspected for damage or contamination.

9.6.1.11 REMOVAL OF CONTAMINATION

- (a) An AOC holder shall ensure that—
 - (1) any contamination found as a result of the leakage or damage of dangerous goods is removed without delay; and
 - (2) an aircraft which has been contaminated by radioactive materials is immediately taken out of service and not returned until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions.

9.6.1.12 LOADING RESTRICTIONS AND STOWAGE OF DANGEROUS GOODS

- (a) Each AOC holder shall ensure that packages and overpacks containing dangerous goods and freight containers containing radioactive materials are loaded and stowed in accordance with the Technical Instructions.
 - (1) **PASSENGER CABIN AND FLIGHT DECK.** An AOC holder shall ensure that dangerous goods are not carried in an aircraft cabin occupied by passengers or on the flight deck, unless otherwise specified in the Technical Instructions.
 - (2) **CARGO COMPARTMENTS.** An AOC holder shall ensure that dangerous goods are loaded, segregated, stowed and secured on an aircraft as specified in the Technical Instructions.
 - (3) **DANGEROUS GOODS DESIGNATED FOR CARRIAGE ONLY ON CARGO AIRCRAFT.** An AOC holder shall ensure that packages of dangerous goods bearing the “Cargo Aircraft Only” label are carried on a cargo aircraft and loaded as specified in the Technical Instructions and in a manner that a crew member or other authorised person can see, handle, and where size and weight permit, separate such packages from other cargo in flight.

- (b) Packages containing dangerous goods shall be separated when stowing, as follows—
 - (1) those packages containing dangerous goods that may react dangerously with other packages shall not be stowed next to each other on an aircraft or in a position that may allow interaction between them in the event of a leakage.
 - (2) those packages containing toxic and infectious substances shall be stowed on an aircraft in accordance with the Technical Instructions.
 - (3) those packages containing radioactive materials shall be stowed on an aircraft so that they are separated from persons, live animals, and undeveloped film and secured in flight in accordance with the Technical Instructions.
- (c) The AOC holder shall protect and secure any dangerous goods in such a manner that will prevent any movement in flight that might change the orientation of the packages.

9.6.1.13 PROVISION OF INFORMATION

- (a) INFORMATION TO GROUND STAFF. An AOC holder shall ensure that—
 - (1) information is provided to enable ground staff to carry out their duties with regard to the transport of dangerous goods, including the actions to be taken in the event of incidents and accidents involving dangerous goods;
 - (2) where applicable, the information referred to in Paragraph 9.6.1.13 (a)(1) of this subsection is also provided to the handling agent; and
 - (3) information is readily accessible to the aerodromes of last departure and next scheduled arrival for each of its flights on which dangerous goods were carried.
- (b) INFORMATION TO PASSENGERS. An AOC holder shall ensure that information is promulgated as required by the Technical Instructions so that passengers are warned as to the types of goods that they are forbidden from transporting aboard an aircraft.
- (c) INFORMATION TO SHIPPERS. An AOC holder shall ensure that information is promulgated as required by the Technical

Instructions so that shippers of dangerous goods are provided with the information as required by the Technical Instructions to enable them to carry out their responsibilities with regard to the transport of dangerous goods and the action to be taken in the event of emergencies arising involving dangerous goods.

- (d) INFORMATION TO ACCEPTANCE POINTS PERSONNEL. An AOC holder and, where applicable, the handling agent shall ensure that notices are provided at acceptance points for cargo giving information about the transport of dangerous goods including the actions to be taken in the event of emergencies arising involving dangerous goods.
- (e) INFORMATION TO CREW MEMBERS. An AOC holder shall ensure that information is provided in the Operations Manual to enable crew members to carry out their responsibilities in regard to the transport of dangerous goods, including the actions to be taken in the event of emergencies arising involving dangerous goods.
- (f) INFORMATION TO THE PIC. An AOC holder shall ensure that the PIC is provided, as early as is practicable before the departure of the flight, with written information as specified in the Technical Instructions.
- (g) INFORMATION IN THE EVENT OF AN IN-FLIGHT EMERGENCY. If an in-flight emergency occurs, the PIC shall, as soon as the situation permits, inform the appropriate ATS unit, for the information of the aerodrome authorities, of any dangerous goods on board the aircraft, as provided for in the Technical Instructions.
- (h) INFORMATION IN THE EVENT OF AN AIRCRAFT INCIDENT OR ACCIDENT. An AOC holder that is involved in an aircraft incident shall—
 - (1) as soon as possible, inform the appropriate authority of the State in which the aircraft incident or accident occurred of any dangerous goods carried; and
 - (2) on request, provide any information required to minimise the hazards created by any dangerous goods carried.

9.6.1.14 DANGEROUS GOODS TRAINING PROGRAMMES AND MANUAL

- (a) Each AOC holder shall have a dangerous goods training programme approved by the Authority, whether or not the AOC holder is approved to transport dangerous goods.

- (b) Crew members, passenger-handling personnel, and security personnel employed by the AOC holder that deal with the screening of passengers and their baggage and cargo shall receive initial and recurrent training that covers, at a minimum, the areas identified in Part 8 of these regulations to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify dangerous goods, and what requirements apply to the carriage of such goods by passengers.
- (c) At a minimum, the dangerous goods training programme shall include the items as listed in Part 8, Section 8.10.1.10 of these regulations.
- (d) The AOC holder shall provide such information in the OM as will enable the flight crew to carry out its responsibilities with regard to the transport of dangerous goods and shall provide instructions as to the action to be taken in the event of emergencies arising involving dangerous goods.

9.6.1.15 DANGEROUS GOODS INCIDENT AND ACCIDENT REPORTS

- (a) An AOC holder shall report dangerous goods incidents and accidents to the Authority within 72 hours of the event, unless exceptional circumstances prevent this.
- (b) Each AOC holder shall report undeclared or misdeclared dangerous goods discovered in cargo or passenger's baggage to the Authority within 72 hours of the discovery, unless exceptional circumstances prevent this.
- (c) An AOC holder shall report to the appropriate authorities of the State of the Operator and the State of Origin any occasions when dangerous goods are discovered to have been carried—
 - (1) when not loaded, segregated, separated or secured in accordance with the Technical Instructions, Part 7, Chapter 2; and
 - (2) without information having been provided to the pilot-in-command.

9.6.1.16 SHIPPERS RESPONSIBILITIES

- (a) No person shall offer a packaging, overpack, or freight container containing dangerous goods for shipment by air unless that person

has, in accordance with the Technical Instructions, ensured that the dangerous goods are—

- (1) properly classified, packed, marked, and labelled and in the proper condition for transport by air in accordance with the relevant regulations; and
 - (2) accompanied by a properly executed dangerous goods transport document.
- (b) In completing the dangerous goods transport document for the AOC holder, the shipper shall, in accordance with the Technical Instructions and any other regulations of Grenada—
- (1) declare that the dangerous goods are fully and accurately described by their proper shipping names;
 - (2) declare that the dangerous goods are classified, packed, marked, and labelled and in the proper condition for transport;
 - (3) complete the form in both English and the language of Grenada when the dangerous goods are to be carried either wholly or partly outside Grenada; and
 - (4) sign the form.

9.6.1.17 DANGEROUS GOODS SECURITY PROVISIONS

- (a) Each shipper and operator and other persons engaged in the transport of dangerous goods by air shall establish security measures, consistent with these regulations, to minimise theft or misuse of dangerous goods that may endanger persons, property, or the environment.

9.7 CARGO COMPARTMENT SAFETY

9.7.1.1 TRANSPORT OF ITEMS IN THE CARGO COMPARTMENT

- (a) The AOC holder shall establish policy and procedures for the transport of items in the cargo compartment, which include the conduct of a specific safety risk assessment. The risk assessment shall include at least the—

- (1) hazards associated with the properties of the items to be transported;
- (2) capabilities of the operator;
- (3) operational considerations (e.g., area of operations, diversion time);
- (4) capabilities of the aircraft and its systems (e.g., cargo compartment fire suppression capabilities);
- (5) containment characteristics of ULDs;
- (6) packing and packaging
- (7) safety of the supply chain for items to be transported; and
- (8) quantity and distribution of dangerous goods items to be transported.

Note: Additional operational requirements for the transport of dangerous goods are contained in Subpart 9.6 of this part.

9.7.1.2 FIRE PROTECTION

- (a) The elements of the cargo compartment(s) fire protection system as approved by the State of Design or State of Registry, and a summary of the demonstrated cargo compartment fire protection certification standards, shall be provided in the AFM or other documentation supporting the operation of the aircraft.
- (b) The AOC holder shall establish policy and procedures that address the items to be transported in the cargo compartment. These shall ensure to a reasonable certainty that in the event of a fire involving those items, it can be detected and sufficiently suppressed or contained by the elements of the aircraft design associated with cargo compartment fire protection, until the aircraft makes a safe landing.

**PART 9 - IMPLEMENTING STANDARDS FOR AIR OPERATOR
CERTIFICATION AND ADMINISTRATION**

For ease of reference the number assigned to each IS corresponds to its associated regulation. For example, IS 9.2.2.2 would reflect a standard required by 9.2.2.2 of this part.

PART 9 - IMPLEMENTING STANDARDS

**IS: 9.2.2.2 MANAGEMENT PERSONNEL REQUIRED FOR COMMERCIAL AIR
TRANSPORT OPERATIONS**

- (a) Each AOC holder shall make arrangements to ensure continuity of supervision if operations are conducted in the absence of any required management personnel.
- (b) Required management personnel shall be contracted to work sufficient hours, such that the management functions are fulfilled.
- (c) A person serving in a required management position for an AOC holder may not serve in a similar position for any other AOC holder, unless an exemption is issued by the Authority.
- (d) The minimum initial qualifications for a Director of Operations are—
 - (1) An ATPL; and
 - (2) 3 years' experience as PIC in commercial air transport operations—
 - (i) of large aircraft, if the AOC holder operates large aircraft; or
 - (ii) of either large or small aircraft, if the AOC holder operates only small aircraft.
- (e) The minimum qualifications for a chief pilot are—
 - (1) an ATPL with the appropriate ratings for at least one of the aircraft used in the AOC holder's operations; and
 - (2) 3 years' experience as PIC in commercial air transport operations—

- (i) in large aircraft, if the AOC holder operates large aircraft; or
- (ii) in either large or small aircraft, if the AOC holder operates only small aircraft.

Note: The Authority may accept a commercial pilot licence with instrument rating in lieu of the ATPL if the PIC requirements for the operations conducted require only a commercial certificate.

- (f) The minimum qualifications for a Director of Maintenance are—
 - (1) an AMT licence with airframe and powerplant ratings;
 - (2) 3 years' experience in maintaining the same category and class of aircraft used by the AOC holder, including 1 year in the capacity of returning aircraft to service; and
 - (3) 1 year of supervisory experience maintaining the same category and class of aircraft used by the AOC holder.
- (g) The minimum qualifications for a chief inspector are—
 - (1) an AMT licence with airframe and powerplant ratings; and
 - (2) 3 years' experience in maintaining the same category and class of aircraft used by the AOC holder, including 1 year in the capacity of returning aircraft to service.
- (h) An AOC holder may employ a person who does not meet the appropriate airman qualifications or experience if the Authority issues an exemption finding that that person has comparable experience and can effectively perform the required management functions.

IS 9.2.2.3 QUALITY SYSTEM

- (a) In order to show compliance with 9.2.2.3 of this part, an AOC holder shall establish its quality system in accordance with the instruction and information contained in the following paragraphs.

1.0 GENERAL**1.1 TERMINOLOGY.**

1.1.1 The terms used in the context of the requirement for an operator's quality system have the following meaning—

- (a) Accountable manager. The person acceptable to the Authority, who has corporate authority for ensuring that all operational and maintenance functions can be financed and performed to the standard required by the Authority and any additional requirements defined by the operator.
- (b) Quality assurance. As distinguished from quality control, involves activities in the business, systems, and technical audit areas. A set of predetermined, systematic actions that are required to provide adequate confidence that a product or service satisfies quality requirements.

1.2 PURPOSE OF THE QUALITY SYSTEM.

1.2.1 The quality system shall enable an operator to monitor compliance with these regulations, the operator's manual system, and any other standards specified by the operator, or the Authority, to ensure safe operations and airworthy aircraft and aeronautical products.

1.3 ORGANISATIONAL STRUCTURE.

1.3.1 The operator may specify the basic structure of the quality system according to the size and complexity of the operation to be monitored.

1.3.2 References to large and small operators elsewhere in these regulations are governed by aircraft capacity (i.e., more or less than 20 seats) and by mass (i.e., greater or less than 10,000kg (10 tonnes) maximum certificated take-off mass). Such terminology is not relevant when considering the scale of an operation and the quality system required. In the context of quality systems, therefore, operators shall be categorised according to the number of full-time personnel.

1.3.3 An operator shall be categorised according to the number of full-time personnel. Operators that employ 5 or fewer full-time employees are considered to be "very small" operations, while those employing between 6 and 20 full-time employees are regarded as "small" operations, as far as quality systems are concerned. Full time in this context means employed for not less than 35 hours per week, excluding vacation periods.

- 1.3.4 Complex quality systems may be inappropriate for a small or very small operation, and the clerical effort required to develop manuals and quality procedures for a complex system may stretch that operator's resources. It is therefore accepted that such an operator may tailor its quality system to suit the size and complexity of the operation and allocate resources accordingly
- 1.3.5 For small and very small operators, it may be appropriate to develop a quality assurance programme that employs a checklist. The checklist shall have a supporting schedule that requires completion of all checklist items within a specified timescale, together with a statement acknowledging completion of a periodic review by top management. An occasional independent overview of the checklist content and achievement of the quality assurance should be undertaken.
- 1.3.6 A small operator may decide to use internal or external auditors or a combination of the two. In these circumstances it would be acceptable for external specialists and/or qualified organisations to perform the quality audits on behalf of the quality manager.

1.4 SCOPE.

- 1.4.1 As a minimum, the quality system shall address the following—
- (a) relevant terminology;
 - (b) the applicable requirements of these regulations;
 - (c) any additional standards and practices of the operator;
 - (d) a description of the operator, including the operational structure;
 - (e) identification of those persons responsible for the development, establishment, and management of the quality assurance programme, including a description of their duties and responsibilities;
 - (f) relevant portions of manuals, reports, and records, including a distribution list of all controlled copies;
 - (g) the operator's quality policy;
 - (h) quality procedures;

- (i) a quality assurance programme, including—
 - (1) the schedule of the monitoring process;
 - (2) audit procedures;
 - (3) reporting procedures;
 - (4) follow-up and corrective action procedures; and
 - (5) a recording system.
- (j) the required financial, material, and human resources; and
- (k) training requirements.

1.5 SAFETY ATTRIBUTES

1.5.1 Where appropriate, an operator shall incorporate the following safety attributes into its policies, procedures, and processes—

- (a) authority;
- (b) responsibility;
- (c) procedures;
- (d) controls;
- (e) process measurements; and

1.6 RELEVANT DOCUMENTATION

1.6.1 The required quality system may be documented in the OM or in a separate Quality Manual. In either instance, the documentation shall—

- (a) contain instructions and information to allow the personnel concerned to perform their duties with a high degree of safety;
- (b) be easy to revise;
- (c) allow personnel to determine the current revision status;
- (d) have the date of the last revision on each page;

- (e) not be contrary to any applicable regulation or the operator's operations specifications; and
- (f) reference applicable regulations.

1.6.2 Each document defined within the structure of an operator's quality system shall be subject to document control. Document control procedures shall ensure that the documents are—

- (a) authorised;
- (b) adequate;
- (c) security classified;
- (d) standardised when completed;
- (e) revised and amended when required;
- (f) appropriately distributed;
- (g) appropriately stored;
- (h) periodically reviewed; and
- (i) appropriately disposed of.

1.7 QUALITY POLICY

1.7.1 An operator shall establish a formal, written quality policy statement that is a commitment by the accountable manager as to what the quality system is intended to achieve.

1.7.2 The quality policy shall reflect initial and continued compliance with these regulations, the operator's manual system, and any additional requirements defined by the operator or the Authority.

1.7.3 The quality policy shall clearly define the operator's purpose, structure, principal and objectives, and all the services rendered by the operator.

1.8 QUALITY MANAGEMENT

1.8.1 With regard to the text in Paragraph 9.2.2.2(a) of this part, the term "accountable manager" is intended to mean the chief executive/president/managing director/general manager, etc., of

the operator's organisation who, by virtue of his or her position, has overall responsibility (including financial) for managing the organisation.

- 1.8.2 The accountable manager shall have overall responsibility for the operator's quality system, including the frequency, format, and structure of the internal management evaluation activities as prescribed in paragraph 2.11 of this IS.
- 1.8.3 The function of the quality manager is to monitor compliance with, and the adequacy of, procedures required to ensure safe practices and airworthy aircraft and aeronautical products as required by these regulations.
- 1.8.4 The quality manager shall be responsible for ensuring that the quality assurance programme is properly established, implemented, and maintained.
- 1.8.5 The quality manager shall—
- (a) report to the accountable manager;
 - (b) not be one of the required management personnel; and
 - (c) have access to all parts of the operation and, as necessary, to any contractor's or subcontractor's operation.
- 1.8.6 In the case of a very small or small operator, as defined in paragraph 1.3.3 of this IS, the positions of the accountable manager and quality manager may be combined.

1.9 FEEDBACK SYSTEM.

- 1.9.1 The quality system shall include a feedback system to the accountable manager to ensure that corrective action is identified and promptly addressed.
- 1.9.2 The feedback system shall specify who is required to rectify discrepancies and noncompliance in each particular case, and the procedure to be followed if corrective action is not completed within an appropriate timescale.

2.0 QUALITY ASSURANCE PROGRAMME

- 2.1 Introduction.

- 2.1.1 The quality assurance programme shall include all planned and systematic actions necessary to provide confidence that operational and maintenance functions are conducted in accordance with all applicable requirements, standards, and procedures.
- 2.2 Quality Assurance Programme Plan.
- 2.2.1 An operator shall describe its quality assurance duties, responsibilities, and procedures in a programme plan.
- 2.2.2 Terms and elements defined in the plan shall be consistent with those outlined in the operator's manual system.
- 2.2.3 Copies of the programme plan shall be distributed to all personnel concerned.
- 2.2.4 Revisions shall be made as necessary to ensure the plan continues to reflect the operator's current quality assurance duties, responsibilities, and procedures.

2.3 MONITORING

- 2.3.1 The purpose of monitoring within the quality system is primarily to investigate and judge the effectiveness of the quality system and thereby to ensure that defined policy and operational and maintenance standards are continuously complied with.
- 2.3.2 Monitoring activity is based upon—
- (a) quality inspections;
 - (b) quality audits;
 - (c) corrective action; and
 - (d) follow-up.
- 2.3.3 The operator shall establish and publish a quality procedure to monitor regulatory compliance on a continuing basis. This monitoring activity shall be aimed at eliminating the causes of unsatisfactory performance.
- 2.3.4 Any non-compliance identified as a result of monitoring shall be communicated to the manager responsible for taking corrective action or, if appropriate, to the accountable manager. Such non-compliance shall be recorded, for the purpose of further

investigation, in order to determine the cause and to enable the recommendation of appropriate corrective action.

2.4 QUALITY INSPECTION

2.4.1 The primary purpose of a quality inspection is to observe a particular event, action, document, etc., in order to verify whether established procedures and requirements are followed during the accomplishment of that event and whether the required standard is achieved.

2.4.2 Typical subject areas for quality inspections are—

- (a) actual flight operations;
- (b) ground de-icing/anti-icing;
- (c) flight support services;
- (d) load control;
- (e) maintenance;
- (f) technical standards; and
- (g) training standards.

2.4.3 Typical methods used for quality inspections for maintenance include—

- (a) product sampling – the monitoring of a representative sample of aeronautical products of the aircraft fleet;
- (b) defect sampling – the monitoring of defect rectification performance;
- (c) concession sampling – the monitoring of any concession to not carry out maintenance on time;
- (d) on-time maintenance sampling – the monitoring of when (flying hours, calendar time, flight cycles, etc.) aircraft and aeronautical products are brought in for maintenance; and
- (e) sample reports of unairworthy conditions and maintenance errors on aircraft and components.

2.5 QUALITY AUDIT

2.5.1 A quality audit is a systematic and independent examination to determine whether quality activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives.

2.5.2 Audits shall include at least the following quality assurance procedures and processes—

- (a) a statement explaining the scope of the audit;
- (b) planning and preparation;
- (c) gathering and recording evidence; and (d) analysis of the evidence.

2.5.3 Techniques that contribute to an effective audit are—

- (a) interviews or discussions with personnel;
- (b) a review of published documents;
- (c) the examination of an adequate sample of records;
- (d) the observation of the activities that make up the operation; and
- (e) the preservation of documents and the recording of observations.

2.6 AUDITORS.

2.6.1 An operator may decide, depending upon the complexity of the operation, whether to make use of a dedicated audit team or a single auditor. In any event, the auditor or audit team shall have relevant operations and/or maintenance experience.

