ANNEX III

ORGANISATION REQUIREMENTS FOR AIR OPERATIONS
(PART-ORO)

SECTION 4 *Helicopters Operations*

ANNEX III

ORGANISATION REQUIREMENTS FOR AIR OPERATIONS
PART-ORO

ORO.GEN.005 Scope

This Annex establishes requirements to be followed by an air operator conducting:

(a) commercial air transport operations (CAT);

(b) commercial specialised operations;

(c) non-commercial operations with complex motor-powered aircraft;

(d) non-commercial specialised operations with complex motor-powered aircraft.

SUBPART GEN
GENERAL REQUIREMENTS

SECTION I
General

ORO.GEN.105 Competent authority

For the purpose of this Annex, Maldives Civil Aviation Authority is the competent authority and it shall be the authorityexercising oversight over operators subject to a certification or declarationobligation or specialised operation authorisation having their principal place of business in the Maldives.

ORO.GEN.110 Operator responsibilities

(a) The operator is responsible for the operation of the aircraft in accordance with Annex IV to this Regulation,the relevant requirements of this Annex and its Air Operator Certificate(AOC)or specialised operation authorisation (SPO authorisation)or declaration.

(b) Every flight shall be conducted in accordance with the provisions of the operations manual.

(c) The operator shall establish and maintain a system for exercising operational control over any flight operated under the terms of its certificateSPO authorisationor declaration.

(d) The operator shall ensure that its aircraft are equipped and its crews are qualified as required for the area and type of operation.

(e) The operator shall ensure that all personnel assigned to, or directly involved in, ground and flight operations are properly instructed, have demonstrated their abilities in their particular duties and are aware of their responsibilities and the relationship of such duties to the operation as a whole.

(f) The operator shall establish procedures and instructions for the safe operation of each aircraft type, containing ground staff and crew member duties and responsibilities for all types of operation on the ground and in flight. These procedures shall not require crew members to perform any activities during critical phases of flight other than those required for the safe operation of the aircraft.

(g) The operator shall ensure that all personnel are made aware that they shall comply with the laws, regulations and procedures of those States in which operations are conducted and that are pertinent to the performance of their duties.

(h) The operator shall establish a checklist system for each aircraft type to be used by crew members in all phases of flight under normal, abnormal and emergency conditions to ensure that the operating procedures in the operations manual are followed. The design and utilisation of checklists shall observe human factors principles and take into account the latest relevant documentation from the aircraft manufacturer.

(i) The operator shall specify flight planning procedures to provide 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 operating sites concerned. These procedures shall be included in the operations manual.

(j) The operator shall establish and maintain dangerous goods training programmes for personnel as required by the technical instructions which shall be subject to review and approval by MCAA. Training programmes shall commensurate with the responsibilities of personnel.

(k) Notwithstanding (j), the operator of a sailplane or a balloon or of flights taking off and landing at the same aerodrome or operating site, under VFR by day, with
  (i) single-engined propeller-driven aeroplanes having a maximum certified take-off mass of 5 700 kg or less and a MOPSC of 5 or less; or
  (ii) other than complex motor-powered helicopters, single-engined, with a MOPSC of 5 or less, shall ensure that the flight crew has received an appropriate training or briefing to enable them to recognise undeclared dangerous goods brought on-board by passengers or as cargo.

ORO.GEN.115 Application for an AOC

(a) The application for an air operator certificate or an amendment to an existing certificate shall be made in a form and manner established by MCAA, taking into account the applicable requirements of the Regulations and its Implementing Rules.

(b) Applicants for an initial certificate shall provide MCAA with documentation demonstrating how they will comply with the requirements established in the Regulations and its Implementing Rules. Such documentation shall include a procedure describing how changes not requiring prior approval will be managed and notified to MCAA.

ORO.GEN.120 Means of compliance

(a) Alternative means of compliance to those adopted by MCAA may be used by an operator to establish compliance with the Regulations and its Implementing Rules.

(b) When an operator subject to certification wishes to use an alternative means of compliance to the acceptable means of compliance (AMC) adopted by MCAA to establish compliance with Regulations and its Implementing Rules, it shall, prior to implementing it, provide MCAA with a full description of the alternative means of compliance. The description shall include any revisions to manuals or procedures that may be relevant, as well as an assessment demonstrating that the Implementing Rules are met.

The operator may implement these alternative means of compliance subject to prior approval by MCAA and upon receipt of the notification as prescribed in ARO.GEN.120 (d).

(c) An operator required to declare its activity shall notify to MCAA the list of alternative means of compliance it uses to establish compliance with this Regulation and its Implementing Rules.

(d) When an operator subject to SPO authorisation wishes to use alternative means of compliance, it shall comply with (b) whenever such alternative means of compliance affects the standard operating procedures that are part of the authorisation and with (c) for the declared part of its organisation and operation.

ORO.GEN.125 Terms of approval and privileges of an AOC holder

A certified operator shall comply with the scope and privileges defined in the operations specifications attached to the operator's certificate.

ORO.GEN.130 Changes related to an AOC holder

(a) Any change affecting:
(1) the scope of the certificate or the operations specifications of an operator; or
(2) any of the elements of the operator's management system as required in ORO.GEN.200(a)(1) and (a)(2),shall require prior approval by MCAA.

(b) For any changes requiring prior approval in accordance with Regulations and its Implementing Rules, the operator shall apply for and obtain an approval issued by MCAA. The application shall be submitted before any such change takes place, in order to enable MCAA to determine continued compliance with Regulations and its Implementing Rules and to amend, if necessary, the operator certificate and related terms of approval attached to it.

The operator shall provide MCAA with any relevant documentation.

The change shall only be implemented upon receipt of formal approval by MCAA in accordance with ARO.GEN.330.

The operator shall operate under the conditions prescribed by MCAA during such changes, as applicable.

(c) All changes not requiring prior approval shall be managed and notified to MCAA as defined in the procedure approved by MCAA in accordance with ARO.GEN.310(c).

ORO.GEN.135 Continued validity of an AOC

(a) The operator's certificate shall remain valid subject to:
(1) the operator remaining in compliance with the relevant requirements of Regulations and its Implementing Rules, taking into account the provisions related to the handling of findings as specified under ORO.GEN.150;
(2) MCAA being granted access to the operator as defined in ORO.GEN.140 to determine continued compliance with the relevant requirements of Regulations and its Implementing Rules; and
(3) the certificate not being surrendered or revoked.

(b) Upon revocation or surrender the certificate shall be returned to MCAA without delay.

ORO.GEN.140 Access

(a) For the purpose of determining compliance with the relevant requirements of Regulations and its Implementing Rules, the operator shall grant access at any time to any facility, aircraft, document, records, data, procedures or any other material relevant to its activity subject to certification, SPO authorisation or declaration, whether it is contracted or not, to any person authorised by one of the following authorities:
(1) the authority defined in ORO.GEN.105;
(2) the authority acting under the provisions of ARO.GEN.300(d), ARO.GEN.300(e) or ARO.RAMP.

(b) Access to the aircraft mentioned under (a), in the case of CAT, shall include the possibility to enter and remain in the aircraft during flight operations unless otherwise decided by the commander for the flight crew compartment in accordance with CAT.GEN.MPA.135 in the interest of safety.

ORO.GEN.150 Findings

After receipt of notification of findings, the operator shall:

(a) identify the root cause of the non-compliance;

(b) define a corrective action plan; and

(c) demonstrate corrective action implementation to the satisfaction of MCAA within a period agreed with that authority as defined in ARO.GEN.350(d).

ORO.GEN.155 Immediate reaction to a safety problem

The operator shall implement:

(a) any safety measures mandated by MCAA in accordance with ARO.GEN.135(c); and

(b) any relevant mandatory safety information issued by MCAA, including airworthiness directives.

ORO.GEN.160 Occurrence reporting

(a) The operator shall report to MCAA, and to any other organisation required by the State of the operator to be informed, any accident, serious incident and occurrence as defined in MCAR 12.

(b) Without prejudice to point (a) the operator shall report to MCAA and to the organisation responsible for the design of the aircraft any incident, malfunction, technical defect, exceeding of technical limitations, occurrence that would highlight inaccurate, incomplete or ambiguous information contained in data established or other irregular circumstance that has or may have endangered the safe operation of the aircraft and that has not resulted in an accident or serious incident.

(c) The reports referred in paragraphs (a) and (b) shall be made in a form and manner, established by MCAA and contain all pertinent information about the condition known to the operator.