2.6.2 The responsibilities of the auditors shall be clearly defined in the relevant documentation.

2.7 AUDITOR'S INDEPENDENCE.

2.7.1 Auditors shall not have any day-to-day involvement in the area of the activity that is to be audited. An operator may, in addition to using the services of full-time dedicated personnel belonging to a separate quality department, undertake the monitoring of specific

areas or activities by the use of part-time auditors. An operator whose structure and size does not justify the establishment of full-time auditors may undertake the audit function by the use of part-time personnel from within its own operation or from external sources under the terms of an agreement acceptable to the Authority. In all cases, the operator shall develop suitable procedures to ensure that persons directly responsible for the activities to be audited are not selected as part of the auditing team. Where external auditors are used, it is essential that any external specialist is familiar with the type of operation and/or maintenance conducted by the operator.

2.7.2 The operator's quality assurance programme shall identify the persons within the operation who have the experience, responsibility, and authority to—

- (a) perform quality inspections and audits as part of ongoing quality assurance;
- (b) identify and record any concerns or findings and the evidence necessary to substantiate such concerns or findings;
- (c) initiate or recommend solutions to concerns or findings through designated reporting channels;
- (d) verify the implementation of solutions within specific timescales; and
- (e) report directly to the quality manager.

2.8 AUDIT SCOPE.

2.8.1 An operator shall monitor compliance with the operational and maintenance procedures it has designed to ensure safe operations, airworthy aircraft and aeronautical products, and the serviceability of both operational and safety equipment. In doing so it shall, as a minimum and where appropriate, monitor—

- (a) plans and company objectives;
- (b) operational and maintenance procedures;
- (c) flight safety
- (d) operator's certification, including operations specifications;

- (e) supervision;
- (f) aircraft performance;
- (g) all-weather operations;
- (h) mass, balance, and aircraft loading;
- (i) instruments and safety equipment;
- (j) manuals, logs, and records;
- (k) flight and duty time limitations, rest requirements, and scheduling;
- (l) aircraft maintenance – operations interface;
- (m) use of the MEL;
- (n) maintenance programmes and continuing airworthiness;
- (o) AD management;
- (p) maintenance accomplishment;
- (q) defect deferral;
- (r) dangerous goods;
- (s) security; and (t) training.

2.8.2 Whatever arrangements are made, an operator shall retain the ultimate responsibility for the quality system and for the completion and follow-up of corrective action.

2.9 AUDIT SCHEDULING

2.9.1 A quality assurance programme shall include a defined audit schedule and a periodic review cycle by area.

2.9.2 An operator shall establish a schedule of audits to be completed during a specified calendar period. All aspects of the operation shall be reviewed within every 12-month period in accordance with the quality assurance programme unless an extension to the audit period is accepted as explained below. An operator may increase the frequency of audits at its discretion but shall not decrease the

frequency without the agreement of the Authority. Audit frequency shall not be decreased beyond a 24-month-period interval.

2.9.3 When an operator defines the audit schedule, significant changes to the management, operation, technologies, or these regulations shall be considered.

2.9.4 The schedule shall be flexible and shall allow unscheduled audits when trends are identified.

2.9.5 If the independent quality audit function is being conducted by external auditors, the audit schedule shall be shown in the relevant documentation.

2.10 CORRECTIVE ACTION AND FOLLOW-UP

2.10.1 CORRECTIVE ACTION PLANS

- (a) The quality assurance programme shall include procedures to ensure that corrective action plans are developed in response to findings. These procedures shall monitor corrective actions to verify their effectiveness and ensure their completion. Operational responsibility and accountability for the implementation of corrective action shall reside with the department cited in the report identifying the finding. The accountable manager shall have the ultimate responsibility for resourcing the corrective action and ensuring, through the quality manager, that the corrective action has re-established compliance with the requirements of the Authority and any additional requirements defined by the operator.
- (b) Subsequent to the quality inspection/audit, the individuals responsible for managing a quality assurance programme shall facilitate the corrective action process by establishing—
 - (1) the identification and seriousness of any findings or concerns and any need for immediate corrective action;
 - (2) the analysis of objective evidence to determine the root cause(s) of the finding or concern;
 - (3) the identification of planned corrective steps that will ensure that the apparent violation or concern does not recur;

- (4) an implementation schedule, including a time frame for putting corrective steps in place; and
- (5) the individuals or departments responsible for implementing the corrective action.

2.10.2 FOLLOW-UP

- (a) Follow-up audits shall be scheduled when necessary to verify that corrective action has been performed and that it has been effective.
- (b) The quality manager shall—
 - (1) ensure that corrective action plans are developed in response to findings of non-compliance;
 - (2) verify that corrective action plans include the elements outlined in paragraph 2.10.1 of this IS;
 - (3) monitor the implementation and completion of corrective action plans;
 - (4) provide management with an independent assessment of corrective action plan development, implementation, and completion; and
 - (5) initiate scheduled and/or unannounced follow-up evaluations to ensure the effectiveness of corrective steps specified in corrective action plans.

2.11 MANAGEMENT EVALUATION

2.11.1 A management evaluation is a comprehensive, systematic, documented review by management of the quality system and the operator's policies and procedures. The management evaluation shall consider—

- (a) the results of quality inspections, audits, and any other indicators; and
- (b) the overall effectiveness of the management organisation in achieving stated objectives.

2.11.2 A management evaluation shall identify and correct trends and shall prevent, where possible, future nonconformities. Conclusions and recommendations made as a result of an evaluation shall be

submitted in writing to the responsible manager for action. The responsible manager shall be a person who has the authority to resolve deficiencies or discrepancies and take action.

- 2.11.3 The accountable manager shall decide upon the frequency, format, and structure of internal management evaluation activities.

2.12 RECORDING

- 2.12.1 The operator shall maintain accurate, complete, and readily accessible records documenting the results of its quality assurance programme. Records are essential data that enable an operation to analyse and determine the root causes of noncompliance so that areas of non-compliance can be identified and addressed.

- 2.12.2 The following records shall be retained for a period of 5 years—

- (a) Audit schedules;
- (b) Quality inspection and audit reports;
- (c) Special evaluation reports, including trends or other reasons associated with scheduling a special evaluation;
- (d) Responses to findings or concerns contained in the reports;
- (e) Corrective action plans and reports submitted in response to findings;
- (f) Follow-up and closure reports; and
- (g) Management evaluation reports.

- 2.12.3 An operator shall maintain and secure the records on its premises.

- 2.12.4 All records shall be made available to the Authority for review.

- 2.12.5 Proprietary information shall be protected in accordance with applicable laws and regulations.

3.0 QUALITY ASSURANCE RESPONSIBILITY FOR CONTRACTORS

3.1 CONTRACTORS

- 3.1.1 An operator may decide to contract certain functions to external organisations for the provision of services related to areas such as—

- (a) ground de-icing/anti-icing;
- (b) ground handling;
- (c) maintenance;
- (d) flight support (including performance calculations, flight planning, navigation database, and dispatch);
- (e) training; and
- (f) manual preparation.

3.1.2 The ultimate responsibility for the product or service provided by the subcontractor shall remain with the operator. A written agreement shall exist between the operator and the contractor clearly defining the safety-related services and quality to be provided. The contractor's safety-related activities relevant to the agreement shall be included in the operator's quality assurance programme.

3.1.3 The operator shall ensure that the subcontractor has the necessary authorisation or approval when required and the resources and competent personnel to undertake the task.

4.0 QUALITY-RELATED BRIEFINGS AND TRAINING

4.1 GENERAL

4.1.1 An operator shall establish effective, well-planned, well-resourced, quality-related briefings for all personnel.

4.1.2 Those responsible for managing the quality system shall receive training covering—

- (a) an introduction to the concept of the quality system;
- (b) quality management;
- (c) the concept of quality assurance;
- (d) quality manuals;
- (e) audit techniques;
- (f) reporting and recording; and

- (g) the way in which the quality system functions in the operation.

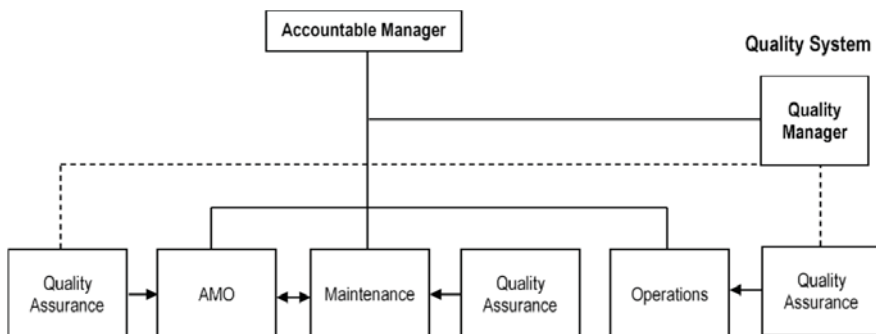
- 4.1.3 Time shall be provided to train every person involved in quality management and to brief those not responsible for managing the quality system. The allocation of time and resources may be governed by the size and complexity of the operation.

4.2 SOURCES OF TRAINING.

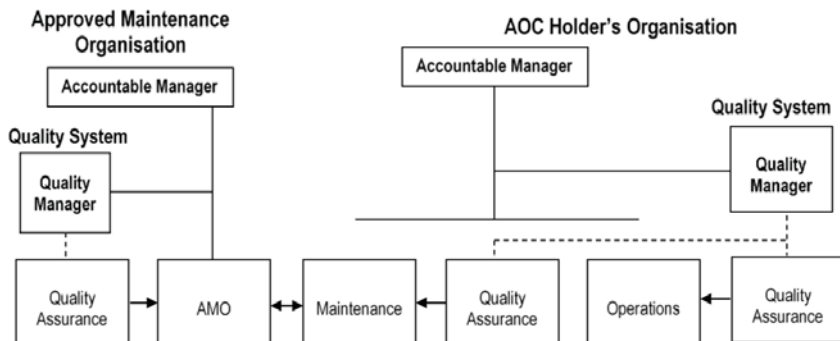
- 4.2.1 Quality management courses are available from the various National or International Standards Institutions, and an operator may consider whether to offer such courses to those likely to be involved in the management of quality systems. An operator with sufficient and appropriately qualified personnel may consider conducting in-house training.

- (a) The following diagrams illustrate two typical examples of operator quality organisations.

- (1) A quality system within the AOC holder's organisation when the AOC holder is also an AMO certificated under Part 6 of these regulations.



- (2) Quality systems related to an AOC holder's organisation where aircraft maintenance is contracted out to an AMO that is not integrated with the AOC holder.

**IS 9.2.2.5****RETENTION OF RECORDS**

- (a) An operator shall ensure that the following information or documentation is retained for the periods shown in the table below—

Table of Record Retention	
Flight Crew Records	Retention Period
Flight, duty, and rest time	2 years
Licence and medical certificate	Until 12 months after the flight crew member has left the employ of the operator
Ground and flight training (all types)	Until 12 months after the flight crew member has left the employ of the operator
Route and aerodrome/heliport qualification training	Until 12 months after the flight crew member has left the employ of the operator
Dangerous goods training	Until 12 months after the flight crew member has left the employ of the operator
Security training	Until 12 months after the flight crew member has left the employ of the operator

Proficiency and qualification checks (all types)	Until 12 months after the flight crew member has left the employ of the operator
Cabin Crew Records	
Flight, duty, and rest time	2 years
Licence, if applicable	Until 12 months after the cabin crew member has left the employ of the operator
Ground and flight training (all types) and qualification checks	Until 12 months after the cabin crew member has left the employ of the operator
Dangerous goods training	Until 12 months after the cabin crew member has left the employ of the operator
Security training	Until 12 months after the cabin crew member has left the employ of the operator
Competency checks	Until 12 months after the cabin crew member has left the employ of the operator
Other AOC Holder Personnel Records	
Training/qualification of other personnel for whom an approved training programme is required in these regulations	Until 12 months after the employee has left the employ of the operator
Licence, if required, and medical certificate, if required	Until 12 months after the employee has left the employ of the operator
Proficiency or competency checks, if required	Until 12 months after the employee has left the employ of the operator
Flight Preparation Forms	
Completed load manifest	3 months after completion of the flight
Mass and balance reports	3 months after completion of the flight
Dispatch releases	3 months after completion of the flight

Flight plans	3 months after completion of the flight
Passenger manifests	3 months after completion of the flight
Weather reports	3 months after completion of the flight
Flight Recorder Records	
Cockpit voice recordings	Preserved after an accident or incident for 60 days, or longer if requested by the Authority
Flight data recordings	Preserved after an accident or incident for 60 days, or longer if requested by the Authority
Aircraft Technical Log	
Journey records section	2 years
Maintenance records section	2 years
Fuel and oil records	3 months
Aircraft Maintenance Records	
Total time in service (hours, calendar time, and cycles, as appropriate) of the aircraft and all life-limited parts	3 months after the unit to which they refer has been permanently withdrawn from service
Current status of compliance with all mandatory continuing airworthiness information	3 months after the unit to which they refer has been permanently withdrawn from service
Appropriate details of modifications and repairs to the aircraft and aeronautical products	3 months after the unit to which they refer has been permanently withdrawn from service
Total time in service (hours, calendar time, and cycles, as appropriate) since the last overhaul of the aircraft or aeronautical products subject to a mandatory overhaul life	3 months after the unit to which they refer has been permanently withdrawn from service
The detailed maintenance records to show all requirements for a maintenance release have been met	1 year after signing of the maintenance release
Other Records	
Operational flight plan	3 months after completion of the flight

[illegible]

FLIGHT DATA BLOCK TIME REPORT									INCIDENTS/OCCURRENCES/OBSERVATIONS REPORT/DEFECTS NOTED ¹⁰									
	Block Time				Landings				State type of report: Operation/Technical/Other ¹¹ Also note any de-/anti-icing as instructed ¹²									
Total per day																		
Total previous report																		
Total to report																		
FLIGHT DATA FLIGHT TIME REPORT									RETURN TO SERVICE				ACTIONS TAKEN ¹³					
	Flight Time				Next Maintenance Due				Name of certifying staff and applicable regulations									
Total this sheet						Hours				Certifies that the work specified, except as otherwise specified, was carried out in accordance with applicable regulations and that, with respect to that work, the aircraft/aeronautical product is considered ready for return to service.								
Total from previous sheet						Landings				Signature								
Total to report						Date												

1. The operator’s name and address shall be preprinted or printed by hand.
2. The flight log shall be filled for—

• Each day

• Each flight crew.
3. The sheet number (e.g., yy-nn) shall be preprinted or printed by hand. All sheets shall be identifiable and numbered according to a continuous system that offers the same security when hand printed as when preprinted.

4. *The PIC's signature states that everything on this sheet is correct.*
5. *For flights from A to A, a summary entry may be made. For all other flights, such as from A to B, an entry shall be made for each flight.*
6. *Total fuel on board (state the units unless preprinted).*
7. *The nature of the flight, such as private, commercial, technical, training, sailplane towing, etc., shall be entered.*
8. *Number of landings, if summary entry.*
9. *Flight preparation according to the OM (PIC's initials) shall state that—*
 - *Mass and balance are within limit.*
 - *Pre-flight check is completed.*
 - *Technical status is checked and aeroplane is accepted by the PIC.*
 - *Passenger manifest/ documentation is performed.*
10. *Incidents/Occurrences/Observations Report/Defects Noted (Operation, Technical, Others)—*
 - *If no report needs to be made, state “-NIL-.”*
 - *If a report must be made, state the type of report.*
11. *Each observation shall be numbered sequentially for each log sheet.*
12. *If de-icing or anti-icing has been applied, state the time and the amount and type of fluid applied or other action taken (e.g., mechanical removal of snow or ice); if oil has been filled, state the time and amount.*
13. *Use the same number as the corresponding observation to link the report and response.*

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IS 9.2.2.11 FLIGHT SAFETY DOCUMENTS SYSTEM

- (a) The following outline addresses the major elements of an AOC holder's flight safety documents system development process, with the aim of ensuring compliance with these regulations.

1.0 ORGANISATION

- 1.1 A flight safety documents system shall be organised according to criteria that ensure easy access to information required for flight and ground operations contained in the various operational documents composing the system and that facilitate management of the distribution and revision of operational documents.
- 1.2 Information contained in a flight safety documents system shall be grouped according to the importance and use of the information, as follows—
- 1.2.1 time-critical information (i.e., information that can jeopardise the safety of the operation if not immediately available);
- 1.2.2 time-sensitive information (i.e., information that can affect the level of safety or delay the operation if not available in a short time period);
- 1.2.3 frequently used information;
- 1.2.4 reference information (i.e., information that is required for the operation but does not fall under 1.2.2 and 1.2.3 of this IS); and
- 1.2.5 information that can be grouped based on the phase of operation in which it is used.
- 1.3 Time-critical information shall be placed early and prominently in the flight safety documents system.
- 1.4 Time-critical information, time-sensitive information, and frequently used information shall be placed in cards and quick-reference guides.

2.0 VALIDATION

A flight safety documents system shall be validated before deployment, under realistic conditions.

Validation shall involve the critical aspects of the information use, in order to verify its effectiveness. Interactions that can occur among all groups during operations shall also be included in the validation process.

3.0 DESIGN

- 3.1 A flight safety documents system shall maintain consistency in terminology and in the use of standard terms for common items and actions.
- 3.2 Operational documents shall include a glossary of terms, abbreviations, and their standard definitions, updated on a regular basis to ensure access to the most recent terminology. All significant terms and abbreviations included in the flight documents system shall be defined.
- 3.3 A flight safety documents system shall ensure standardisation across document types, including writing style, terminology, use of graphics and symbols, and formatting. This includes a consistent location for specific types of information and the consistent use of units of measurement and codes.
- 3.4 A flight safety documents system shall include a master index to locate, in a timely manner, information included in more than one operational document.

Note: The master index shall be placed in the front of each document and shall consist of no more than three levels of indexing. Pages containing abnormal and emergency information shall be tabbed for direct access.

- 3.5 A flight safety documents system shall comply with the requirements of the operator's quality system, if applicable.

4.0 DEPLOYMENT

Operators shall monitor deployment of the flight safety documents system to ensure appropriate and realistic use of the documents based on the characteristics of the operational environment and in a way that is both operationally relevant and beneficial to operational personnel. This monitoring shall include a formal feedback system for obtaining input from operational personnel.

5.0 AMENDMENT

- 5.1 Operators shall develop an information gathering, review, distribution, and revision control system to process information and data obtained from all sources relevant to the type of operation conducted, including the State of the Operator, the State of Design, the State of Registry, manufacturers, and equipment vendors.

Note: Manufacturers provide information for the operation of specific aircraft that emphasises the aircraft systems and procedures under conditions that may not fully match the requirements of operators. Operators shall ensure that such information meets their specific needs and those of the Authority.

- 5.2 Operators shall develop an information gathering, review, and distribution system to process information resulting from changes that originate within the operator, including—

5.2.1 changes resulting from the installation of new equipment;

5.2.2 changes in response to operating experience;

5.2.3 changes in an operator's policies and procedures;

5.2.4 changes in an operator's certificate; and

5.2.5 changes for purposes of maintaining cross-fleet standardisation.

Note: Operators shall ensure that crew coordination philosophy, policies, and procedures are specific to their operation.

- 5.3 A flight safety documents system shall be reviewed—

5.3.1 on a regular basis at least once a year;

5.3.2 after major events (e.g., mergers, acquisitions, rapid growth, downsizing);

5.3.3 after technological changes (e.g., introduction of new equipment); and

5.3.4 after changes in safety regulations.

- 5.4 Operators shall develop methods for communicating new information. The specific methods shall be responsive to the degree of communication urgency.

Note: As frequent changes diminish the importance of new or modified procedures, it is desirable to minimise changes to the flight safety documents system.

- 5.5 New information shall be reviewed and validated, considering its effects on the entire flight safety documents system.
- 5.6 The method for communicating new information shall be complemented by a tracking system to ensure currency by operational personnel. The tracking system shall include a procedure to verify that operational personnel have the most recent updates.

IS: 9.2.3.2 DRY LEASING OF FOREIGN REGISTERED AIRCRAFT

- (a) An AOC holder may dry lease an aircraft for the purpose of commercial air transportation to any AOC holder of a State which is signatory to the Chicago Convention provided that the following conditions are met—
- (1) The aircraft carries an appropriate airworthiness certificate issued, in accordance with ICAO Annex 8, by the country of registration and meets the registration and identification requirements of that country.
 - (2) The aircraft is of a type design which complies with all of the requirements that would be applicable to that aircraft were it registered in Grenada, including the requirements which shall be met for issuance of a Grenada standard airworthiness certificate (including type design conformity, condition for safe operation, and the noise, fuel venting, and engine emission requirements).
 - (3) The aircraft is maintained according to an approved maintenance program, and
 - (4) The aircraft is operated by Grenada-certified airmen employed by the AOC holder.
- (b) An AOC holder shall provide the Authority with a copy of the dry lease to be executed.
- (c) Operational control of any dry leased aircraft rests with the AOC holder operating that aircraft.

- (d) The Authority shall remove a dry leased aircraft from the lessors AOC holder's operations specifications and list it on the foreign AOC holder lessee's operations specifications.
- (e) An AOC holder engaged in dry leasing aircraft shall make the dry lease agreement explicit concerning the maintenance programme and MEL to be followed during the term of the dry lease.

IS: 9.2.3.3 AIRCRAFT INTERCHANGE

- (a) Before operating under an interchange agreement, an AOC holder shall show that—
 - (1) the procedures for the interchange operation conform with safe operating practices;
 - (2) required crew members and flight operations officers meet approved training requirements for the aircraft and equipment to be used and are familiar with the communications and dispatch procedures to be used;
 - (3) maintenance personnel meet training requirements for the aircraft and equipment, and are familiar with the maintenance procedures to be used;
 - (4) flight crew members and flight operations officers meet appropriate route and airport qualifications;
 - (5) the aircraft to be operated are essentially similar to the aircraft of the AOC holder with whom the interchange is effected; and
 - (6) the arrangement of flight instruments and controls that are critical to safety are essentially similar, unless the authority determines that the AOC holder has adequate training programmes to insure that any potentially hazardous dissimilarities are safely overcome by flight crew familiarisation.
- (b) An AOC holder conducting an interchange agreement shall include the pertinent provisions and procedures of the agreement in its manuals.
- (c) The AOC holder shall amend their operations specifications to reflect an interchange agreement.

- (d) The AOC holder shall comply with the applicable regulations of the State of Registry of an aircraft involved in an interchange agreement while it has operational control of that aircraft.

IS: 9.2.3.4 WET LEASING

- (a) An AOC holder shall provide the Authority with a copy of the wet lease to be executed.
- (b) The Authority shall verify that operational control remains with the lessor who must also be an AOC holder. The Authority shall also consider the extent and control of certain operational functions such as—
 - (1) initiating and terminating flights.
 - (2) maintenance and servicing of aircraft.
 - (3) scheduling crewmembers.
 - (4) paying crewmembers.
 - (5) training crewmembers.
- (c) An AOC holder engaged in a wet leasing arrangement shall amend its operations specifications to contain the following information—
 - (1) The names of the parties to the agreement and the duration of the agreement.
 - (2) The make, model, and series of aircraft involved in the agreement.
 - (3) The kind of operation.
 - (4) The expiration date of the lease agreement.
 - (5) A statement specifying the party deemed to have operational control.
 - (6) Any other item, condition, or limitation the Authority determines necessary.

IS: 9.2.3.5**EMERGENCY EVACUATION DEMONSTRATION**

- (a) An AOC holder shall conduct a partial emergency evacuation and ditching evacuation, observed by the Authority, that demonstrates the effectiveness of its crew member emergency training and evacuation procedures.
- (b) Prior to conducting an emergency evacuation demonstration, the AOC holder shall apply for and obtain approval from the Authority.
- (c) Cabin Crews used in the emergency evacuation demonstrations shall—
 - (1) be selected at random by the Authority;
 - (2) have completed the AOC holder's Authority-approved training programme for the type and model of aircraft; and
 - (3) have passed the drills and competence check on the emergency equipment and procedures.
- (d) To conduct the partial emergency evacuation demonstration, the AOC holder's assigned Cabin Crews shall, using the AOC holder's line operating procedures—
 - (1) demonstrate the opening of 50 percent of the required floor-level emergency exits and 50 percent of the required non-floor-level emergency exits (whose opening by a Cabin Crew is defined as an emergency evacuation duty) and deployment of 50 percent of the exit slides, selected by the Authority; and
 - (2) prepare for use those exits and slides within 15 seconds.
- (e) To conduct the ditching evacuation demonstration, the AOC holder's assigned Cabin Crews shall—
 - (1) demonstrate their knowledge and use of each item of required emergency equipment;
 - (2) prepare the cabin for ditching within 6 minutes after the intention to ditch is announced;
 - (3) remove each life raft from storage (one life raft, selected by the Authority, shall be launched and properly inflated or one slide life raft properly inflated); and

- (4) enter the raft (the raft shall include all required emergency equipment) and completely set it up for extended occupancy.

IS: 9.2.3.6 DEMONSTRATION FLIGHTS

- (a) An AOC holder shall conduct demonstration flights for each type of aircraft, including those aircraft materially altered in design, and for each kind of operation the AOC holder intends to conduct.

Definition: "Materially altered aircraft" refers to aircraft having powerplants installed other than those for which it is certified; or alterations to the aircraft or its components that materially affect flight characteristics

- (b) An AOC holder shall conduct demonstration flights which contain at least—
 - (1) one hundred total hours of flight time, unless the Authority determines that a satisfactory level of proficiency has been demonstrated in fewer hours;
 - (2) ten hours of night time (may not be reduced), if night flights are to be authorised;
 - (3) five instrument approach procedures under simulated or actual instrument weather conditions, if IFR flights are to be authorised; and
 - (4) entry into a representative number of en route airports, as determined by the Authority.
- (c) A person shall not carry passengers in an aircraft during demonstration flights, except for those needed to make the demonstration flight and those designated by the Authority.
- (d) For those AOC holders of aircraft of less than 5700 kg, the necessity and extent of demonstration shall be at the option of the Authority.

IS: 9.3.1.2 OPERATIONS MANUAL- GENERAL

- (a) The general part or section of the Operations Manual shall contain at least the following—

0.0 ADMINISTRATION AND CONTROL OF OPERATIONS MANUAL**0.1 INTRODUCTION**

- 0.1.1 A statement that the manual complies with all applicable rules and regulations and with the special limitations and specific approvals of the applicable air operator operations specifications.
- 0.1.2 A statement that the manual contains operational instructions that are to be complied with by the relevant personnel in the performance of their duties.
- 0.1.3 A list and brief description of the various OM parts and their contents, applicability, and use.
- 0.1.4 Explanations and definitions of terms and words used in the manual.

0.2 SYSTEM OF AMENDMENT AND REVISION

- 0.2.1 A description of who is responsible for the issuance and insertion of amendments and revisions.
- 0.2.2 A record of amendments and revisions with insertion dates and effective dates.
- 0.2.3 A statement that hand-written amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety.
- 0.2.4 A description of the system for the annotation of pages and their effective dates.
- 0.2.5 A list of effective pages and their effective dates.
- 0.2.6 Annotation of changes (on text pages and, as practicable, on charts and diagrams).
- 0.2.7 A system for recording temporary revisions.
- 0.2.8 A description of the distribution system for the manuals, amendments, and revisions.
- 0.2.9 A statement of who is responsible for notifying the Authority of proposed changes and working with the Authority on changes requiring Authority approval.

1.0 ORGANISATION AND RESPONSIBILITIES**1.1 ORGANISATIONAL STRUCTURE**

- 1.1.1 A description of the organisational structure, including the general company organisation and the operations department organisation.
- 1.1.2 The relationship between the operations department and the other departments of the organization.
- 1.1.3 In particular, the subordination and reporting lines of all divisions, departments, etc., that pertain to the safety of flight operations.
- 1.1.4 Instructions outlining the responsibilities of operations personnel pertaining to the conduct of flight operations.

1.2 RESPONSIBLE MANAGERS

- 1.2.1 The name of each manager responsible for flight operations, the maintenance system, crew training, and ground operations.
- 1.2.2 A description of the function and responsibilities of each manager.
- 1.3 Authority, Duties, and Responsibilities of Operations Management Personnel.

A description of the authority, duties, and responsibilities of operations management personnel pertaining to the safety of flight operations and compliance with applicable regulations.
- 1.4 Authority, Duties, and Responsibilities of a PIC.

A description of the authority, duties, and responsibilities of the PIC.
- 1.5 Authority, Duties, and Responsibilities of Crew Members Other Than the PIC.

A description of the authority, duties, and responsibilities of all required crew members.

2.0 OPERATIONAL CONTROL AND SUPERVISION**2.1 SUPERVISION OF THE OPERATION BY THE AOC HOLDER.**

- 2.1.1 A description of the system for supervision of the operation by the AOC holder. This description shall show how the safety of flight operations and the qualifications of personnel involved in all such operations are supervised and monitored. In particular, the procedures related to the following items shall be described—

- (a) Specifications for the operational flight plan;
- (b) Competence of operations personnel; and
- (c) Control, analysis, and storage of records; flight documents; additional information; and safety-related data.

2.2 System of Promulgation of Additional Operational Instructions and Information.

- 2.2.1 A description of any system for promulgating information that may be of an operational nature but is supplementary to the information in the OM, including the applicability of this information and the responsibilities for its promulgation.

2.3 SAFETY MANAGEMENT SYSTEM

- 2.3.1 A description of the main aspects of the SMS programme required by Part 1, Subpart 1.4 of these regulations, including—

- (a) safety policy: general expectations;
- (b) safety risk management: general expectations;
- (c) safety assurance: general expectations; and
- (d) safety promotion: general expectations.

2.4 Operational Control.

- 2.4.1 A description of the objectives, procedures, and responsibilities necessary to exercise operational control with respect to flight safety.

3.0 QUALITY SYSTEM

- 3.1 A description of the quality system adopted.

4.0 FLIGHT CREW

4.1 CREW COMPOSITION

- 4.1.1 An explanation of the method for determining crew composition, taking into account the following—

- (a) Experience (total and type), recency, and qualification of the crew members;

- (b) The designation of the PIC and, if required by the duration of the flight, the procedures for the relief of the PIC or other members of the flight crew; and
- (c) The flight crew for each type of operation, including the designation of the succession of command.

4.2 PIC DESIGNATION.

4.2.1 The rules applicable to the designation of a PIC.

4.3 CREW INCAPACITATION.

4.3.1 Instructions on the succession of command in the event of flight crew incapacitation.

5.0 FLIGHT CREW, CABIN CREW, FLIGHT OPERATIONS OFFICER/FLIGHT DISPATCHER, AND OTHER OPERATIONS PERSONNEL QUALIFICATIONS

5.1 QUALIFICATIONS

5.1.1 A description of the required licence rating(s), qualification/competency (e.g., for routes and aerodromes) experience, training, checking, and recency of experience for operations personnel to conduct their duties. Consideration shall be given to the aircraft type, type of operation, and composition of the crew.

5.2 FLIGHT CREW.

5.2.1 Operation on more than one type or variant.

5.3 CABIN CREW.

5.3.1 Operation on more than one type or variant.

5.4 FLIGHT OPERATIONS OFFICER/FLIGHT DISPATCHER.

5.5 OTHER OPERATIONS PERSONNEL.

6.0 FATIGUE MANAGEMENT

6.1 FLIGHT TIME, FLIGHT DUTY PERIODS, DUTY PERIOD LIMITATIONS, AND REST REQUIREMENTS.

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6.1.1 Flight crew;

6.1.2 Cabin crew; and

6.1.3 FOO/flight dispatcher.

6.2 FRMS (IF AUTHORISED BY THE AUTHORITY).

7.0 CREW HEALTH

7.1 CREW HEALTH PRECAUTIONS.

7.1.1 The relevant regulations and guidance for crew members concerning health, including—

- (a) alcohol and other intoxicating liquor;
- (b) narcotics;
- (c) drugs;
- (d) sleeping tablets;
- (e) pharmaceutical preparations;
- (f) immunisations;
- (g) scuba diving;
- (h) blood donation;
- (i) meal precautions prior to and during flight;
- (j) sleep and rest; and
- (k) surgical operations.

8.0 OPERATING PROCEDURES

8.1 Flight Preparation Instructions.

8.1.1 As applicable to the operation—

- (a) Criteria for determining the usability of aerodromes.
- (b) The method for determining minimum flight altitudes.

- (c) The method for determining aerodrome operating minima.
- (d) En route operating minima for VFR flights.
 - (1) A description of en route operating minima for VFR flights or VFR portions of a flight and, where single-engine aircraft are used, instructions for route selection with respect to the availability of surfaces that permit a safe forced landing.
- (e) Presentation and application of aerodrome and en route operating minima.
- (f) Interpretation of meteorological information.
 - (1) Explanatory material on the decoding of meteorological forecasts and meteorological reports relevant to the area of operations, including the interpretation of conditional expressions.
- (g) Determination of the quantities of fuel, oil, and water-methanol carried.
 - (1) This section shall include the specific instructions and methods by which the quantities of fuel, oil, and water-methanol to be carried are determined and monitored in flight. It shall also include instructions on the measurement and distribution of the fluid carried on board. Such instructions shall take account of all circumstances likely to be encountered on the flight, including the possibility of in-flight replanning, the failure of one or more of the aircraft's powerplants, and possible loss of pressurisation. The system for maintaining fuel and oil records shall also be described.
- (h) The general principles of mass and centre of gravity, including—
 - (1) the policy for using either standard and/or actual masses;
 - (2) the method for determining the applicable passenger, baggage, and cargo mass;

- (3) the applicable passenger and baggage masses for various types of operations and aircraft;
- (4) general instruction and information necessary for verification of the various types of mass and balance documentation in use;
- (5) last-minute changes to procedures;
- (6) seating policy and procedures; and
- (7) a list of documents, forms, and additional information to be carried during a flight.

8.2 GROUND HANDLING ARRANGEMENTS AND PROCEDURES.

8.2.1 FUELLING PROCEDURES.

- (a) A description of fuelling procedures, including—
 - (1) safety precautions during refuelling and defuelling, including when an auxiliary power unit is in operation or when a turbine engine is running and, if applicable, when the propeller brakes are on;
 - (2) refuelling and defuelling when passengers are embarking, on board, or disembarking;
 - (3) precautions to be taken to avoid mixing fuels; and
 - (4) a method to ensure the required amount of fuel is loaded.

8.2.2 Aircraft, passenger, and cargo handling procedures related to safety.

- (a) A description of the handling procedures to be used when allocating seats, embarking and disembarking passengers, and loading and unloading the aircraft. Further procedures, aimed at achieving safety while the aircraft is on the ramp, shall also be given. Handling procedures shall include—
 - (1) sick passengers and persons with reduced mobility;
 - (2) the permissible size and weight of hand baggage;
 - (3) the loading and securing of items in the aircraft;

- (4) special loads and classification of load compartments (e.g., dangerous goods, live animals);
- (5) the positioning of ground equipment;
- (6) the operation of aircraft doors;
- (7) safety on the ramp, including fire prevention, blast, and suction areas;
- (8) start-up and ramp departure and arrival procedures;
- (9) servicing of aircraft;
- (10) documents and forms; and
- (11) multiple occupancy of aircraft seats.

8.3 PROCEDURES FOR THE REFUSAL OF EMBARKATION

- 8.3.1 Procedures to ensure that persons who appear to be intoxicated or who demonstrate by manner or physical indications that they are under the influence of alcohol or drugs, except medical patients under proper care, are refused embarkation.

8.4 DE-ICING AND ANTI-ICING ON THE GROUND

- 8.4.1 Instructions for the conduct and control of ground de-icing/anti-icing operations. A description of the de-icing and anti-icing policy and procedures for aircraft on the ground. These shall include descriptions of the types and effects of icing and other contaminants on aircraft while stationary, during ground movements, and during take-off. In addition, a description of the fluid types used shall be given, including—

- (a) proprietary or commercial names;
- (b) characteristics;
- (c) effects on aircraft performance; and
- (d) precautions during usage.

8.5 HELICOPTER REFUELLING PROCEDURES.

- 8.5.1 A description of procedures for helicopter refuelling, including—

- (a) the doors on the refuelling side shall remain closed;
- (b) the door on the non-refuelling side shall remain open;
- (c) firefighting facilities of the appropriate scale shall be immediately available in the case of a fire;
- (d) the presence of fuel vapour, if detected, shall cease the refuelling process;
- (e) the ground or deck area beneath the exits intended for emergency evacuation shall be kept clear;
- (f) seat belts shall be unfastened to facilitate rapid egress.

8.6 FLIGHT PROCEDURES AND FLIGHT NAVIGATION EQUIPMENT.

8.6.1 A description of flight procedures, including—

- (a) SOPs for each phase of flight;
- (b) instructions on the use of normal checklists and the timing of their use;
- (c) departure contingency procedures;
- (d) instructions on the maintenance of altitude awareness and the use of automated or flight crew altitude call-outs;
- (e) instructions on the use of autopilots and autothrottles in IMC;
- (f) instructions on the clarification and acceptance of ATC clearances, particularly where terrain clearance is involved;
- (g) departure and approach briefings;
- (h) procedures for familiarisation with areas, routes, and aerodromes;
- (i) stabilised approach procedure;
- (j) limitation on high rates of descent near the surface;
- (k) conditions required to commence or to continue an instrument approach;

- (l) instructions for the conduct of precision and non-precision instrument approach procedures;
- (m) the allocation of flight crew duties and procedures for the management of crew workload during night and IMC instrument approach and landing operations;
- (n) the circumstances in which a radio listening watch is to be maintained; and
- (o) instructions and training requirements for the use of HUD and EVS equipment, as applicable.

8.6.2 Navigation Equipment

- (a) A list of the navigation equipment to be carried, including any requirements relating to operations where PBN is prescribed.

8.6.3 Navigation Procedures.

- (a) A description of all navigation procedures relevant to the type(s) and area(s) of operation. Consideration shall be given to—
 - (1) standard navigation procedures, including policy for carrying out independent cross-checks of keyboard entries where these affect the flight path to be followed by the aircraft;
 - (2) in-flight replanning;
 - (3) procedures in the event of system degradation;
 - (4) where relevant to the operations, long-range navigation procedures, the engine failure procedure for EDTO, and the nomination and utilisation of diversion aerodromes;
 - (5) instructions and training requirements for the avoidance of controlled flight into terrain (ATC clearances where terrain is a factor) and policy for the use of the ground proximity warning system;
 - (6) policy, instructions, procedures, and training requirements for the avoidance of collisions and the use of the ACAS;
 - (7) information and instructions relating to the interception of civil aircraft, including—

- (i) procedures, as prescribed in IS 8.8.1.28 of these regulations, for PICs of intercepted aircraft; and
 - (ii) visual signals for use by intercepting and intercepted aircraft, as contained in IS 8.8.1.28 of these regulations; and
 - (b) For aeroplanes intended to be operated above 15,000m (49,000ft)—
 - (1) information that will enable the pilot to determine the best course of action to take in the event of exposure to solar cosmic radiation; and
 - (2) procedures in the event that a decision to descend is taken, covering—
 - (i) the necessity of giving the appropriate ATS unit prior warning of the situation and of obtaining a provisional descent clearance; and
 - (ii) the action to be taken in the event that communication with an ATS unit cannot be established or is interrupted.
- 8.6.4 Policy And Procedures For In-Flight Fuel Management.
- 8.6.5 Adverse And Potentially Hazardous Atmospheric Conditions.
- 8.6.6 Procedures for operating in, and/or avoiding, potentially hazardous atmospheric conditions, including—
- (a) thunderstorms;
 - (b) icing conditions;
 - (c) turbulence;
 - (d) wind shear;
 - (e) jet stream;
 - (f) volcanic ash clouds;
 - (g) heavy precipitation;

- (h) sand storms;
- (i) mountain waves; and
- (j) significant temperature inversions.

8.6.7 Operating restrictions.

- (a) Cold weather operations;
- (b) Take-off and landing in turbulence;
- (c) Low-level wind shear operations;
- (d) Crosswind operations (including tailwind components);
- (e) High-temperature operations; and
- (f) High-altitude operations.

8.6.8 Incapacitation of Crew Members.

- (a) Procedures to be followed in the event of the incapacitation of crew members in flight. Examples of the types of incapacitation and the means for recognising them shall be included.

8.6.9 Cabin safety requirements.

- (a) Procedures covering—
 - (1) cabin preparation for flight; in-flight requirements; and preparation for landing, including procedures for securing cabin and galleys;
 - (2) procedures to ensure that passengers are seated where, in the event that an emergency evacuation is required, they may best assist and not hinder evacuation from the aircraft;
 - (3) procedures to be followed during passenger embarkation and disembarkation;
 - (4) procedures for fuelling with passengers on board, embarking, or disembarking;
 - (5) smoking on board;

- (6) the use of portable electronic equipment and cellular telephones; and
 - (7) procedure for a traveler with a suspected communicable disease.
- 8.6.10 Passenger briefing procedures.
 - (a) The contents, means, and timing of passenger briefing.
- 8.6.11 Procedures for use of cosmic or solar radiation detection equipment – aeroplanes.
 - (a) Procedures for the use of cosmic or solar radiation detection equipment and for recording its readings, including actions to be taken in the event that limit values specified in the OM are exceeded. In addition, the procedures, including ATC procedures, to be followed in the event that a decision to descend or reroute is taken.
- 8.6.12 Procedures for monitoring Carbon Dioxide Emissions
 - (a) Procedures for Monitoring and Reporting of Carbon Dioxide Emissions
- 8.7 ALL-WEATHER OPERATIONS.
- 8.8 USE OF THE MINIMUM EQUIPMENT LIST AND CONFIGURATION DEVIATION LIST.
- 8.9 NON-REVENUE FLIGHTS.
- 8.9.1 Procedures and limitations for—
 - (a) training flights;
 - (b) test flights;
 - (c) delivery flights;
 - (d) ferry flights;
 - (e) demonstration flights; and
 - (f) positioning flights, including the type of persons who may be carried on such flights.