(d) Reports shall be made as soon as practicable, but in any case within 72 hours of the operator identifying the condition to which the report relates, unless exceptional circumstances prevent this.

(e) Where relevant, the operator shall produce a follow-up report to provide details of actions it intends to take to prevent similar occurrences in the future, as soon as these actions have been identified. This report shall be produced in a form and manner established by MCAA.

SECTION 2
Management

ORO.GEN.200 Management system

(a) The operator shall establish, implement and maintain a management system that includes:
  (1) clearly defined lines of responsibility and accountability throughout the operator, including a direct safety accountability of the accountable manager;
  (2) a description of the overall philosophies and principles of the operator with regard to safety, referred to as the safety policy;
  (3) the identification of aviation safety hazards entailed by the activities of the operator, their evaluation and the management of associated risks, including taking actions to mitigate the risk and verify their effectiveness;
  (4) maintaining personnel trained and competent to perform their tasks;
  (5) documentation of all management system key processes, including a process for making personnel aware of their responsibilities and the procedure for amending this documentation;
  (6) a function to monitor compliance of the operator with the relevant requirements. Compliance monitoring shall include a feedback system of findings to the accountable manager to ensure effective implementation of corrective actions as necessary; and
  (7) any additional requirements that are prescribed in the relevant Subparts of this Annex or other applicable Annexes.

(b) The management system shall correspond to the size of the operator and the nature and complexity of its activities, taking into account the hazards and associated risks inherent in these activities.

ORO.GEN.205 Contracted activities

(a) The operator shall ensure that when contracting or purchasing any part of its activity, the contracted or purchased service or product conforms to the applicable requirements.

(b) When the certified operator or the SPO authorisation holder contracts any part of its activity to an organisation that is not itself certified or authorised in accordance with this Part to carry out such activity, the contracted organisation shall work under the approval of the operator. The contracting organisation shall ensure that MCAA is given access to the contracted organisation, to determine continued compliance with the applicable requirements.

ORO.GEN.210 Personnel requirements

(a) The operator shall appoint an accountable manager, who has the authority for ensuring that all activities can be financed and carried out in accordance with the applicable requirements. The accountable manager shall be responsible for establishing and maintaining an effective management system.

(b) A person or group of persons shall be nominated by the operator, with the responsibility of ensuring that the operator remains in compliance with the applicable requirements. Such person(s) shall be ultimately responsible to the accountable manager.

(c) The operator shall have sufficient qualified personnel for the planned tasks and activities to be performed in accordance with the applicable requirements.

(d) The operator shall maintain appropriate experience, qualification and training records to show compliance with point (c).

(e) The operator shall ensure that all personnel are aware of the rules and procedures relevant to the exercise of their duties.

ORO.GEN.215 Facility requirements

The operator shall have facilities allowing the performance and management of all planned tasks and activities in accordance with the applicable requirements.

ORO.GEN.220 Record-keeping

(a) The operator shall establish a system of record-keeping that allows adequate storage and reliable traceability of all activities developed, covering in particular all the elements indicated in ORO.GEN.200.

(b) The format of the records shall be specified in the operator's procedures.

(c) Records shall be stored in a manner that ensures protection from damage, alteration and theft.

SUBPART AOC
AIR OPERATOR CERTIFICATION

ORO.AOC.100 Application for an air operator certificate

(a) Prior to commencing commercial air transport operations, the operator shall apply for and obtain an air operator certificate (AOC) issued by MCAA.

(b) The operator shall provide the following information to MCAA:
(1) the official name and business name, address, and mailing address of the applicant;
(2) a description of the proposed operation, including the type(s), and number of aircraft to be operated;
(3) a description of the management system, including organisational structure;
(4) the name of the accountable manager;
(5) the names of the nominated persons required by ORO.AOC.135(a) together with their qualifications and experience;
(6) a copy of the operations manual required by ORO.MLR.100;
(7) a statement that all the documentation sent to MCAA have been verified by the applicant and found in compliance with the applicable requirements.

(c) Applicants shall demonstrate to MCAA that:
(1) they comply with all the applicable requirements of Annex IV to MCAR Air Operations, this Annex, Annex IV (Part-CAT) and Annex V (Part-SPA) to this Regulation;
(2) all aircraft operated have a certificate of airworthiness (CofA) in accordance with MCAR M; and
(3) its organisation and management are suitable and properly matched to the scale and scope of the operation.