8.10 OXYGEN REQUIREMENTS.

8.10.1 An explanation of the conditions under which oxygen shall be provided and used.

9.0 DANGEROUS GOODS AND WEAPONS

9.1 TRANSPORT OF DANGEROUS GOODS

9.1.1 Information, instructions, and general guidance on the transport of dangerous goods, including—

- (a) the AOC holder's policy on the transport of dangerous goods;
- (b) guidance on the requirements for acceptance, labelling, handling, stowage, and segregation of dangerous goods;
- (c) procedures and actions to be taken for responding to emergency situations involving dangerous goods;
- (d) duties of all personnel involved;
- (e) instructions on the carriage by the AOC holder's employees; and
- (f) For operators not approved for the carriage of dangerous goods, a policy to not carry spare parts (COMAT), that should be categorised as dangerous goods.

9.2 TRANSPORT OF WEAPONS.

9.2.1 The conditions under which weapons, munitions of war, and sporting weapons may be carried.

10.0 SECURITY

10.1 SECURITY POLICIES AND PROCEDURES.

10.1.1 A description of security policies and procedures for handling and reporting crime (e.g., unlawful interference, sabotage, bomb threats, and hijacking) on board.

10.2 SECURITY INSTRUCTIONS AND GUIDANCE.

10.2.1 Security instructions and guidance of a non-confidential nature that shall include the authority and responsibilities of operations personnel.

10.3 PREVENTIVE SECURITY MEASURES AND TRAINING.

10.3.1 A Description of Preventive Security Measures And Training.

Note: Parts of the security instructions and guidance may be kept confidential.

11.0 Handling of Accidents and Incidents

11.1 Procedures for the Handling, Notifying, and Reporting of Accidents and Incidents.

11.1.1 This section shall include—

- (a) definitions of accidents and incidents and the relevant responsibilities of all persons involved;
- (b) descriptions of the company departments, authorities, or other institutions that shall be notified in case of an accident or incident, and by which means and in what sequence;
- (c) special notification requirements in the event of an accident or incident when dangerous goods are being carried;
- (d) a description of the requirements to report accidents and incidents;
- (e) the forms used for reporting accidents and incidents and the procedure for submitting such forms to the Authority;
- (f) if the AOC holder develops additional safety-related reporting procedures for its own internal use, a description of the applicability and related forms to be used; and
- (g) procedures for PICs who have observed an accident or incident.

12.0 RULES OF THE AIR

12.1 RULES OF THE AIR, INCLUDING—

12.1.1 Territorial application of the Rules of the Air;

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12.1.2	The circumstances during which a radio listening watch shall be maintained;
12.1.3	ATC clearances, adherence to flight plan, and position reports;
12.1.4	The ground-air visual codes for use by survivors, description and use of signal aids; and
12.1.5	Distress and urgency signals.

IS 9.3.1.3 TRAINING MANUAL

- (a) Each AOC holder and AOC applicant shall submit and maintain training programme manuals based on the following outline—

1.0 TRAINING SYLLABI AND CHECKING PROGRAMMES**1.1 GENERAL REQUIREMENTS**

- 1.1.1 Training syllabi and checking programmes for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight shall be developed to meet the respective requirements of the Authority. An AOC holder may not use any person in, nor may any person serve in, a required crew member capacity or operational capacity unless that person meets the training and currency requirements established by the Authority for that respective position.

1.2 FLIGHT CREW.

- 1.2.1 The training syllabi and checking programmes for flight crew members shall include—
- (a) a written training programme acceptable to the Authority that provides for basic indoctrination, initial, transition, difference, and recurrent training, as appropriate, for flight crew members for each type of aircraft flown by that crew member; this written training programme shall include both normal and emergency procedures training applicable for each type of aircraft flown by the crew member;
- (b) adequate ground and flight training facilities and properly qualified instructors required to meet training objectives and needs;

- (c) a current list of approved training materials, equipment, training devices, simulators, and other required training items needed to meet the training needs for each type and variation of aircraft flown by the AOC holder;
- (d) an adequate number of ground and flight check personnel to ensure adequate training and checking of flight crew members; and
- (e) a record system acceptable to the Authority to show compliance with appropriate training and currency requirements.

1.3 CABIN CREW

1.3.1 The training syllabi and checking programmes for cabin crew members shall include—

- (a) basic initial ground training covering duties and responsibilities;
- (b) appropriate Authority rules and regulations;
- (c) appropriate portions of the AOC holder's OM;
- (d) appropriate emergency training, as required by the Authority and the AOC holder's OM;
- (e) appropriate flight training;
- (f) appropriate recurrent, transition, or difference training, as required, to maintain currency in any type and variance of aircraft the crew member may be required to work in;
- (g) a current list of approved training materials, equipment, training devices, simulators, and other required training items needed to meet the training needs for each type and variation of aircraft flown by the AOC holder;
- (h) an adequate number of ground check personnel and flight check personnel to ensure adequate training and checking of crew members; and

- (i) a record system acceptable to the Authority to show compliance with all appropriate training and currency requirements.

1.4 ALL CREW MEMBERS.

1.4.1 A written training programme shall be developed for all crew members in the emergency procedures appropriate to each make and model of aircraft flown in or by the crew member. Areas shall include—

- (a) individual instruction in the use of on-board emergency equipment such as fire extinguishers, emergency breathing equipment, first aid equipment, emergency exits and evacuation slides, and the aircraft's oxygen system, including the use of portable emergency oxygen bottles. Flight crew members shall also practice using the emergency equipment designed to protect them in case of a flight deck fire or smoke;
- (b) instruction in potential emergencies such as rapid decompression, ditching, firefighting, aircraft evacuation, medical emergencies, hijacking, and disruptive passengers; and
- (c) scheduled recurrent training to meet Authority requirements.

1.5 ALL OPERATIONS PERSONNEL.

1.5.1 The training syllabi and checking programmes for all operations personnel shall include—

- (a) training in the safe transportation and recognition of all dangerous goods permitted by the Authority to be shipped by air; training shall include the proper packaging, marking, labelling, and documentation of dangerous articles and magnetised materials;
- (b) all appropriate security training required by the Authority; and
- (c) a method of providing any required notification of an accident or incident involving dangerous goods.

1.6 OPERATIONS PERSONNEL OTHER THAN CREW MEMBERS.

- 1.6.1 For operations personnel other than crew members (e.g., FOO, handling personnel), a written training programme shall be developed that pertains to their respective duties. The training programme shall provide for initial, recurrent, differences, specialised, and any other training required by the Authority.

2.0 PROCEDURES FOR TRAINING AND CHECKING**2.1 PROFICIENCY CHECKING PROCEDURES.**

- 2.1.1 Procedures to be applied in the event that personnel do not achieve or maintain the required standards.
- 2.2 Procedures Involving the Simulation of Abnormal or Emergency Situations.
- 2.2.1 Procedures to ensure that abnormal or emergency situations requiring the application of part or all of the abnormal or emergency procedures, and simulation of IMC by artificial means, are not simulated during commercial air transportation flights.

3.0 DOCUMENT RETENTION**3.1 DOCUMENTATION TO BE STORED AND STORAGE PERIODS.**

- 3.1.1 An AOC holder shall retain all documentation required by the Authority, or the Authority of another State in which the AOC holder is operating, for the time specified by the respective Authority or for the time period needed to show compliance with appropriate regulations or this OM, whichever is longer.

IS: 9.3.1.4 AIRCRAFT OPERATING MANUAL

- (a) Each AOC applicant and AOC holder shall submit and maintain an AOM as part of its OM, containing at least the following—
- 1.0 General Information and Units of Measurement
- 1.1 General information (e.g., aircraft dimensions), including a description of the units of measurement used for the operation of the aircraft type concerned and conversion tables.

2.0 LIMITATIONS**2.1 CERTIFICATION AND OPERATIONAL LIMITATIONS.**

- 2.1.1 A description of the applicable operational limitations, including—
- (a) certification status;
 - (b) passenger seating configuration for each aircraft type, including a pictorial presentation;
 - (c) types of operation that are approved (e.g., AMO/IMC/VFR, CAT II/III, flights in known icing conditions, etc.);
 - (d) crew composition;
 - (e) operation within mass and centre of gravity limitations;
 - (f) speed limitations;
 - (g) flight envelopes;
 - (h) wind limits, including operations on contaminated runways;
 - (i) performance limitations for applicable configurations;
 - (j) runway slope;
 - (k) limitations on wet or contaminated runways;
 - (l) airframe contamination; and
 - (m) post landing.

3.0 PROCEDURES**3.1 NORMAL PROCEDURES.**

- 3.1.1 The normal procedures and duties assigned to the crew, the appropriate checklists, the system for use of the checklists, and a statement covering the necessary coordination procedures between flight and cabin crew. The following normal procedures and duties shall be included—
- (a) pre-flight;
 - (b) pre-departure and loading;

- (c) altimeter setting and checking;
- (d) taxi, take-off, and climb;
- (e) noise abatement;
- (f) cruise and descent;
- (g) approach, landing preparation, and briefing;
- (h) VFR approach;
- (i) instrument approach;
- (j) visual approach and circling;
- (k) missed approach;
- (l) normal landing;
- (m) post landing; and
- (n) operation on wet and contaminated runways.

3.2 Flight Deck Procedures.

- (a) Specific flight deck procedures that pertain a flight release;
- (b) Initial flight deck preparation;
- (c) SOPs;
- (d) Flight deck discipline;
- (e) Standard call-outs;
- (f) Communications;
- (g) Flight safety;
- (h) Push-back and towing procedures;
- (i) Taxi guidelines and ramp signals;
- (j) Take-off and climb out procedures;
- (k) Choice of runway;
- (l) Take-off in limited visibility;

- (m) Take-off in adverse weather;
- (n) Use and limitations of weather radar;
- (o) Use of landing lights;
- (p) Monitoring of flight instruments;
- (q) Power settings for take-off;
- (r) Malfunctions during take-off;
- (s) Rejected take-off decision;
- (t) Climb, best angle, best rate;
- (u) Sterile cockpit procedures;
- (v) En route and holding procedures;
- (w) Cruise control;
- (x) Navigation logbook;
- (y) Descent, approach, and landing procedures;
- (z) Reporting of maintenance problems; and
- (aa) How to obtain maintenance and service en route.

3.3**ABNORMAL AND EMERGENCY PROCEDURES.**

3.3.1

A listing of abnormal and emergency procedures assigned to crew members with appropriate checklists that include a system for use of the checklists and a statement covering the necessary coordination procedures between flight and cabin crew. The following abnormal and emergency procedures and duties shall be included—

- (a) crew incapacitation;
- (b) fire and smoke drills;
- (c) unpressurised and partially pressurised flight, as applicable;
- (d) exceeding of structural limits, such as overweight landing;

- (e) exceeding of cosmic radiation limits, as applicable;
- (f) lightning strikes;
- (g) distress communications and alerting of ATC to emergencies;
- (h) engine failure;
- (i) system failures;
- (j) guidance for diversion in case of serious technical failure;
- (k) ground proximity warning;
- (l) ACAS;
- (m) wind shear;
- (n) emergency landing/ditching;
- (o) aircraft evacuation;
- (p) fuel jettisoning precautions (as applicable) and overweight landing;
- (q) general considerations and policy;
- (r) emergency procedures;
- (s) emergency descent;
- (t) low fuel;
- (u) dangerous goods incident or accident;
- (v) interception procedures;
- (w) emergency signal for cabin crew members;
- (x) communication procedures; and
- (y) radio listening watch.

4.0 PERFORMANCE DATA, SUPPLEMENTARY PERFORMANCE DATA, AND OTHER ACCEPTABLE PERFORMANCE DATA**4.1 GENERAL.**

4.1.1 Performance data shall be provided in a form in which it can be used without difficulty.

4.2 Performance Data.

4.2.1 Performance material that provides the necessary data to allow the flight crew to comply with the approved AFM performance requirements shall be included to allow the determination of —

- (a) take-off climb limits (mass, altitude, temperature);
- (b) take-off field length limits (dry, wet, contaminated);
- (c) net flight path data for obstacle clearance calculation or, where applicable, takeoff flight path;
- (d) gradient losses for banked climbouts;
- (e) en route climb limits;
- (f) approach climb limits;
- (g) landing climb limits;
- (h) landing field length limits (dry, wet, contaminated), including the effects of an inflight failure of a system or device, if it affects the landing distance;
- (i) brake energy limits; and
- (j) speeds applicable for the various flight stages (also considering wet or contaminated runways).

4.3 Supplementary Performance Data.

4.3.1 Supplementary data covering—

- (a) Flights in icing conditions;
- (b) The maximum crosswind and tailwind components for each aircraft type operated and the reductions to be applied to

these values having regard to gust, low visibility, runway surface conditions, crew experience, use of autopilot, abnormal or emergency circumstances, or any other relevant operational factors; and

- (c) Any certified performance related to an allowable configuration, or configuration deviation, such as anti-skid inoperative, shall be included.

4.4 Other Acceptable Performance Data.

- 4.4.1 If performance data, as required for the appropriate performance class, is not available in the approved AFM, then other data acceptable to the Authority shall be included.

Alternatively, the OM may contain cross references to the approved data contained in the AFM, where such data is not likely to be used often or in an emergency.

4.5 Additional Performance Data.

- 4.5.1 Additional performance data, where applicable, including—

- (a) all engines operating climb gradients;
- (b) drift-down data;
- (c) the effect of de-icing/anti-icing fluids;
- (d) flight with landing gear down;
- (e) for aircraft with three or more engines, one-engine-inoperative ferry flights; and
- (f) flights conducted under the provisions of a CDL.

5.0 FLIGHT PLANNING

5.1 FLIGHT PLANNING DATA.

- 5.1.1 Specific data and instructions necessary for pre-flight and in-flight planning, including factors such as speed schedules and power settings. Where applicable, procedures for engine(s) out operations, EDTO, and flights to isolated aerodromes shall be included for the flight plan and the operational flight plan.

5.2 Fuel and Oil Calculations.

5.2.1 The method for calculating fuel needed for the various stages of flight.

6.0 MASS AND BALANCE

6.1 CALCULATING MASS AND BALANCE.

6.1.1 Instructions and data for calculating mass and balance, including—

- (a) the calculation system (e.g., index system);
- (b) information and instructions for the completion of mass and balance documentation, including manual and computer-generated types;
- (c) limiting mass and centre of gravity of the various versions; and
- (d) dry operating mass and corresponding centre of gravity or index.

7.0 LOADING

7.1 LOADING PROCEDURES.

7.1.1 Instructions for loading and securing a load in the aircraft, including—

- (a) use of aircraft systems and associated controls.

7.2 Loading Dangerous Goods.

7.2.1 A method for notifying the PIC when dangerous goods are loaded in the aircraft.

8.0 SURVIVAL AND EMERGENCY EQUIPMENT INCLUDING OXYGEN

8.1 LIST OF SURVIVAL EQUIPMENT TO BE CARRIED.

8.1.1 A list of the survival equipment to be carried for the routes to be flown and the procedures for checking the serviceability of this equipment prior to take-off.

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8.1.2 Instructions regarding the location, accessibility, and use of survival and emergency equipment and its associated checklist(s).

8.2 Ground-Air Visual Signal.

8.2.1 Instructions illustrating the ground-air visual signal code for use by survivors.

8.3 OXYGEN USAGE.

8.3.1 The procedure for determining the amount of oxygen required and the quantity that is available, taking into consideration the flight profile, number of occupants, and possible cabin decompression.

8.3.2 The information provided shall be in a form in which it can be used without difficulty.

8.4 EMERGENCY EQUIPMENT USAGE.

8.4.1 A description of the proper use of the following emergency equipment, if applicable—

- (a) life jackets;
- (b) life rafts;
- (c) medical kits/first aid kits;
- (d) survival kits;
- (e) emergency locator transmitter;
- (f) visual signalling devices;
- (g) evacuation slides; and
- (h) emergency lighting.

9.0 Emergency Evacuation Procedures

9.1 Instructions for Emergency Evacuation.

9.1.1 Instructions for preparing for emergency evacuation, including crew coordination and emergency station assignment.

9.2 EMERGENCY EVACUATION PROCEDURES.

- 9.2.1 A description of the duties of all members of the crew for the rapid evacuation of an aircraft and the handling of passengers in the event of a forced landing, ditching, or other emergency.

10.0 AIRCRAFT SYSTEMS

- 10.1 A description of the aircraft systems, related controls and indications, and operating instructions.

- 11.0 Minimum Equipment List and Configuration Deviation List

- 11.1 The MEL and CDL for the aircraft types operated and the specific operations authorised, including any requirements relating to operations where performance- based navigation (PBN) is prescribed.

- 12.0 Route and Aerodrome Instructions and Information (optional for this manual)

- 13.0 Instructions and Information

- 13.1 Communications, navigation, and aerodromes.

- 13.1.1 Instructions and information relating to communications, navigation, and aerodromes, including—

- (a) minimum flight level/altitude for each route to be flown;
- (b) operating minima for departure, destination, and alternate aerodromes;
- (c) communication facilities and navigation aids;
- (d) runway data and aerodrome facilities;
- (e) approach, missed approach, and departure procedures, including noise abatement procedures;
- (f) communications-failure procedures;
- (g) search and rescue facilities in the area over which the aircraft is to be flown;
- (h) a description of the aeronautical charts that shall be carried on board in relation to the type of flight and the route to be flown, including the method for checking their validity;

- (i) availability of aeronautical information and meteorological services;
- (j) en route COM/NAV procedures, including holding; and
- (k) aerodrome categorisation for flight crew competence qualification.

IS: 9.3.1.10 TRAINING TO PROFICIENCY

- (a) A course of training in an aircraft simulator may be included for use in proficiency checks if that course—
 - (1) Provides at least 4 hours of training at the pilot controls of an aircraft simulator as well as a proper briefing before and after the training;
 - (2) Provides training in at least the procedures and manoeuvres set forth in the proficiency check requirements; and
 - (3) Provides line-oriented training that—
 - (i) Utilises a complete flight crew;
 - (ii) Includes at least the manoeuvres and procedures that may be expected in line operations;
 - (iii) Is representative of the flight segment appropriate to the operations being conducted by the AOC holder; and
 - (4) Is given by an instructor who meets the applicable requirements of a check airman.

IS: 9.3.1.18 PASSENGER BRIEFING CARDS

- (a) An AOC holder shall provide at each passenger seat, information cards that include the following information in the primary language in which emergency commands are given by the crew—
 - (1) Functions required of a passenger in the event of an emergency in which a crew member is not available to assist—
 - (i) Locate the emergency exit;

- (ii) Recognise the emergency exit opening mechanism;
 - (iii) Comprehend the instructions for operating the emergency exit;
 - (iv) Operate the emergency exit;
 - (v) Assess whether opening the emergency exit will increase the hazards to which passengers may be exposed;
 - (vi) Follow oral directions and hand signals given by a crew member;
 - (vii) Stow or secure the emergency exit door so that it will not impede use of the exit;
 - (viii) Assess the condition of an escape slide, activate the slide, and stabilise the slide after deployment to assist others in getting off the slide;
 - (ix) Pass expeditiously through the emergency exit; and
 - (x) Assess, select, and follow a safe path away from the emergency exit
- (2) A request that a passenger identify himself or herself to allow reseating if he or she—
- (i) Cannot perform the emergency functions stated in the information card;
 - (ii) Has a non-discernible condition that will prevent him or her from performing the functions;
 - (iii) May suffer bodily harm as the result of performing one or more of those functions; or
 - (iv) Does not wish to perform those functions;
 - (v) Lacks the ability to read, speak, or understand the language or the graphic form in which instructions are provided by the AOC holder;

- (vi) Lacks the ability to read, speak, or understand the language or the graphic form in which instructions are provided by the AOC holder.

IS: 9.3.1.19 AERONAUTICAL DATA CONTROL SYSTEM

- (a) An AOC holder shall provide aeronautical data for each airport used by the AOC holder which includes the following—
 - (1) Airports—
 - (i) Facilities.
 - (ii) Navigational and communications aids.
 - (iii) Construction affecting takeoff, landing, or ground operations.
 - (iv) Air traffic facilities.
 - (2) Runways, clearways, and stopways—
 - (i) Dimensions.
 - (ii) Surface.
 - (iii) Marking and lighting systems.
 - (iv) Elevation and gradient.
 - (3) Displaced thresholds—
 - (i) Location.
 - (ii) Dimensions.
 - (iii) Takeoff or landing or both.
 - (4) Obstacles—
 - (i) Those affecting takeoff and landing performance computations.
 - (ii) Controlling obstacles.

- (5) Instrument flight procedures—
 - (i) Departure procedure.
 - (ii) Approach procedure.
 - (iii) Missed approach procedure.
- (6) Special information—
 - (i) Runway visual range (RVR) measurement equipment.
 - (ii) Prevailing winds under low visibility conditions.

IS 9.3.1.20 ROUTE GUIDE – AREAS, ROUTES, AERODROMES, AND HELIPORTS

- (a) Each AOC applicant and AOC holder shall submit and maintain as part of its OM a route guide containing information on areas, routes, aerodromes, and heliports. The route guide shall contain at least the information in IS 9.3.1.20(c).
- (b) The route guide shall ensure that the flight crew have, for each flight, information relating to communication facilities, navigation aids, aerodromes, heliports, instrument approaches, instrument arrivals, and instrument departures, as applicable for the operation, and such other information as the operator may deem necessary in the proper conduct of flight operations.
- (c) Each route guide shall contain at least the following information—
 - (1) The minimum flight altitudes for each aircraft to be flown;
 - (2) Aerodrome operating minima for each of the aerodromes that are likely to be used as aerodromes of intended landing or as alternate aerodromes;
 - (3) The increase of aerodrome operating minima in case of degradation of approach or aerodrome facilities;
 - (4) Heliport operating minima for each of the heliports that are likely to be used as heliports of intended landing or as alternate heliports;
 - (5) The increase of heliport operating minima in case of degradation of approach or heliport facilities; and

- (6) The necessary information for compliance with all flight profiles required by regulations, including the determination of—
 - (i) take-off runway length requirements for dry, wet, and contaminated conditions, including those dictated by systems failures that affect the take-off distance;
 - (ii) take-off climb limitations;
 - (iii) en route climb limitations;
 - (iv) approach climb limitations and landing climb limitations;
 - (v) landing runway length requirements for dry, wet, and contaminated conditions, including systems failures that affect the landing distance; and
 - (vi) supplementary information, such as tire speed limitations.

IS: 9.3.1.21**WEATHER REPORTING SOURCES**

- (a) The Authority approves and considers the following sources of weather reports satisfactory for flight planning or controlling flight movement—

- (1) Government Meteorological Office.
- (2) Grenada-operated automated surface observation stations.

Note: Some automated systems cannot report all required items for a complete surface aviation weather report.

- (3) Grenada-operated supplemental aviation weather reporting stations.
- (4) Observations taken by airport traffic control towers.
- (5) Grenada-contracted weather observatories.

- (6) Any active meteorological office operated by a foreign state which subscribes to the standards and practices of ICAO conventions.
- (7) Any military weather reporting sources approved by the Authority.

Note: Use of military sources is limited to control of those flight operations which use military airports as departure, destination, alternate, or diversionary airports.

- (8) Near real time reports such as pilot reports, radar reports, radar summary charts, and satellite imagery reports made by commercial weather sources or other sources specifically approved by the Authority.
- (9) An AOC holder operated and maintained weather reporting system approved by the Authority.

IS: 9.3.1.22**DE-ICING AND ANTI-ICING PROGRAMME**

- (a) Contents of the AOC holder's ground de-icing and anti-icing programme shall include a detailed description of—
 - (1) How the AOC holder determines that conditions are such that frost, ice, or snow may reasonably be expected to adhere to the aircraft and that ground de-icing and anti-icing operational procedures shall be in effect;
 - (2) Who is responsible for deciding that ground de-icing and anti-icing operational procedures shall be in effect;
 - (3) The procedures for implementing ground de-icing and anti-icing operational procedures; and
 - (4) The specific duties and responsibilities of each operational position or group responsible for getting the aircraft safely airborne while ground de-icing and anti-icing operational procedures are in effect.
- (b) The AOC holder's programme shall include procedures for flight crew members to increase or decrease the determined holdover time in changing conditions. The holdover time shall be supported by data acceptable to the Authority. If the maximum holdover time is

exceeded, takeoff is prohibited unless at least one of the following conditions exists—

- (1) A pre-takeoff contamination check is conducted outside the aircraft (within five minutes prior to beginning take off) to determine that the wings, control surfaces, and other critical surfaces, as defined in the certificate holder's programme, are free of frost, ice, or snow;
- (2) It is otherwise determined by an alternate procedure, approved by the Authority and in accordance with the AOC holder's approved programme, that the wings, control surfaces, and other critical surfaces are free of frost, ice, or snow; or
- (3) The wings, control surfaces, and other critical surfaces are de-iced again and a new holdover time is determined.

IS: 9.4.1.4 AOC HOLDER'S MAINTENANCE CONTROL MANUAL

- (a) An AOC applicant and AOC holder shall submit and maintain a maintenance control manual containing at least the following.

Note: The manual may be arranged in any subject order and the subjects may be combined so long as all applicable subjects are covered in the manual.

1.0 ADMINISTRATION AND CONTROL OF THE MAINTENANCE CONTROL MANUAL

1.1 INTRODUCTION.

- 1.1.1 A statement that the manual complies with all applicable Authority regulations and requirements and with the terms and conditions of the applicable AOC;
- 1.1.2 A statement that the manual contains maintenance and operational instructions with which the relevant personnel are to comply in the performance of their duties;
- 1.1.3 A list and brief description of the various MCM parts and their contents, applicability, and use; and
- 1.1.4 Explanations and definitions of terms and words used in the manual.

1.2 SYSTEM OF AMENDMENT AND REVISION.

- 1.2.1 A description of who is responsible for the issuance and insertion of amendments and revisions;
- 1.2.2 A required record of amendments and revisions with insertion dates and effective dates;
- 1.2.3 A statement that hand-written amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety;
- 1.2.4 A description of the system for the annotation of pages and their effective dates;
- 1.2.5 A list of effective pages and their effective dates;
- 1.2.6 Annotation of changes (on text pages and, as practicable, on charts and diagrams);
- 1.2.7 A system for recording temporary revisions;
- 1.2.8 A description of the distribution system for the manuals, amendments, and revisions; and
- 1.2.9 A statement of who is responsible for notifying the Authority of proposed changes and for working with the Authority on changes requiring Authority approval.

2.0 GENERAL ORGANISATION**2.1 CORPORATE COMMITMENT BY THE AOC HOLDER.****2.2 GENERAL INFORMATION.**

- 2.2.1 A brief description of the organisation;
 - 2.2.2 A description of the organisation's relationships with other organisations;
 - 2.2.3 Fleet composition;
 - 2.2.4 The type of operation; and
 - 2.2.5 Line station locations.
- 2.3 Maintenance Management Personnel.

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- 2.3.1 Accountable manager;
- 2.3.2 Nominated post holder;
- 2.3.3 Maintenance coordination;
- 2.3.4 Duties and responsibilities;
- 2.3.5 Organisation chart(s); and
- 2.3.6 Manpower resources and training policy.
- 2.4 Notification Procedure to the Authority Regarding Changes to the Maintenance Arrangements, Locations, Personnel, Activities, or Approval.

3.0 MAINTENANCE PROCEDURES

- 3.1 Aircraft Logbook Utilisation and MEL Application.
- 3.2 Aircraft Maintenance Programme Development and Amendment.
- 3.3 Time and Maintenance Records, Responsibilities, and Retention.
- 3.4 Accomplishment and Control of Mandatory Continuing Airworthiness Information (Airworthiness Directives).
- 3.5 Analysis of the Effectiveness of the Maintenance Programme.
- 3.6 Non-Mandatory Modification Embodiment Policy.
- 3.7 Major Modification Standards.
- 3.8 Defect Reports.
 - 3.8.1 Analysis;
 - 3.8.2 Liaison with manufacturers and Authorities; and
 - 3.8.3 Deferred defect policy.
- 3.9 Engineering Activity.
- 3.10 Reliability Programmes.

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3.10.1	Airframe;
3.10.2	Propulsion; and
3.10.3	Components.
3.11	Pre-Flight Inspection.
3.11.1	Preparation of aircraft for flight;
3.11.2	Subcontracted ground handling functions;
3.11.3	Security of cargo and baggage loading;
3.11.4	Control of refuelling, quantity/quality; and
3.11.5	Control of snow, ice, dust, and sand contamination to an approved aviation standard.
3.12	Aircraft Weighing.
3.13	Flight Test Procedures.
3.14	Sample of Documents, Tags, and Forms Used.
3.15	Appropriate Portions of the AOC Holder's Operations Manual.

IS: 9.4.1.6 AOC HOLDER'S ADDITIONAL QUALITY SYSTEM FOR MAINTENANCE

- (a) An AOC shall establish a plan acceptable to the Authority to show when and how often the activities as required in Section 9.4.1.2 of this part will be monitored. In addition, reports should be produced at the completion of each monitoring investigation and include details of discrepancies of non-compliance with procedures or requirements
- (b) The feedback part of the system shall address who is required to rectify discrepancies and noncompliance in each particular case and the procedure to be followed if rectification is not completed within appropriate time scales. The procedure should lead to the Accountable Manager.
- (c) To ensure effective compliance with Section 9.4.1.6 of this part, an AOC Holder and AOC applicant should use the following elements—

- (1) Product sampling - the part inspection of a representative sample of the aircraft fleet;
- (2) Defect sampling - the monitoring of defect rectification performance;
- (3) Concession sampling - the monitoring of any concession to not carry out maintenance on time;
- (4) On time maintenance sampling - the monitoring of when (flying hours/calendar time/flight cycles, etc) aircraft and their components are brought in for maintenance;
- (5) Sample reports of un-airworthy conditions and maintenance errors on aircraft and components.

Note: The primary purpose of the Quality System for maintenance is to monitor compliance with the approved procedures specified in an operators maintenance control manual to ensure compliance with Subpart 9.4 and thereby ensure the maintenance aspects of the operational safety of the aircraft. In particular, this part of the Quality System provides a monitor of the effectiveness of maintenance, reference 9.4.1.2, and should include a feedback system to ensure that corrective actions are identified and carried out in a timely manner.

IS: 9.4.1.12 AIRCRAFT MAINTENANCE PROGRAMME

- (a) The aircraft maintenance programme should be managed and presented by the Operator to the Authority.
- (b) Implementation of the content of an approved Operators aircraft maintenance programme should be accomplished by an appropriately approved Part 6 AMO and it therefore follows that the AMO should have full access to the approved aeroplane maintenance programme when the AMO is not the author.
- (c) The aircraft should only be maintained to one approved maintenance programme at a given point in time. Where an operator wishes to change from one approved operators aircraft maintenance programme to another such approved programme , a transfer Check/Inspection may need to be performed, as agreed with the Authority, in order to implement the change.
- (d) The operators aircraft maintenance programme should contain a preface which will define the maintenance programme contents , the

inspection standards to be applied, permitted variations to task frequencies and, where applicable, any procedure to escalate established check/inspection intervals. Appendix 1 to this IS provides detailed guidance on the content of an approved operators maintenance programme.

- (e) Where an operator wishes to use an aircraft with the initial operators aircraft maintenance programme based upon the Maintenance Review Board Report (MRBR) process, any associated programme for the continuous surveillance of the reliability, or health monitoring of the aircraft should be considered as part of the aircraft maintenance programme.
- (f) Where an aircraft has been subjected to the MRBR process, an operator should normally develop the initial operators maintenance programme based upon the MRBR.
- (g) The documentation supporting the development of operator's aircraft maintenance programmes for aircraft types subjected to the MRBR process should contain identification cross reference to the MRBR tasks such that it is always possible to relate such tasks to the current approved operators aircraft maintenance programme. This does not prevent the approved operators maintenance programme from being developed in the light of service experience to beyond the MRBR recommendations but will show the relationship to such recommendations.
- (h) Some approved operators maintenance programmes, not developed from the MRB process, utilise reliability programmes. Such programmes should be considered as part of the approved maintenance programme.
- (i) Reliability programmes should be developed for aircraft maintenance programmes based upon MSG logic or those that include condition monitored components or that do not contain overhaul time periods for all significant system components.
- (j) Reliability programmes need not be developed for aircraft maintenance programmes of aircraft of 5 700 kg and below or that do contain overhaul time periods for all significant system components.
- (k) The documentation issued by the Authority to approve the maintenance programme may include details of who may issue certificates of release to service in a particular situation and may define which tasks are considered as base maintenance activity.

Development of the approved maintenance programme is dependent upon sufficient satisfactory in-service experience which has been properly processed. In general, the task being considered for escalation beyond MRB limits should have been satisfactorily repeated at the existing frequency several times before being proposed for escalation. Appendix 1 to this IS gives further guidance.

- (l) The Authority may approve a part of or an incomplete operators aircraft maintenance programme at the start of operation of a new aircraft type or a new operator, subject to the limitation that the approved operators maintenance programme is only valid for a period that does not exceed any required maintenance not yet approved. The following examples illustrate just two possibilities.
 - (1) A new aircraft type may not have completed the acceptance process for structural inspection or corrosion control. It therefore follows that the operator's aircraft maintenance programme cannot be approved as a complete programme but is reasonable to approve for a limited period, say, 3000 hrs or 1 year.
 - (2) A new operator may not have established suitable maintenance arrangements for the high life time checks . It therefore follows that the Authority may be unable to approve the complete operator's aircraft maintenance programme , preferring to opt for a limited period.
 - (3) If the Authority is no longer satisfied that a safe operation can be maintained, the approval of an operators aircraft maintenance programme or part of it may be suspended or revoked. Events giving rise to such action include—
 - (i) An operator suspending the operation of an aircraft type for at least one year.
 - (ii) Periodic review of the approved operators aircraft maintenance programme by the Authority shows that the operator has failed to ensure that the programme reflects the maintenance needs of the aircraft such that safe operation can be assured.
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APPENDIX 1 TO IS. 9.4.1.12.**(A) OPERATOR'S AIRCRAFT MAINTENANCE PROGRAMME****1.0 GENERAL REQUIREMENTS**

- 1.1. The maintenance programme should contain the following basic information.
 - 1.1.1. The type/model and registration number of the aircraft e, engines and, where applicable, auxiliary power units and propellers.
 - 1.1.2. The name and address of the operator.
 - 1.1.3. The operator's reference identification of the programme document; the date of issue and issue number.
 - 1.1.4. A statement signed by the operator to the effect that the specified aircraft will be maintained to the programme and that the programme will be reviewed and updated as required by paragraph 5.
 - 1.1.5. Contents/list of effective pages of the document.
 - 1.1.6. Check periods which reflect the anticipated utilisation of the aircraft. Such utilisation should be stated and include a tolerance of not more than 25%. Where utilisation cannot be anticipated, calendar time limits should also be included.
 - 1.1.7. Procedures for the escalation of established check periods, where applicable and acceptable to the Authority.
 - 1.1.8. Provision to record date and reference to approved amendments incorporated in the programme.
 - 1.1.9. Details of pre-flight maintenance tasks which are accomplished by maintenance staff and not included in the Operations Manual for action by flight crew.
 - 1.1.10. The tasks and the periods (intervals/frequencies) at which each part of the aircraft, engines, APU's, propellers, components, accessories, equipment, instruments, electrical and radio apparatus, and associated systems and installations should be inspected, together with the type and degree of inspection.

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- 1.1.11. The periods at which items as appropriate, should be checked, cleaned, lubricated, replenished, adjusted and tested.
 - 1.1.12. Details of specific structural inspections or sampling programmes.
 - 1.1.13. Details of the corrosion control programme.
 - 1.1.14. The periods and procedures for the collection of engine health monitoring data.
 - 1.1.15. The periods at which overhauls and/or replacements by new or overhauled parts should be made.
 - 1.1.16. A cross-reference to other documents approved by the Authority which contain the details of maintenance tasks related to mandatory life limitations, Certification Maintenance Requirements (CMIR's) and Airworthiness Directives (AD's).

Note: To prevent inadvertent variations to such tasks or intervals these items should not be included in the main portion of the maintenance programme document, or any planning control system, without specific identification of their mandatory status.

- 1.1.17. Details of, or cross-reference to, any required Reliability Programme or statistical methods of continuous Surveillance.
- 1.1.18. A statement that practices and procedures to satisfy the Programme should be to the standards specified in the Type Certificate Holder's Maintenance Instructions.
- 1.1.19. Each maintenance task quoted should be defined in a definition section of the Programme

2.0 Programme basis

- 2.1. Operator's Aircraft Maintenance programmes should normally be based upon the Maintenance Review Board Report, where available, and the Type Certificate holder's Maintenance Planning Document or Chapter 5 of the Maintenance Manual, (i.e. the Manufacturer's recommended Maintenance Programme). The structure and format of these maintenance recommendations may be re-written by the operator to better suit his operation and control of the particular maintenance programme.

- 2.2. For a newly type-certificated aircraft, where no previously approved Maintenance Programme exists, it will be necessary for the operator to comprehensively appraise the manufacturer's recommendations (and the MRB Report where applicable), together with other airworthiness information, in order to produce a realistic Programme for approval.
- 2.3. For existing aircraft types it is permissible for the operator to make comparisons with maintenance programmes previously approved. It should not be assumed that a Programme approved for another operator will automatically be approved for the operator. Evaluation is to be made of aircraft/fleet utilisation, landing rate, equipment fit and, in particular, the experience of the maintenance organisation must be assessed.

3.0 AMENDMENTS

- 3.1. Amendments (revisions) to the approved Programme should be raised by the operator, to reflect changes in the type certificate holder's recommendations, modifications, service experience, or as required by the Authority. Reliability programmes form one important method of updating approved programmes.
- 4.0 Permitted variations to maintenance periods
- 4.1. The Operator may only vary the periods prescribed by the Programme with the approval of the Authority.
- 5.0 Periodic review of maintenance programme contents
- 5.1. Operator's approved aircraft Maintenance Programmes should be subject to periodic review to ensure that they reflect current Type Certificate holder's recommendations, revisions to the Maintenance Review Board Report, mandatory requirements and maintenance needs of the aircraft.
- 5.2. The Operator should review the detailed requirements at least annually for continued validity in the light of operating experience.

PART 10
COMMERCIAL AIR TRANSPORT BY FOREIGN AIR OPERATORS

10.1 GENERAL

10.1.1.1 APPLICABILITY

- (a) This Part prescribes requirements applicable to the operation of any civil aircraft for the purpose of commercial air transportation operations by any air operator whose Air Operator Certificate is issued and controlled by a civil aviation authority other than the Authority]. This part does not apply to aircraft when used by military, customs, and police services, which are not used for compensation or hire.

10.1.1.2 DEFINITIONS

- (a) For the purpose of this part, the applicable definitions are contained in Part 1 of these regulations – “General Policies, Procedures and Definitions.”

10.1.1.3 COMPLIANCE

- (a) A foreign air operator shall not operate an aircraft in commercial air transport unless that operator holds an AOC, issued by the State of the operator, for the operations being conducted.
- (b) A foreign air operator shall not operate an aircraft in commercial air transportation operations contrary to the requirements of—
 - (1) This part;
 - (2) The applicable paragraphs of Parts 7 and 8 of these regulations;
 - (3) The standards contained in the Annexes to the Chicago Convention applicable to the operation being conducted;
 - (4) The Civil Aviation (Security) Regulations; and
 - (5) Any other requirements that the Authority may specify.

- (c) Parts (a) and (b) apply also to any person who engages in an operation governed by this Part without the appropriate certificate and operations specification or similar document required as part of the certification.
- (d) Foreign operators shall comply with the applicable sections of Parts 5, Section 5.5.1.4 and Part 6, Section 6.5.1.9 when in the airspace of Grenada.

10.1.1.4 AUTHORITY TO INSPECT

- (a) A foreign air operator shall ensure that any person authorized by the Authority, will be permitted at any time, without prior notice, to board any aircraft operated for commercial air transportation to Grenada—
 - (1) to inspect the documents and manuals required by this part;
 - (2) to conduct an inspection of the aircraft; and
 - (3) to take appropriate action when necessary to preserve safety.
- (b) When the Authority identifies a case of non-compliance or suspected non-compliance by an original operator with laws, regulations and procedures applicable within that State's territory, or a similar serious safety issue with that operator, the Authority shall immediately notify the operator and, if the issue warrants it, the State of the Operator. Where the State of the Operator and the State of Registry are different, such notification shall also be made to the State of Registry, if the issue falls within the responsibilities of that State and warrants a notification.
- (c) In the case of notification to States as Specified in Paragraph 10.1.1.4(b), if the issue and its resolution warrant it Grenada shall engage in consultations with the State of the Operator and the State of Registry, as applicable, concerning the safety standards maintained by the operator.

10.1.1.5 OPERATIONS SPECIFICATIONS AND OTHER REQUIRED DOCUMENTATION

- (a) Prior to commencing commercial air operations to Grenada the Air Transport Licensing Board shall submit the following information to the Authority on behalf of the foreign operator—
 - (1) A certified true copy of the operator's AOC;
 - (2) The following information from the Operations Specifications—
 - (i) Aircraft Authorizations;
 - (ii) Operational Control;
 - (iii) Aircraft lease arrangements (if applicable);
 - (iv) Traffic Alert and Collision Avoidance System (TCAS);
 - (v) Aircraft Radio Equipment;
 - (vi) Authorized areas of en route operations, limitations and provisions;
 - (vii) Basic Instrument Procedure Approach Authorizations for all airports;
 - (viii) A copy of the approval page of the MEL for each aircraft type proposed to be operated;
 - (ix) A copy of the current certificate of aircraft registration and certificate of airworthiness for each aircraft type proposed to be operated.
 - (3) Information on Cockpit Voice Recorders and Flight Data Recorders installed on the aircraft;
 - (4) Flight Crew composition;
 - (5) Current Insurance coverage for the period of the requested permit;
 - (6) Dangerous Goods approval, if applicable;

- (7) Any other document the Authority considers necessary to ensure that the intended operations will be conducted safely.
- (b) The Authority shall advise the Air Transport Licensing Board whether the proposed operation would be operated safely, in accordance with the applicable laws of Grenada and the standards contained in the relevant annexes to the Convention on International Civil Aviation.