ORO.AOC.105 Operations specifications and privileges of an AOC holder

The privileges of the operator, including those granted in accordance with Annex V (Part-SPA), shall be specified in the operations specifications of the certificate.

ORO.AOC.110 Leasing agreement

Any lease-in

(a) Any lease agreement concerning aircraft used by an operator certified in accordance with this Part shall be subject to prior approval by MCAA.

(b) The operator certified in accordance with this Part shall only wet lease-in aircraft from an operator that is not subject to an operating ban.

Wet lease-in

(c) The applicant for the approval of the wet lease-in of an aircraft of a third country operator shall demonstrate to MCAA that:
(1) the third country operator holds a valid AOC issued in accordance with ICAO Annex 6;
(2) the safety standards of the third country operator with regard to continuing airworthiness and air operations are equivalent to the applicable requirements established by these Regulations; and
(3) the aircraft has a standard CofA issued in accordance with ICAO Annex 8.

Dry lease-in

(d) An applicant for the approval of the dry lease-in of an aircraft registered in a third country shall demonstrate to MCAA that:
(1) an operational need has been identified that cannot be satisfied through leasing an aircraft registered in the Maldives;
(2) the duration of the dry lease-in does not exceed seven months in any 12 consecutive month period; and
(3) compliance with the applicable requirements of Regulations are ensured.

Dry lease-out

(e) The operator certified in accordance with this Part intending to dry lease-out one of its aircraft shall apply for prior approval by MCAA. The application shall be accompanied by copies of the intended lease agreement or description of the lease provisions, except financial arrangements, and all other relevant documentation.

Wet lease-out

(f) Prior to the wet lease-out of an aircraft, the operator certified in accordance with this Part shall notify MCAA.

ORO.AOC.115 Code-share agreements

(a) An operator certified in accordance with this Part shall enter into a code-share agreement with a third country operator only after:
  (1) having verified that the third country operator complies with the applicable ICAO standards; and
  (2) having provided MCAA with documented information enabling such authority to comply with ARO.OPS.105.

(b) When implementing the code-share agreement the operator shall monitor and regularly assess the ongoing compliance of the third country operator with the applicable ICAO standards.

(c) The operator certified in accordance with this Part shall not sell and issue tickets for a flight operated by a third country operator when the third country operator is subject to an operating ban or is failing to maintain compliance with the applicable ICAO standards.

ORO.AOC.120 Approvals to provide cabin crew training and to issue cabin crew licence

(a) When intending to provide the training course required in Annex V (Part-CC), the operator shall apply for and obtain an approval issued by MCAA. For this purpose, the applicant shall demonstrate compliance with the requirements for the conduct and content of training course established in CC.TRA.215 and CC.TRA.220 of that Annex and shall provide MCAA with:
  (1) the date of intended commencement of activity;
  (2) the personal details and qualifications of the instructors as relevant to the training elements to be covered;
  (3) the name(s) and address(es) of the training site(s) at which the training is to be conducted;
  (4) a description of the facilities, training methods, manuals and representative devices to be used; and
  (5) the syllabi and associated programmes for the training course.

(b) If MCAA decides, in accordance with ARA.CC.200 of Annex VI (Part-ARA), that operators may be approved to issue cabin crew licences, the applicant shall, in addition to (a):
  (1) demonstrate to MCAA that:
    (i) theorganisation has the capability and accountability to perform this task;
    (ii) the personnel conducting examinations are appropriately qualified and free from conflict of interest; and
  (2) provide the procedures and the specified conditions for:
    (i) conducting the examination required by CC.TRA.220;
    (ii) issuing cabin crew licences; and
    (iii) supplyingMCAA with all relevant information and documentation related to the licences it will issue and their holders, for the purpose of record-keeping, oversight and enforcement actions by that authority.

(c) The approvals referred to in (a) and (b) shall be specified in the operations specifications.

ORO.AOC.125 Non-commercial operations of aircraft listed in the operations specifications by the holder of an AOC

(a) The holder of an AOC may conduct non-commercial operations with an aircraft otherwise used for commercial air transport operations that is listed in the operations specifications of its AOC, provided that the operator:
  (1) describes such operations in detailin the operations manual, including:
    (i) identification of the applicable requirements;
    (ii) a clear identification of any differencesbetween operating procedures used whenconducting commercial air transport operations and non-commercial operations;
    (iii) a means of ensuring that all personnel involved in the operation are fully familiar with the associated procedures;
  (2) submits the identified differences between the operating procedures referred to in (a)(1)(ii) to the MCAA for prior approval.