10.1.1.6 OPERATION OF FOREIGN REGISTERED AIRCRAFT

- (a) A person shall not operate a foreign registered aircraft in Grenada other than for commercial air transport operations in accordance with this part for more than 30 days in any twelve-month period unless approved by the Authority. An application for such approval shall be made in writing and contain the following information—
 - (1) aircraft registration number;
 - (2) aircraft make, model and series;
 - (3) aircraft serial number;
 - (4) airport where the aircraft is based;
 - (5) operator name, address and telephone contact numbers;
 - (6) a current copy of the aircraft insurance papers;
 - (7) a current copy of the aircraft Certificate of Airworthiness; and
 - (8) a current copy of the aircraft Certificate of Registration.
- (b) The Authority may—
 - (1) grant such approval for a period not to exceed six months in each instance and subject to such conditions as the Authority may specify in writing;
 - (2) refuse such application and direct that the aircraft be registered in Grenada if it is eligible to be so registered in order to continue operations; or

- (3) prohibit the aircraft from flying if its operation would be in contravention of the Civil Aviation Act and these Regulations or not in the interests of safety.

10.1.2 DOCUMENTS

10.1.2.1 FOREIGN AIR OPERATOR'S AIRCRAFT TECHNICAL LOG

- (a) A foreign air operator shall maintain an aircraft technical log system containing the following information for each aircraft—
 - (1) information about each flight necessary to ensure continued flight safety;
 - (2) the current aircraft certificate of release to service;
 - (3) the current maintenance statement giving the aircraft maintenance status of what scheduled and out of phase maintenance is next due, unless the Authority agrees to the maintenance statement being kept elsewhere;
 - (4) all outstanding deferred defects that affect the operation of the aircraft, and
 - (5) any necessary guidance instructions on maintenance support.

10.1.2.2 AIR OPERATOR MANUALS, DOCUMENTS AND FLIGHT CREW LICENCES TO BE CARRIED

- (a) A foreign air operator shall ensure that the following manuals, documents and licences are carried on flights into Grenada—
 - (1) A certified true copy of the AOC and associated operations specifications, all of which shall be in the English language;
 - (2) The current parts of the Operations Manual that are relevant to the duties of the crew;
 - (3) The current parts of the Operations Manual that are required for the conduct of a flight, such as the MEL and information and instructions relating to the interception of aircraft, and which shall be easily accessible to the crew on board the aircraft on each flight;

- (4) The current AFM or RFM approved by the State of Registry, or the current Aircraft Operating Manual approved by the State of the Operator; the AFM or RFM shall be updated by implementing changes made mandatory by the State of Registry received from the State of Design;
- (5) The current certificate of aircraft registration and the certificate of airworthiness in force with respect to that aircraft;
- (6) The appropriate licences of the members of the flight crew and cabin crew, if a cabin crew licence is required by the Foreign Authority;
- (7) A noise certificate, where applicable, which will be issued in accordance with ICAO Annex 16, Volume I; and
- (8) Appropriate approvals and/or licences of crew members for aircraft radio operation.

10.1.2.3 ADDITIONAL INFORMATION AND FORMS TO BE CARRIED

- (a) A foreign air operator shall ensure that, in addition to the documents and manuals described in Sections 10.1.2.1 and 10.1.2.2, the following forms, relevant to the type and area of operation, are carried on each flight—
 - (1) operational Flight Plan;
 - (2) aircraft Technical Log containing at least the information required in Paragraph 10.1.2.1(a);
 - (3) appropriate NOTAM/aeronautical information service briefing documents;
 - (4) appropriate meteorological information;
 - (5) the passenger and cargo manifests, as appropriate for the intended flights;
 - (6) mass and balance documentation for the aircraft, certifying that the load carried is properly distributed and safely secured;
 - (7) copy of applicable Specific Operating Provisions required under this part;

- (8) notification of special loads including any dangerous goods; and
 - (9) current maps and charts for the area of operation.
- (b) The Authority may authorize the information detailed in Paragraph 10.1.2.3(a) above, or parts thereof, to be presented in a form other than on printed paper provided the information is accessible for inspection.

10.1.2.4 PRODUCTION OF DOCUMENTATION, MANUALS AND RECORDS

- (a) A foreign air operator shall—
 - (1) provide any person authorized by the Authority access to any documents, manuals and records which are related to flight operations and maintenance; and
 - (2) produce upon request all such documents, manuals and records, when requested to do so by the Authority, within a reasonable period of time.
- (b) The pilot in command shall, within a reasonable time of being requested to do so by a person authorized by the Authority, produce to that person the documentation, manuals and records required to be carried on board.

10.1.2.5 PRESERVATION, PRODUCTION AND USE OF FLIGHT RECORDER RECORDINGS

- (a) Following an accident, incident, or when the Authority so directs, the operator of an aircraft on which a flight recorder is carried shall preserve the original recorded data for a period of 60 days unless otherwise directed by the investigating authority.

10.1.3 OPERATIONS AND PERFORMANCE

10.1.3.1 COMPUTATION OF PASSENGER AND BAGGAGE WEIGHED MASS

- (a) A foreign air operator shall compute the mass of passengers and checked baggage using—
 - (1) The actual weighed mass of each person and the actual weighed mass of baggage; or

- (2) The standard mass values specified by the foreign Authority.
- (b) The Authority may require a foreign air operator to produce evidence validating any standard mass values used.

10.1.3.2 SINGLE-ENGINE AIRCRAFT

- (a) A foreign air operator shall not operate a single-engine, non-turbine aircraft for the purpose of commercial air transportation operations.
- (b) A foreign air operator may operate a single-engine turbine aeroplane at night and in IMC provided the State of the Operator has ensured that—
 - (1) The turbine engine is reliable;
 - (2) The operator's maintenance procedures, operating practices, flight dispatch procedures, and crew training programmes are adequate;
 - (3) The aeroplane is appropriately equipped for flight at night and in IMC;
 - (4) Aeroplanes issued a certificate of airworthiness before 01 January 2005 have an engine trend monitoring system; and
 - (5) Aeroplanes issued a certificate of airworthiness on or after 01 January 2005 have an automatic trend monitoring system.

10.1.3.3 SINGLE PILOT OPERATIONS UNDER IFR OR AT NIGHT

- (a) A foreign air operator shall not operate an aeroplane under IFR or at night by a single pilot unless approved by the State of the Operator and the aeroplane meets the following conditions—
 - (1) The flight manual does not require a flight crew of more than one pilot;
 - (2) The aeroplane is propeller-driven;
 - (3) The maximum approved passenger seating configuration is not more than nine;
 - (4) The maximum certificated take-off mass does not exceed 5,700 kg;

- (5) The aeroplane is equipped with—
 - (i) A serviceable autopilot that has at least altitude hold and heading select modes;
 - (ii) A headset with a boom microphone or equivalent; and
 - (iii) A means of displaying charts that enables them to be readable in all ambient light conditions.
- (6) The PIC has satisfied the requirements of experience, training, checking and recency prescribe by the State of the Operator.

10.1.3.4 FLIGHT RULES

- (a) Within the territorial boundaries of Grenada, a foreign air operator shall comply with the flight rules and limitations contained in Part 8 of the Schedule.
- (b) Foreign air operators shall ensure that their flight crew have available and have become familiar with the flight rules in Part 8 of the Schedule.

10.2 FLIGHT CREW MEMBER QUALIFICATIONS

10.2.1.1 GENERAL

- (a) Foreign air operators shall ensure that their flight crews have the appropriate licences and ratings for the operations to be conducted in Grenada.

10.2.1.2 AGE LIMITATIONS

- (a) Foreign air operators shall ensure that the required PIC engaged in single pilot operations on aircraft operating in Grenada shall be less than 60 years of age.
- (b) Foreign air operators shall ensure, for aircraft engaged in operations in Grenada requiring more than one pilot, that if one pilot is between the age of 60 and up to age 65, the other pilot shall be less than age 60.
- (c) Foreign air operators shall ensure, for aircraft engaged in operations in Grenada requiring more than one pilot, that a pilot shall not at any time after he attains the age of 65 years act as a PIC or co-pilot

on any aircraft on a flight for the purpose of commercial air transport operations.

10.2.1.3 LANGUAGE PROFICIENCY

- (a) A foreign air operator shall ensure that flight crew operating aircraft in Grenada meet the language proficiency requirement of least the operational level 4 as contained in ICAO Annex 1 for the English language and that such proficiency is endorsed on the licence.

10.3 SECURITY

10.3.1.1 AIRCRAFT SECURITY

- (a) A foreign air operator shall—
 - (1) ensure that all appropriate personnel are familiar and comply with the relevant requirements of the national civil aviation security programme and other security programmes of Grenada;
 - (2) establish, maintain and conduct approved training programs which enable the operator's personnel to take appropriate action to prevent acts of unlawful interference such as sabotage or unlawful seizure of aircraft and to minimize the consequences of such events should they occur;
 - (3) following an act of unlawful interference on board an aircraft the PIC or in his absence the operator, shall submit, without delay, a report of such an act to the Authority;
 - (4) ensure that all aircraft carry a checklist of the procedures to be followed for that type of aircraft in searching for concealed weapons, explosives or other dangerous devices; and
 - (5) if installed, the flight crew compartment door on all aircraft operated for the purpose of carrying passengers shall be capable of being locked from within the compartment in order to prevent unauthorized access.

10.3.1.2 UNAUTHORIZED CARRIAGE

- (a) A foreign air operator shall take measures to ensure that no persons conceal themselves or cargo on board an aircraft.

10.4 DANGEROUS GOODS**10.4.1.1 OFFERING DANGEROUS GOODS FOR TRANSPORT BY AIR**

- (a) A foreign air operator may accept dangerous goods for transport by air in Grenada only if the foreign air operator—
 - (1) has been authorized to do so by the foreign Authority; and
 - (2) has conducted the required personnel training.
- (b) The foreign air operator shall properly classify, document, certify, describe, package, mark, label and put in a fit condition for transport, dangerous goods as required by the operator's dangerous goods programme as approved by the foreign Authority.
- (c) The foreign air operator shall state in the Operations Specifications required in Section 10.1.1.5 whether or not that operator has been authorised to accept dangerous goods by the foreign Authority.
- (d) Where the foreign operator has been granted authority to accept dangerous goods, and has an approved dangerous goods programme authorised by the foreign Authority, the foreign operator shall submit a copy of its dangerous goods program to the Authority.

10.4.1.2 CARRIAGE OF WEAPONS OF WAR AND MUNITIONS OF WAR

- (a) A foreign air operator conducting commercial air transportation operations to Grenada shall—
 - (1) not transport weapons of war and munitions of war by air unless an approval to do so has been granted by all States concerned.
 - (2) ensure that weapons of war and munitions of war are—
 - (i) stowed in the aircraft in a place which is inaccessible to passengers during flight; and
 - (ii) in the case of firearms, unloaded, unless, before the commencement of the flight, an approval has been granted by all States concerned that such weapons of war and munitions of war may be carried in circumstances that differ in part or in total from those indicated in this subparagraph.

- (3) ensure that the pilot in command is notified before the flight begins of the details and location on board the aeroplane or helicopter of any weapons of war and munitions of war that are intended to be carried.

10.4.1.3 CARRIAGE OF SPORTING WEAPONS AND AMMUNITION

- (a) A foreign air operator conducting commercial air transportation operations to Grenada shall take all measures necessary to ensure that any sporting weapons intended to be carried by air are reported.
- (b) A foreign air operator accepting the carriage of sporting weapons shall ensure that they are—
 - (1) stowed in the aircraft in a place which is inaccessible to passengers during flight unless the Authority has determined that compliance is impracticable and has approved other procedures, and
 - (2) in the case of firearms or other weapons that can contain ammunition, unloaded.
- (c) A foreign air operator may allow a passenger to carry ammunition for sporting weapons in passenger's checked baggage, as approved by the Authority.

PART 11 AERIAL WORK

11.1 GENERAL

11.1.1.1 APPLICABILITY

- (a) This part prescribes the requirements for those operators that are conducting aerial work and operations that are considered to be aerial work in Grenada.
- (b) All persons who conduct aerial work in Grenada shall, at all times, continue in compliance with the certification requirements of this part.
- (c) All persons who conduct aerial work in Grenada shall, at all times, continue in compliance with the applicable airworthiness requirements and operating rules of this part, except where this part grants relief from those requirements.

- (d) All persons who conduct remotely piloted aircraft (RPA) aerial work in Grenada shall, at all times, continue in compliance with—
 - (1) The RPA requirements in Section 8.8.1.33 of the Schedule;
 - (2) The RPA requirements for foreign air operators in Part 10 of these Regulations;
 - (3) The personnel licensing requirements for RPA in Part 2 of these Regulations; and
 - (4) The applicable requirements of this part, except where this part may be less prescriptive than Section 8.8.1.33 of these regulations.
- (e) A person operating an RPA and its remotely piloted aircraft systems (RPAS), registered in Grenada or holding an operator certificate from Grenada, shall—
 - (1) Not operate in Grenada without appropriate authorisation from the Authority;
 - (2) Not engage in international air navigation without appropriate authorisation from the State from which the take-off of the RPA is made;
 - (3) Not operate across or within the territory of another State without special authorisation issued by each State, and shall be obtained authorisation prior to take-off if there is reasonable expectation, when planning the operations, that the aircraft may enter the airspace concerned;
 - (4) Not operate over the high seas without prior coordination with the appropriate air traffic service authority, and shall obtain authorisation prior to take-off if there is reasonable expectation, when planning the operations, that the aircraft may enter the airspace concerned;
 - (5) Operate in accordance with conditions specified by the State of Registry, the State of the Operator, if different from the State of Registry, or the State(s) the flight is to operate within; and
 - (6) Ensure that the RPAS meets the performance and equipment carriage requirements for the specific airspace in which the flight is to operate.

- (f) All persons who intend to conduct RPA aerial work in Grenada shall submit an application to the Authority on a form and in a manner as prescribed by the Authority.

11.1.1.2 DEFINITIONS

- (a) Definitions are contained in Part 1 of the Schedule.

11.1.1.3 ABBREVIATIONS

- (a) The following acronyms are used in this part—

- (1) **AGL** – above ground level
- (2) **ATC** – air traffic control
- (3) **ATPL** – airline transport pilot licence
- (4) **CG** – centre of gravity
- (5) **CPL** – commercial pilot licence
- (6) **IFR** – instrument flight rules
- (7) **PIC** – pilot-in-command
- (8) **PPL** – private pilot licence
- (9) **RPA** – remotely piloted aircraft
- (10) **VFR** – visual flight rules

11.2 AGRICULTURAL AIRCRAFT OPERATIONS

11.2.1 GENERAL

11.2.1.1 APPLICABILITY

- (a) This subpart prescribes the requirements governing—
- (1) Agricultural aircraft operations within Grenada; and
 - (2) The issue of commercial and private agricultural aircraft operator certificates for those operations.
- (b) In a public emergency, a person conducting agricultural aircraft operations under this part may, to the extent necessary, deviate from the operating rules of this part in order to perform relief and welfare activities approved by an agency of the government.

- (c) Each person who deviates from a rule of this part shall, within 10 days after the deviation, send to the Authority a complete report of the aircraft operation involved, including a description of the operation and the reasons for it.

11.2.2 CERTIFICATION RULES

11.2.2.1 CERTIFICATE REQUIRED

- (a) Except as provided in Paragraphs 11.2.2.1(c) and (d) of this subsection, a person shall not conduct agricultural aircraft operations without, or in violation of, an agricultural aircraft operator certificate issued under this part.
- (b) An operator may, if it complies with this subpart, conduct agricultural aircraft operations with a rotorcraft with external dispensing equipment in place without a rotorcraft external-load operator certificate.
- (c) A government agency conducting agricultural aircraft operations with public aircraft need not comply with this subpart.
- (d) The holder of a rotorcraft external-load operator certificate under this part conducting agricultural aircraft operations, involving only the dispensing of water on forest fires by rotorcraft external-load means, need not comply with this subpart.

11.2.2.2 APPLICATION FOR CERTIFICATE

- (a) An applicant for an agricultural aircraft operator certificate shall apply on a form and in a manner prescribed by the Authority.

11.2.2.3 AMENDMENT OF CERTIFICATE

- (a) An agricultural aircraft operator certificate may be amended—
 - (1) On the Authority's own initiative, under applicable laws and regulations; or
 - (2) Upon application by the holder of that certificate.
- (b) A certificate holder shall submit an application to amend an agricultural aircraft operator certificate on a form and in a manner prescribed by the Authority. The applicant shall file the application at least 15 days before the date that the applicant proposes the amendment shall become effective, unless the Authority approves a shorter filing period.

- (c) The Authority shall grant a request to amend a certificate if it determines that safety in air commerce and the public interest so allow.
- (d) Within 30 days after receiving a denial to amend, the certificate holder may petition the Authority to reconsider the denial.

11.2.2.4 CERTIFICATION REQUIREMENTS

- (a) GENERAL. Except as provided in Paragraph 11.2.2.4(a)(3) of this subsection—
 - (1) The Authority shall issue a private agricultural aircraft operator certificate to an applicant that meets the requirements of this subpart for that certificate.
 - (2) The Authority shall issue a commercial agricultural aircraft operator certificate to an applicant that meets the requirements of this subpart for that certificate.
 - (3) An applicant who applies for an agricultural aircraft operator certificate containing a prohibition against the dispensing of economic poisons shall not be required to demonstrate knowledge specific to economic poisons.
- (b) PILOTS.
 - (1) A private operator – pilot applicant shall hold a PPL, CPL, or ATPL issued by the Authority and shall be properly rated for the aircraft to be used.
 - (2) A commercial operator – pilot applicant shall have available the services of at least one pilot who holds a current CPL or ATPL issued by the Authority and shall be properly rated for the aircraft to be used.
- (c) AIRCRAFT. The applicant shall have at least one certificated and airworthy aircraft, equipped for agricultural operation.
- (d) KNOWLEDGE AND SKILL TESTS. The applicant shall show, or shall have the person who is designated as the chief supervisor of agricultural aircraft operations for him or her show, that the applicant meets the following knowledge and skill requirements for agricultural aircraft operations—
 - (1) The test of knowledge, which consists of the following—

- (i) Steps to be taken before starting operations, including a survey of the area to be worked;
 - (ii) Safe handling of economic poisons and proper disposal of used containers for those poisons;
 - (iii) The general effects of economic poisons and agricultural chemicals on plants, animals, and persons, with emphasis on those normally used in the areas of intended operations, and the precautions to be observed in using poisons and chemicals;
 - (iv) Primary symptoms of poisoning of persons from economic poisons, the appropriate emergency measures to be taken, and the location of poison control centres;
 - (v) Performance capabilities and operating limitations of the aircraft to be used; and
 - (vi) Safe flight and application procedures.
- (2) The test of skill, which consists of the following manoeuvres that must be shown in any of the aircraft specified in Paragraph 11.2.2.4(c) of this subsection at that aircraft's maximum certificated take-off mass or the maximum mass established for the special purpose load, whichever is greater—
- (i) Short-field and soft-field take-offs (aeroplanes and gyroplanes only);
 - (ii) Approaches to the working area;
 - (iii) Flare-outs;
 - (iv) Swath runs;
 - (v) Pullups and turnarounds; and
 - (vi) Rapid deceleration (quick stops) in helicopters only.

11.2.2.5 DURATION OF CERTIFICATE

- (a) An agricultural aircraft operator certificate is effective until it is surrendered, suspended, or revoked.

- (b) The holder of an agricultural aircraft operator certificate that is suspended or revoked shall return it to the Authority.

11.2.3 OPERATING RULES AND RELATED REQUIREMENTS

11.2.3.1 OPERATING RULES

- (a) Except as provided in paragraph 11.2.3.1(c) of this subsection, this section prescribes rules that apply to persons and aircraft used in agricultural aircraft operations conducted under this part.
- (b) The holder of an agricultural aircraft operator certificate may deviate from the requirements of Part 9 of these regulations without a certificate, as authorised in this subpart, for dispensing operations when conducting nondispensing aerial work operations related to agriculture, horticulture, or forest preservation in accordance with the operating rules of this section.
- (c) The operating rules of this subpart apply to rotorcraft external-load operator certificate holders conducting agricultural aircraft operations involving only the dispensing of water on forest fires by rotorcraft externalload means.

11.2.3.2 CARRYING OF CERTIFICATE

- (a) A person shall not operate an aircraft in an agricultural aircraft operation unless a copy of the agricultural aircraft operator certificate under which the operation is conducted is carried on that aircraft. The copy shall be presented for inspection upon the request of the Authority or any government law enforcement officer.
- (b) The certificate of aircraft registration and the certificate of airworthiness issued for the aircraft need not be carried in the aircraft, provided that the certificates be kept available for inspection at the base from which the dispensing operation is conducted.

11.2.3.3 LIMITATIONS ON PRIVATE AGRICULTURAL AIRCRAFT OPERATOR

- (a) A person shall not conduct an agricultural aircraft operation under the authority of a private agricultural aircraft operator certificate—
 - (1) For compensation or hire;
 - (2) Over a congested area; or

- (3) Over any property, unless that person is the owner or lessee of the property or has ownership or other property interest in the crop located on that property.

11.2.3.4 MANNER OF DISPENSING

- (a) A person shall not dispense, or may cause to be dispensed, from an aircraft any material or substance in a manner that creates a hazard to persons or property on the surface.

11.2.3.5 ECONOMIC POISON DISPENSING

- (a) Except as provided in Paragraph 11.2.3.5 (b) of this subsection, a person shall not dispense, or shall cause to be dispensed, from an aircraft any economic poison that is registered with Grenada—
 - (1) For a use other than that for which it is registered;
 - (2) Contrary to any safety instructions or use limitations on its label; or
 - (3) In violation of any law or regulation of Grenada.
- (b) This section does not apply to any person dispensing economic poisons for experimental purposes under—
 - (1) The supervision of a Grenada agency authorised by law to conduct research in the field of economic poisons; or
 - (2) A permit from Grenada.

11.2.3.6 PERSONNEL

- (a) INFORMATION. The holder of an agricultural aircraft operator certificate shall ensure that each person used in the certificate holder's agricultural aircraft operation is informed of that person's duties and responsibilities for the operation.
- (b) SUPERVISORS. A person shall not supervise an agricultural aircraft operation unless he or she has met the knowledge and skill requirements of this subpart.
- (c) PILOT IN COMMAND. A person shall not act as PIC of an aircraft operated under this subpart unless that pilot—

- (1) Holds a pilot licence and rating prescribed by this subpart as appropriate to the type of operation conducted; or
- (2) Has demonstrated to the holder of the agricultural aircraft operator certificate conducting the operation, or to a supervisor designated by that certificate holder, that the person has met the knowledge and skill requirements of this subpart. However, a demonstration of the knowledge and skill requirements is not necessary for any PIC who—
 - (i) Is, at the time of the filing of an application by an agricultural aircraft operator, working as a PIC for that operator; and
 - (ii) Has a record of operation under that applicant that does not disclose any question regarding the safety of his or her flight operations or his or her competence in dispensing agricultural materials or chemicals.

11.2.3.7 OPERATIONS IN CONTROLLED AIRSPACE DESIGNATED FOR AN AERODROME

- (a) Except for flights to and from a dispensing area, A person shall not operate an aircraft within the lateral boundaries of the surface area of Class D airspace designated for an aerodrome unless authorisation for that operation has been obtained from the ATC facility having jurisdiction over that area.
- (b) A person shall not operate an aircraft in weather conditions below VFR minimums within the lateral boundaries of a Class E airspace area that extends upward from the surface unless authorisation for that operation has been obtained from the ATC facility having jurisdiction over that area.
- (c) The holder of a rotorcraft external-load operator certificate shall submit to the Authority a current and valid standard or restricted certificate of airworthiness, as described in Section 11.2.3.5 of this part, for each aircraft to be added to the certificate.
- (d) A certificate holder may operate an aircraft under special VFR weather minimums without meeting the requirements prescribed in Part 8 of the Schedule.

11.2.3.8 OPERATION OVER CONGESTED AREAS: GENERAL

- (a) A person shall not operate an aircraft over a congested area except in accordance with the requirements of this paragraph.
 - (1) Prior written approval shall be obtained from the appropriate official or governing body of the political subdivision over which the operation is conducted.
 - (2) Notice of the intended operation shall be given to the public by some effective means, such as daily newspapers, radio, television, or door-to-door notice.
 - (2) A plan for each complete operation shall be submitted to and approved by the Authority and include:
 - (i) Consideration of obstructions to flight;
 - (ii) The emergency landing capabilities of the aircraft to be used; and
 - (iii) Any necessary coordination with ATC.
- (b) A certificate holder may operate, or may cause the operation of, an aircraft over a congested area at altitudes required for the proper accomplishment of the agricultural aircraft operation if the operation is conducted—
 - (1) With the maximum safety to persons and property on the surface, consistent with the operation; and
 - (2) In accordance with the requirements of Paragraph 11.2.3.8(a) of this subsection.
- (c) Each certificate holder shall ensure that all single-engine aircraft, while over a congested area, operate:
 - (1) Except for helicopters, not loaded during take-offs and turnarounds;
 - (2) Not below the altitudes prescribed in Part 8 of these regulations except during the actual dispensing operation, including the approaches and departures necessary for that operation; and

- (3) During the actual dispensing operation, including the approaches and departures for that operation, not below the altitudes prescribed in Part 8 of these regulations unless it is in an area and at such an altitude that the aircraft can make an emergency landing without endangering persons or property on the surface.
- (d) Each certificate holder shall ensure that all multi-engine aircraft, while over a congested area, operate:
 - (1) During take-off, under conditions that will allow the aeroplane to be brought to a safe stop within the effective length of the runway from any point on take-off up to the time of attaining, with all engines operating at normal take-off power, 105 per cent of the minimum control speed with the critical engine inoperative in the take-off configuration or 115 per cent of the power-off stall speed in the take-off configuration, whichever is greater;

Note: Assume still-air conditions and no correction for any uphill gradient of 1 per cent or less when the percentage is measured as the difference between elevations at the end points of the runway divided by the total length. For uphill gradients greater than 1 per cent, the effective take-off length of the runway is reduced 20 per cent for each 1 per cent grade.

- (2) At a weight greater than the weight that, with the critical engine inoperative, would permit a rate of climb of at least 50 ft per minute at an altitude of at least 1 000 ft above the elevation of the highest ground or obstruction within the area to be worked or at an altitude of 5 000 ft, whichever is higher. Assume that the propeller of the inoperative engine is in the minimum drag position; that the wing flaps and landing gear are in the most favourable positions; and that the remaining engine or engines are operating at the maximum continuous power available; and
- (3) Below the altitudes prescribed in Part 8 of these regulations except during the actual dispensing operation, including the approaches, departures, and turnarounds necessary for that operation.
- (e) Each certificate holder shall issue notice of the intended operation to the public as may be specified by the Authority.

11.2.3.9 OPERATION OVER CONGESTED AREAS: PILOTS AND AIRCRAFT

- (a) GENERAL. A person shall not operate an aircraft over a congested area except in accordance with the pilot and aircraft rules of this subsection.
- (b) PILOTS. Each PIC shall have—
 - (1) 25 hours of PIC flight time in the make and basic model of the aircraft, at least 10 hours of which shall have been acquired within the preceding 12 calendar months; and
 - (2) 100 hours of flight experience as PIC in dispensing agricultural materials or chemicals.
- (c) AIRCRAFT.
 - (1) Each aircraft shall—
 - (i) If it is an aircraft not specified in Paragraph 11.2.3.9(c)(1)(ii) of this subsection, have had within the preceding 100 hours of time in service a 100-hour or annual inspection by a person authorised in accordance with Part 8 of the Schedule or have been inspected under a progressive inspection system; and
 - (ii) If it is a large or turbine-powered multi-engine civil airplane of Grenada registry, have been inspected in accordance with the applicable inspection programme requirements of Part 8 of these regulations.
 - (2) Except for helicopters, each aircraft shall be equipped with a device capable of jettisoning at least one-half of the aircraft's maximum authorised load of agricultural material within 45 seconds. If the aircraft is equipped with a device for releasing the tank or hopper as a unit, there shall be a means to prevent inadvertent release by the pilot or other crew members.

11.2.3.10 AVAILABILITY OF CERTIFICATE

- (a) Each holder of an agricultural aircraft operator certificate shall keep that certificate at the main base of operations and shall present it for inspection on the request of the Authority or any government law enforcement officer.

11.2.4 RECORDS AND REPORTS**11.2.4.1 RECORDS: COMMERCIAL AGRICULTURAL AIRCRAFT OPERATOR**

- (a) A holder of a commercial agricultural aircraft operator certificate shall maintain and keep current, at the main base of operations designated in its application, the following records—
- (1) The name and address of each person for whom agricultural aircraft services were provided;
 - (2) The date of the service;
 - (3) The name and quantity of the material dispensed for each operation conducted; and
 - (4) The name, address, and licence number of each pilot used in agricultural aircraft operations and the date that pilot met the knowledge and skill requirements of this subpart.
- (b) The records required by this section shall be kept for at least 12 months and shall be made available for inspection by the Authority upon request.

11.2.4.2 CHANGE OF ADDRESS

- (a) A holder of an agricultural aircraft operator certificate shall notify the Authority in writing in advance of any change in the address of its main base of operations.

11.2.4.3 TERMINATION OF OPERATIONS

- (a) Whenever a person who holds a certificate ceases operations under this part, he or she shall surrender that certificate to the designated office of the Authority.

11.3 ROTORCRAFT EXTERNAL-LOAD OPERATIONS**11.3.1 GENERAL****11.3.1.1 APPLICABILITY**

- (a) This subpart prescribes—
- (1) Airworthiness requirements for rotorcraft used in external-load operations; and

- (2) Operating and certification rules governing the conduct of rotorcraft external-load operations in Grenada.
- (b) The certification requirements of this part shall not apply to—
 - (1) Rotorcraft manufacturers when developing external-load attaching means;
 - (2) Manufacturers demonstrating compliance of equipment utilised under this part;
 - (3) Operations conducted by a person demonstrating compliance for the issuance of a certificate under this part;
 - (4) Training flights conducted in preparation for the demonstration of compliance with this part; or
 - (5) A local or national government conducting operations with public aircraft.
- (c) For the purpose of this part, a person other than a crew member or a person who is essential and directly connected with the external-load operation may be carried only in approved Class D rotorcraft-load combinations.

11.3.2 CERTIFICATION RULES

11.3.2.1 CERTIFICATE REQUIRED

- (a) A person subject to this part shall not conduct rotorcraft external-load operations within Grenada without, or in violation of the special limitations and specific approvals of, a rotorcraft external-load operator certificate issued by the Authority.

11.3.2.2 DURATION OF CERTIFICATE

- (a) Unless sooner surrendered, suspended, or revoked, a rotorcraft external-load operator certificate shall expire at the end of the 24th month after the month in which it is issued or renewed.

11.3.2.3 APPLICATION FOR CERTIFICATE ISSUANCE OR RENEWAL

- (a) Application for an original certificate or renewal of a certificate issued under this part shall be made on a form and in a manner prescribed by the Authority.

11.3.2.4 CERTIFICATION REQUIREMENTS

- (a) The Authority shall issue a rotorcraft external-load operator certificate to an applicant that meets the requirements of this subpart for that certificate.
- (b) The Authority shall issue authorisation to operate specified rotorcraft with those classes of rotorcraft-load combinations for which the applicant or certificate holder qualifies under the applicable requirements of this subpart.

11.3.2.5 ROTORCRAFT

- (a) An applicant shall have the exclusive use of at least one rotorcraft that—
 - (1) Is type certificated under, and meets the requirements of, those regulations that prescribe requirements for rotorcraft external-load operations;
 - (2) Complies with the certification requirements in this subpart that apply to the rotorcraft-load combinations for which authorisation is requested; and
 - (3) Has a valid certificate of registration and a valid standard or restricted category certificate of airworthiness.
- (b) For the purposes of this subsection, a person has exclusive use of a rotorcraft if he or she has sole possession, control, and use of it for flight, as owner, or has a written agreement (including arrangements for the performance of required maintenance) giving him or her that possession, control, and use for at least 6 consecutive months.
- (c) For the purposes of this subsection, Class A, B, C, and D are defined in Part 1, Paragraph 1.1.1.3(a)(530) of the Schedule under rotorcraft-load combinations.

11.3.2.6 PERSONNEL

- (a) An applicant shall hold, or shall have available the services of at least one person who holds, a current CPL or ATPL issued by the Authority, with a rating appropriate for the rotorcraft to be used.
- (b) An applicant shall designate one pilot, who may be the applicant, as chief pilot for rotorcraft external-load operations.

- (c) An applicant may designate qualified pilots as assistant chief pilots to perform the functions of the chief pilot when the chief pilot is not readily available.
- (d) The chief pilot and assistant chief pilots shall be acceptable to the Authority, and each shall hold a current CPL or ATPL, with a rating appropriate for the rotorcraft to be used.
- (e) The holder of a rotorcraft external-load operator certificate shall report any change in designation of chief pilot or assistant chief pilot immediately to the Authority.
- (f) A newly designated chief pilot shall comply with the knowledge and skill requirements of this subpart within 30 days or the operator shall not conduct further operations under the rotorcraft external-load operator certificate, unless otherwise authorised by the Authority.

11.3.2.7 AMENDMENT OF CERTIFICATE

- (a) The holder of a rotorcraft external-load operator certificate may apply to the Authority for an amendment of the certificate to add or delete a rotorcraft-load combination authorisation.
- (b) The holder of a rotorcraft external-load operator certificate may apply for an amendment to add or delete a rotorcraft-load combination authorisation by submitting to the Authority a new list of rotorcraft, by registration number, with the classes of rotorcraft-load combinations for which authorisation is requested.

11.3.2.8 AVAILABILITY, TRANSFER, AND SURRENDER OF CERTIFICATE

- (a) The holder of a rotorcraft external-load operator certificate shall keep that certificate and a list of authorised rotorcraft at the main base of operations and shall make it available for inspection by the Authority upon request.
- (b) A person conducting a rotorcraft external-load operation shall carry a copy of the rotorcraft external-load operator certificate in each rotorcraft used in the operation.
- (c) The holder of a rotorcraft external-load operator certificate shall return the certificate to the Authority—
 - (1) If the Authority suspends or revokes the certificate; or

- (2) If the certificate holder discontinues operations under the certificate and does not resume operations within 2 years.

11.3.3 OPERATING RULES AND RELATED REQUIREMENTS

11.3.3.1 OPERATING RULES

- (a) A person shall not conduct a rotorcraft external-load operation without, or contrary to, the Rotorcraft-Load Combination Flight Manual prescribed in Section 11.3.4.4 of this part.
- (b) A person shall not conduct a rotorcraft external-load operation unless—
 - (1) The rotorcraft complies with Section 11.3.2.5 of this part; and
 - (2) The rotorcraft and rotorcraft-load combination are authorised under the rotorcraft external-load operator certificate.
- (c) Before a person shall operate a rotorcraft with an external-load configuration that differs substantially from any that person has previously carried with that type of rotorcraft (whether or not the rotorcraft-load combination is of the same class), that person shall conduct, in a manner that shall not endanger persons or property on the surface, those of the following flight operational checks that the Authority determines are appropriate to the rotorcraft-load combination—
 - (1) Make a determination that the mass of the rotorcraft-load combination and the location of its CG are within approved limits and that the external load is securely fastened and does not interfere with devices provided for its emergency release.
 - (2) Make an initial lift-off and verify that controllability is satisfactory.
 - (3) While hovering, verify that directional control is adequate.
 - (4) Accelerate into forward flight to verify that no attitude (whether of the rotorcraft or of the external load) is encountered in which the rotorcraft is uncontrollable or which is otherwise hazardous.
 - (5) In forward flight, check for hazardous oscillations of the external load, but if the external load is not visible to the pilot, other crew members or ground personnel may make this check and signal the pilot.

- (6) Increase the forward airspeed and determine an operational airspeed at which no hazardous oscillation or hazardous aerodynamic turbulence is encountered.
- (d) Notwithstanding the requirements of Part 8 of these regulations, the holder of a rotorcraft external-load operator certificate may conduct rotorcraft external-load operations over congested areas if those operations are conducted without hazard to persons or property on the surface and comply with the following—
 - (1) The operator shall develop a plan for each complete operation and shall obtain approval for the operation from the Authority; and

Note: The plan shall include an agreement with the appropriate political subdivision that local officials will exclude unauthorised persons from the area in which the operation will be conducted; coordination with ATC, if necessary; and a detailed chart depicting the flight routes and altitudes.

- (2) Each flight shall be conducted at an altitude, and on a route, that shall allow a jettisonable external load to be released and the rotorcraft to be landed in an emergency without hazard to persons or property on the surface.
- (e) Notwithstanding the requirements of Part 8 of these regulations, and except as provided by Paragraph 11.3.4.3(a)(4) of this part, the holder of a rotorcraft external-load operator certificate may conduct external-load operations, including approaches, departures, and load-positioning manoeuvres necessary for the operation, below 500 ft above the surface and closer than 500 ft to persons, vessels, vehicles, and structures, if the operations are conducted without creating a hazard to persons or property on the surface.
- (f) A person shall not conduct rotorcraft external-load operations under IFR unless specifically approved by the Authority. However, under no circumstances may a person be carried as part of the external-load under IFR.

11.3.3.2 CARRIAGE OF PERSONS

- (a) A certificate holder shall not allow a person to be carried during rotorcraft external-load operations unless that person—
 - (1) Is a flight crew member;

- (2) Is a flight crew member trainee;
 - (3) Performs an essential function in connection with the external-load operation; or
 - (4) Is necessary to accomplish the work activity directly associated with that operation.
- (b) The PIC shall ensure that all persons are briefed before take-off on all pertinent procedures to be followed (including normal, abnormal, and emergency procedures) and equipment to be used during the external load operation.

11.3.3.3 CREW MEMBER TRAINING, CURRENCY, AND TESTING REQUIREMENTS

- (a) A certificate holder shall not use, nor shall a person serve as, a pilot in rotorcraft external-load operations unless that person—
 - (1) Has successfully demonstrated to the Authority knowledge and skill with respect to the rotorcraft load combination; and
 - (2) Has in his or her personal possession a letter of competency or an appropriate logbook entry indicating compliance with Paragraph 11.3.3.3(a)(1) of this section.
- (b) A certificate holder shall not use, nor shall a person serve as, a crew member or other operations personnel in Class D operations unless within the preceding 12 calendar months that person has successfully completed either an approved initial or continuation training programme.
- (c) Notwithstanding Paragraph 11.3.3.3(b) of this section, a person who has performed a rotorcraft external load operation of the same class and in an aircraft of the same type within the past 12 calendar months need not undergo continuation training.

11.3.4 AIRWORTHINESS REQUIREMENTS

11.3.4.1 FLIGHT CHARACTERISTICS REQUIREMENTS

- (a) The applicant shall demonstrate to the Authority, by performing the following operational flight checks, as applicable, that the rotorcraft-load combination has satisfactory flight characteristics, unless these operational flight checks have been demonstrated previously

and the rotorcraft-load combination flight characteristics were satisfactory. For the purposes of this demonstration, the external-load mass (including the external-load attaching means) is the maximum mass for which authorisation is requested.

- (b) CLASS A ROTORCRAFT-LOAD COMBINATIONS. The operational flight check shall consist of at least the following manoeuvres—
 - (1) Take-off and landing;
 - (2) Demonstration of adequate directional control while hovering;
 - (3) Acceleration from a hover; and
 - (4) Horizontal flight at airspeeds up to the maximum airspeed for which authorisation is requested.
- (c) CLASS B AND CLASS D ROTORCRAFT-LOAD COMBINATIONS. The operational flight check shall consist of at least the following manoeuvres—
 - (1) Pickup of the external load;
 - (2) Demonstration of adequate directional control while hovering;
 - (3) Acceleration from a hover;
 - (4) Horizontal flight at airspeeds up to the maximum airspeed for which authorisation is requested;
 - (5) Demonstration of appropriate lifting device operation; and
 - (6) Manoeuvring of the external load into release position and release of the external load, under probable flight operation conditions, by means of each of the quick-release controls installed on the rotorcraft.
- (d) CLASS C ROTORCRAFT-LOAD COMBINATIONS. For Class C rotorcraft-load combinations used in wire-stringing, cable-laying, or similar operations, the operational flight check shall consist of the manoeuvres, as applicable, prescribed in Paragraph 11.3.4.1(c) of this section.

11.3.4.2 STRUCTURES AND DESIGN

- (a) EXTERNAL-LOAD ATTACHING MEANS. Each external-load attaching means shall be approved by the Authority.
- (b) QUICK-RELEASE DEVICES. Each quick-release device shall be approved by the Authority.
- (c) MASS AND CENTRE OF GRAVITY.
 - (1) MASS. The total mass of the rotorcraft-load combination shall not exceed the total mass approved for the rotorcraft during its type certification.
 - (2) CG. The location of the CG shall, for all loading conditions, be within the range established for the rotorcraft during its type certification. For Class C rotorcraft-load combinations, the magnitude and direction of the loading force shall be established at those values for which the effective location of the CG remains within its established range.

11.3.4.3 OPERATING LIMITATIONS

- (a) In addition to the operating limitations set forth in the manufacturer's approved Rotorcraft Flight Manual, and to any other limitations the Authority may prescribe, the operator shall establish at least the following limitations and shall set them forth in its Rotorcraft-Load Combination Flight Manual for rotorcraft-load combination operations—
 - (1) The rotorcraft-load combination shall be operated only within the mass and CG limitations established in accordance with this subpart;
 - (2) The rotorcraft-load combination shall not be operated with an external-load mass exceeding that used in showing compliance with this subpart;
 - (3) The rotorcraft-load combination shall not be operated at airspeeds greater than those established in accordance with this subpart;
 - (4) A person shall not conduct an external-load operation under this part with a rotorcraft type certificated in the restricted category over a densely populated area, in a congested airway, or near a busy aerodrome where passenger transport operations are conducted; and

- (5) The rotorcraft-load combination of Class D shall be conducted only in accordance with the following—
 - (i) The rotorcraft to be used shall be type certificated under transport Category A for the operating mass and shall provide hover capability with one engine inoperative at that operating mass and altitude;
 - (ii) The rotorcraft shall be equipped to allow direct radio intercommunication among required crew members;
 - (iii) The personnel lifting device shall be approved by the Authority; and
 - (iv) The lifting device shall have an emergency release requiring two distinct actions.

11.3.4.4 ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL

- (a) The applicant shall prepare a Rotorcraft-Load Combination Flight Manual and shall submit it for approval by the Authority. The limiting height-speed envelope data need not be listed as operating limitations. The manual shall set forth—
 - (1) Operating limitations, procedures (normal and emergency), performance, and other information established under this subpart;
 - (2) The class of rotorcraft-load combinations for which the airworthiness of the rotorcraft has been demonstrated in accordance with this subpart; and
 - (3) In the information section of the Rotorcraft-Load Combination Flight Manual—
 - (i) Information on any peculiarities discovered when operating particular rotorcraft-load combinations;
 - (ii) Precautionary advice regarding static electricity discharges for Class B, Class C, and Class D rotorcraft-load combinations; and
 - (iii) Any other information essential for safe operation with external loads.

11.3.5 MARKINGS AND PLACARDS

- (a) The following markings and placards shall be displayed conspicuously and shall be such that they cannot be easily erased, disfigured, or obscured—
 - (1) A placard (displayed in the flight deck or cabin) stating the class of rotorcraft-load combination and the occupancy limitation for which the rotorcraft has been approved; and
 - (2) A placard, marking, or instruction (displayed next to the external-load attaching means) stating the maximum external load approved.

11.4 GLIDER TOWING**11.4.1.1 APPLICABILITY**

- (a) This subpart applies to those operations involving towing gliders by aircraft.

11.4.1.2 CERTIFICATE OR EQUIVALENT AUTHORISATION REQUIRED

- (a) The Authority shall require a person conducting operations in accordance with this subpart to hold a certificate or equivalent authorisation.
- (b) The Authority shall issue a certificate or equivalent authorisation to an applicant that meets the requirements of this subpart for that certificate or authorisation.

11.4.1.3 AIRCRAFT REQUIREMENTS

- (a) A person shall not operate an aircraft that is towing a glider unless—
 - (1) The aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness; and
 - (2) The towline used has a breaking strength not less than 80 per cent of the maximum certificated operating mass of the glider and not more than twice the maximum certificated operating mass.
 - (3) The towline used may have a breaking strength more than twice the maximum certificated operating mass of the glider if—

- (i) The PIC of the towing aircraft is qualified under Part 2 of these regulations;
- (ii) A safety link is installed at the point of attachment of the towline to the glider with a breaking strength not less than 80 per cent of the maximum certificated operating mass of the glider and not greater than twice this operating mass; or
- (iii) A safety link is installed at the point of attachment of the towline to the towing aircraft with a breaking strength greater, but not more than 25 per cent greater, than that of the safety link at the towed glider end of the towline and not greater than twice the maximum certificated operating mass of the glider.

11.4.1.4 EXPERIENCE AND TRAINING REQUIREMENTS

- (a) A person shall not act as a PIC for towing a glider unless that person has—
 - (1) At least a PPL with a category rating for the tow aircraft;
 - (2) Logged at least 100 hours of PIC time in the same aircraft category, class, and type, if applicable, as the tow aircraft;
 - (3) Received training in and an instructor endorsement for—
 - (i) The techniques and procedures essential to the safe towing of gliders, including airspeed limitations;
 - (ii) Emergency procedures;
 - (iii) Signals used; and
 - (iv) Maximum angles of bank;
 - (4) Except as provided in Paragraph 11.4.1.4(b) of this section, completed at least three flights as the sole manipulator of the controls of an aircraft towing a glider or simulating glider-towing flight procedures while accompanied by a pilot who meets the requirements of this subsection;
 - (5) Except as provided in Paragraph 11.4.1.4(b) of this section, received a logbook endorsement from the pilot, described in Paragraph 11.4.1.4(a)(4) of this section, certifying that the person has accomplished at least three flights in an aircraft while towing a glider; and

- (6) Within the preceding 12 months—
 - (i) Made at least three actual glider tows while accompanied by a qualified pilot who meets the requirements of this subsection; or
 - (ii) Made at least three flights as PIC of a glider towed by an aircraft.
- (b) The pilot, described in Paragraph 11.4.1.4(a)(4) of this section, who endorses the logbook of a person seeking glider-towing privileges shall have—
 - (1) Met the requirements of this section prior to endorsing the logbook of the person seeking glidertowing privileges; and
 - (2) Logged at least 10 flights as PIC of an aircraft while towing a glider.
- (c) If the pilot described in Paragraph 11.4.1.4(a)(4) of this section holds only a PPL, then that pilot shall have—
 - (1) Logged at least 100 hours of PIC time in aeroplanes or 200 hours of PIC time in a combination of powered and other-than-powered aircraft; and
 - (2) Performed and logged at least three flights within the 12 calendar months preceding the month that the pilot accompanies or endorses the logbook of a person seeking glider-towing privileges—
 - (i) In an aircraft while towing a glider accompanied by another pilot who meets the requirements of this section; or
 - (ii) As PIC of a glider being towed by another aircraft.

11.4.1.5 OPERATING RULES

- (a) A pilot shall not conduct any towing operation in controlled airspace until he or she has received the appropriate clearance from the ATC service.
- (b) A pilot shall not conduct any towing operation in uncontrolled airspace until he or she has notified the appropriate Authority for such activity to be entered into the NOTAM service of Grenada.

- (c) A pilot shall not engage in towing operations, either as the pilot of the towing aircraft or as the pilot of the towed glider, until all pilots have agreed upon a general course of action, including take-off and release signals, airspeeds, and emergency procedures for each pilot.
- (d) A pilot of a civil aircraft shall not intentionally release a towline, after release of a glider, in a manner that endangers the life or property of another.

11.5 BANNER TOWING

11.5.1.1 APPLICABILITY

- (a) This subpart applies to those operations involving towing aircraft banners or other signs, lit or unlit.

11.5.1.2 CERTIFICATE OR EQUIVALENT AUTHORISATION REQUIRED

- (a) The Authority shall require each person conducting operations in accordance with this subpart to hold a certificate or equivalent authorisation.
- (b) The Authority shall issue a certificate or equivalent authorisation to an applicant that meets the requirements of this subpart for that certificate or authorisation.
- (c) A helicopter operating under the requirements of Subpart 11.3 may tow a banner using an external-load attaching means without a certificate or equivalent authorisation only if the operator has at least a Class B authorisation on the operating certificate.

11.5.1.3 AIRCRAFT REQUIREMENTS

- (a) A person shall not operate an aircraft that is towing a banner unless the aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness.
- (b) A person shall not operate a helicopter that is towing a banner unless the helicopter has a means to prevent the banner from becoming entangled in the helicopter's tail rotor during all phases of flight, including autorotations.

Note: The only way to prevent the banner from tangling in the tail rotor during autorotation may be to jettison the banner.

11.5.1.4 EXPERIENCE AND TRAINING REQUIREMENTS

- (a) For non-revenue flights, the pilot of the tow aircraft shall hold at least a valid PPL and shall have a minimum of 200 hours PIC time.
- (b) When banner-towing operations are conducted for compensation or hire, the pilot shall have at least a CPL (instrument rating not required) and at least a valid second-class medical certificate.
- (c) All pilots engaged in banner-towing operations shall demonstrate competence to the Authority by performing at least one pickup and drop of the maximum number of letters (panels) to be used by the certificate holder.

Note: This demonstration should be observed from the ground to allow the inspector to evaluate the competence of any essential ground personnel as well as the flight operation.

11.5.1.5 OPERATING RULES

- (a) All banner-towing operations shall be conducted only—
 - (1) In VFR weather conditions as described in Part 8 of these regulations; and
 - (2) Between the hours of official sunrise and official sunset.
- (b) A person shall not conduct banner-towing operations:
 - (1) Over congested areas or open-air assemblies of persons lower than 1 000 ft; and
 - (2) Elsewhere lower than the minimum safe altitude requirements of Part 8 of these regulations.
- (c) Helicopters may be operated at less than the minimums prescribed in paragraph 11.5.1.5(b) of this subsection if the operation is conducted without hazard to persons or property on the surface.
- (d) The certificate holder shall obtain the aerodrome manager's approval to conduct banner-towing operations.
- (e) If banner-towing operations take place at an aerodrome with a control tower, the certificate holder shall inform that control tower of the time of the banner-towing operation.

- (f) The certificate holder shall notify the appropriate aerodrome officials in advance when banner-towing operations will be in close proximity to an uncontrolled aerodrome.
- (g) Only essential crew members shall be carried when conducting banner-towing operations.
- (h) When banner-towing operations are conducted over congested areas, the pilot shall exercise due care, so that an emergency release of the banner and/or tow rope shall not cause undue hazard to persons or property on the surface.
- (i) A pilot shall drop the tow rope in a predesignated area at least 500 ft from persons, buildings, parked automobiles, and aircraft.

Note: If the tow plane lands with the rope attached, due care shall be exercised to avoid trailing the rope and endangering other aircraft in the air or persons, property, or aircraft on the surface.

- (j) Each pilot conducting banner-towing operations shall carry on board the aircraft a current copy of the certificate or equivalent authorisation allowing banner-towing operations.

11.6 MOTION PICTURE AND TELEVISION FILMING OPERATIONS

11.6.1.1 APPLICABILITY

- (a) This subpart applies to those operations involving motion picture and television filming, appearance inflight in motion pictures, and airborne direction or production of such filming when those operations are conducted as part of a business enterprise or for compensation or hire.
- (b) For purposes of this subpart, “motion picture” shall include film, videos, and live broadcast in any format and the preparation and rehearsal for those operations.

11.6.1.2 CERTIFICATE OR EQUIVALENT AUTHORISATION REQUIRED

- (a) The Authority shall require each person conducting operations in accordance with this subpart to hold a certificate or equivalent authorisation.
- (b) The Authority shall issue a certificate or equivalent authorisation to an applicant that meets the requirements of this subpart for that certificate or authorisation.

11.6.1.3 AIRCRAFT REQUIREMENT

- (a) In order to be used in motion picture and television filming operations, an aircraft in the experimental category shall have a certificate of airworthiness issued to it for the purpose of exhibition.

11.6.1.4 EXPERIENCE AND TRAINING REQUIREMENTS

- (a) A pilot shall not conduct motion picture and television filming operations unless that pilot has—
 - (1) A CPL with ratings appropriate to the category, class, and type of aircraft to be used under the terms of the authorisation;
 - (2) At least 500 hours as PIC, including—
 - (i) At least 20 hours as PIC in the aircraft type;
 - (ii) A minimum of 100 hours in the category and class of aircraft to be used;
 - (iii) A minimum of 5 hours as PIC in the make and model of aircraft to be used under the authorisation; and
 - (iv) If the pilot intends to perform acrobatics below 1 500 ft AGL, the pilot shall hold a Statement of Acrobatic Competency for the operations to be performed.

11.6.1.5 OPERATING RULES

- (a) An operator shall conduct motion picture and television filming operations so as not to endanger persons or property on the surface or aircraft in flight.
- (b) An operator shall obtain a certificate or equivalent authorisation from the Authority if filming sequences require an aircraft to be flown—
 - (1) In acrobatic flight below 1 500 ft AGL;
 - (2) Over a congested area;
 - (3) In controlled airspace; or
 - (4) In other instances where a departure from the requirements of Part 8 of these regulations is needed.

- (c) The holder of the certificate or equivalent authorisation shall provide a schedule of events that lists the:
 - (1) Identification of the aircraft; and
 - (2) Performers in the sequence of their appearance.
- (d) Any manoeuvres added or time changes made to the schedule of events shall be approved by the Authority.
- (e) The holder of the certificate or equivalent authorisation shall develop, have approved by the Authority, and comply with a Motion Picture and Television Filming Operations Manual.
- (f) When conducting any motion picture or television filming operation requiring a certificate or equivalent authorisation, the holder of the certificate or authorisation shall ensure that all reasonable efforts are made to confine spectators to designated areas. If reasonable efforts have been taken and unauthorised persons or vehicles enter the airspace where manoeuvres are being performed during the filming production event, efforts shall be made to remove those persons or vehicles.

11.6.1.6 CONTENTS OF A MOTION PICTURE AND TELEVISION OPERATIONS MANUAL

- (a) Each Motion Picture and Television Operations Manual shall contain at least the following—
 - (1) COMPANY ORGANISATION.
 - (i) The business name, address, and telephone number of the applicant;
 - (ii) A list of pilots involved in the filming production, including their pilot licence numbers, grade and class, and date of medical certification; and
 - (iii) A list of aircraft by make and model.
 - (2) DISTRIBUTION AND REVISION. Procedures for revising the manual to ensure that it is kept current and procedures for the distribution of the manual to concerned personnel.
 - (3) PERSONS AUTHORISED. Procedures for ensuring that no persons, except those persons consenting to be involved and necessary for the filming production, are allowed within 150 m (500 ft) of the filming production area.

- (4) AREA OF OPERATIONS. The area that shall be used during the term of the authorisation.
- (5) PLAN OF ACTIVITIES. Procedures for the submission, within 3 days of scheduled filming, of a written plan of activities to the Authority, including at least the following—
 - (i) Dates and times for all flights;
 - (ii) The name and phone number of the person responsible for the filming production event;
 - (iii) The make and model of aircraft to be used and the type of certificate of airworthiness, including category;
 - (iv) The names of pilots involved in the filming production event;
 - (v) A statement that permission to conduct the filming production event has been obtained from property owners and/or local officials;
 - (vi) The signature of the certificate holder or a designated representative; and
 - (vii) A general outline, or summary, of the production schedule, to include maps or diagrams of the specific filming location, if necessary.
- (6) PERMISSION TO OPERATE. Requirements and procedures for obtaining permission from property owners and/or local officials (e.g., police, fire department), as appropriate for the conduct of all filming productions when using the Certificate or equivalent authorisation.
- (7) SECURITY. The method of security that shall be used to exclude from the location all persons not directly involved with the operation.

Note: This shall include the requirement used to stop activities when unauthorised persons, vehicles, and/or aircraft enter the operations area, or for any other reason, in the interest of safety.

- (8) BRIEFING OF PILOT/PRODUCTION PERSONNEL. Procedures for briefing personnel on the risks involved and on emergency procedures and safeguards to be followed during the filming production event.

- (9) CERTIFICATION/AIRWORTHINESS. Procedures for ensuring that required inspections will be conducted.
- (10) COMMUNICATIONS. Procedures for communicating with all participants during the actual operation and filming.

Note: The applicant may use oral, visual, and/or radio communications, as long as participants are continuously apprised of the current status of the operation.

- (11) ACCIDENT AND INCIDENT NOTIFICATION. Procedures for receiving notification of and reporting accidents and incidents.

11.7 SIGHTSEEING FLIGHTS

11.7.1.1 APPLICABILITY

- (a) This subpart applies to those operations involving the carriage of persons for viewing natural formations, manmade objects, or wildlife on the ground when—
 - (1) Those operations are conducted as part of a business enterprise or for compensation or hire;
 - (2) The flight is unquestionably advertised as “sightseeing”;
 - (3) The flight returns to the aerodrome of departure without having landed at any other aerodrome;
 - (4) The flight is conducted within a 25-statute-mile radius of the departure aerodrome; and
 - (5) The certificated passenger capacity of the aircraft does not exceed nine passengers.

Note: Any other passenger-carrying flight for remuneration, hire, or valuable consideration shall be conducted under an air operator certificate in accordance with Part 9 of these regulations.

11.7.1.2 CERTIFICATE OR EQUIVALENT AUTHORISATION REQUIRED

- (a) The Authority shall require each person conducting operations in accordance with this subpart to hold a certificate or equivalent authorisation.
- (b) The Authority shall issue a certificate or equivalent authorisation to an applicant that meets the requirements of this subpart for that certificate or authorisation.

- (c) An operator under this Subpart shall hold an operating certificate issued under the provisions of Part 9.

11.7.1.3 EXPERIENCE AND TRAINING REQUIREMENTS

- (a) A pilot shall not conduct sightseeing operations unless that pilot has—
 - (1) At least a CPL with ratings appropriate to the category, class, and type of aircraft to be used under the terms of the certificate or equivalent authorisation;
 - (2) At least 500 hours as PIC, including—
 - (i) At least 20 hours as PIC in the aircraft type;
 - (ii) A minimum of 100 hours in the category and class of aircraft to be used; and
 - (iii) A minimum of 5 hours as PIC in the make and model of aircraft to be used under the certificate or equivalent authorisation.

11.7.1.4 OPERATING RULES

- (a) An operator shall conduct operations so as not to endanger persons or property on the surface or aircraft in flight.
- (b) All sightseeing operations shall be conducted only—
 - (1) In VFR weather conditions; and
 - (2) Between the hours of official sunrise and official sunset.
- (c) A person shall not conduct sightseeing operations —
 - (1) Over congested areas or open-air assemblies of persons lower than 1 000 ft; and
 - (2) Elsewhere lower than the minimum safe altitude requirements of Part 8 of the Schedule
- (d) In addition to any operational or equipment requirements of this subpart for manned free balloon operation, the following equipment is required for specific types of manned free balloon operation—

- (1) For all balloons, an altimeter and a rate-of-climb indicator;
- (2) For hot air balloons—
 - (i) If fuel cells are used, a means (e.g., fuel quantity gauge) to indicate to the crew the quantity of fuel in each cell during flight, calibrated in appropriate units or in per cent of fuel cell capacity; and
 - (ii) An envelope temperature indicator; and.
- (3) For captive gas balloons, a compass.
- (e) In addition to any requirements of this section for a specific type of tethered or moored balloon operation, the requirements of Part 8, Subpart 8.8 apply.
- (f) The requirements of Part 8 of the Schedule apply to sightseeing operations described by this subpart.

11.8 FISH SPOTTING

11.8.1.1 APPLICABILITY

- (a) This subpart applies to those operations involving locating, tracking, and reporting on the location of fish and fish schools, when those operations are conducted as part of a business enterprise or for compensation or hire.

11.8.1.2 CERTIFICATE OR EQUIVALENT AUTHORISATION REQUIRED

- (a) The Authority shall require each person conducting operations in accordance with this section to hold a certificate or equivalent authorisation.
- (b) The Authority shall issue a certificate or equivalent authorisation to an applicant that meets the requirements of this section for that certificate or authorisation.

11.8.1.3 EXPERIENCE AND TRAINING REQUIREMENT

- (a) A pilot shall not conduct fish spotting operations unless that pilot has—

- (1) At least a CPL with ratings appropriate to the category and class of aircraft to be used under the terms of the Certificate or equivalent authorisation;
- (2) At least 500 hours as PIC, including:
 - (i) A minimum of 100 hours in the category and class of aircraft to be used;
 - (ii) A minimum of 25 hours as PIC the category and class of aircraft to be used; and
 - (iii) A minimum of 5 hours as PIC in the make and model of aircraft to be used under the Certificate or equivalent authorisation.

11.8.1.4 OPERATING RULES

- (a) An operator shall conduct operations so as not to endanger persons or property on the surface or aircraft in flight.
- (b) Minimum cloud clearance requirements and minimum altitude requirements of Part 8 of these regulations do not apply to those persons to whom the Authority has specifically approved different minimums as a part of a certificate or equivalent authorisation under Subpart 11.8 of this part.

11.9 NEWS MEDIA AND TRAFFIC REPORTING

11.9.1.1 APPLICABILITY

- (a) This subpart applies to those operations involving observation of, and reporting on, news media events and/or vehicular traffic conditions on the highways and streets, when conducted by aircraft or airmen, or both.

11.9.1.2 CERTIFICATE OR EQUIVALENT AUTHORISATION REQUIRED

- (a) The Authority shall require each person conducting operations in accordance with this section to hold a certificate or equivalent authorisation.
- (b) The Authority shall issue a certificate or equivalent authorisation to an applicant that meets the requirements of this section for that certificate or authorisation.

11.9.1.3 EXPERIENCE AND TRAINING REQUIREMENTS

- (a) A pilot shall not conduct news media or traffic reporting operations unless that pilot has—
 - (1) At least a CPL with ratings appropriate to the category, class, and type of aircraft to be used under the terms of the Certificate or equivalent authorisation;
 - (2) At least 500 hours as PIC, including—
 - (i) At least 20 hours as PIC in the aircraft type;
 - (ii) A minimum of 100 hours in the category and class of aircraft to be used; and
 - (iii) A minimum of 5 hours in the make and model of aircraft to be used under the Certificate or equivalent authorisation.

11.9.1.4 OPERATING RULES

- (a) An operator shall conduct operations so as not to endanger persons or property on the surface nor aircraft in flight.
- (b) Minimum cloud clearance requirements and minimum altitude requirements of Part 8 of these regulations do not apply to those persons to whom the Authority has specifically approved different minimums as a part of a certificate or equivalent authorisation under Subpart 11.9 of this part.

Made by the Director General this 26th day of June, 2024.

MR. ANTHONY WHITTIER
*Director General,
Eastern Caribbean Civil Aviation Authority.*

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