(b) An AOC holder conducting operations referred to in (a) shall not be required to submit a declaration in accordance with this Part.

ORO.AOC.130 Flight data monitoring — aeroplanes

(a) The operator shall establish and maintain a flight data monitoring system, which shall be integrated in its management system, for aeroplanes with a maximum certificated take-off mass of more than 27 000 kg.

(b) The flight data monitoring system shall be non-punitive and contain adequate safeguards to protect the source(s) of the data.

ORO.AOC.135 Personnel requirements

(a) In accordance with ORO.GEN.210 (b), the operator shall nominate persons responsible for the management and supervision of the following areas:
  (1) flight operations;
  (2) crew training;
  (3) ground operations; and
  (4) continuing airworthiness in accordance with Regulations.

(b) *Adequacy and competency of personnel*
  (1) The operator shall employ sufficient personnel for the planned ground and flight operations.
  (2) All personnel assigned to, or directly involved in, ground and flight operations shall:
    (i) be properly trained;
    (ii) demonstrate their capabilities in the performance of their assigned duties; and
    (iii) be aware of their responsibilities and the relationship of their duties to the operation as a whole.

(c) *Supervision of personnel*
  (1) The operator shall appoint a sufficient number of personnel supervisors, taking into account the structure of the operator's organisation and the number of personnel employed.
  (2) The duties and responsibilities of these supervisors shall be defined, and any other necessary arrangements shall be made to ensure that they can discharge their supervisory responsibilities.
  (3) The supervision of crew members and personnel involved in the operation shall be exercised by individuals with adequate experience and the skills to ensure the attainment of the standards specified in the operations manual.

ORO.AOC.140 Facility requirements

In accordance with ORO.GEN.215, the operator shall:

(a) make use of appropriate ground handling facilities to ensure the safe handling of its flights;

(b) arrange operational support facilities at the main operating base, appropriate for the area and type of operation; and

(c) ensure that the available working space at each operating base is sufficient for personnel whose actions may affect the safety of flight operations. Consideration shall be given to the needs of ground crew, personnel concerned with operational control, the storage and display of essential records and flight planning by crews.

ORO.AOC.150 Documentation requirements

(a) The operator shall make arrangements for the production of manuals and any other documentation required and associated amendments.

(b) The operator shall be capable of distributing operational instructions and other information without delay.

SUBPART DEC
DECLARATION

ORO.DEC.100 Declaration

The operator of complex motor-powered aircraft engaged in non-commercial operations or non-commercial specialised operations, and the commercial specialised operator shall:

(a) provide MCAA with all relevant information prior to commencing operations, using the form contained in Appendix I to this Annex;

(b) notify to MCAA a list of the alternative means of compliance used;

(c) maintain compliance with the applicable requirements and with the information given in the declaration;

(d) notify MCAA without delay of any changes to its declaration or the means of compliance it uses through submission of an amended declaration using the form contained in Appendix I to this Annex; and

(e) notify MCAA when it ceases operation.

SUBPART SPO
COMMERCIAL SPECIALISED OPERATIONS

ORO.SPO.100 Common requirements for commercial specialised operators

(a) A commercial specialised operator shall in addition to ORO.DEC.100 also comply with ORO.AOC.135, ORO.AOC.140 and ORO.AOC.150.

(b) Aircraft shall have a certificate of airworthiness (CofA) in accordance with MCAR M or shall be leased-in in accordance with (c).

(c) A commercial specialised operator shall obtain prior approval of MCAA and comply with the following conditions, if:
  (1) Wet leasing-in an aircraft:
    (i) The safety standards of an operator with regard to continuing airworthiness and air operations are equivalent to the applicable requirements established by MCAR M and this Regulation;
    (ii) The aircraft operator has a standard CofA issued in accordance with ICAO Annex 8;
    (iii) The duration of the wet lease-in does not exceed seven months in any 12 consecutive month period; or
  (2) Dry leasing-in an aircraft:
    (i) An operational need has been identified that cannot be satisfied through leasing an aircraft registered in the Maldives;
    (ii) The duration of the dry lease-in does not exceed seven months in any 12 consecutive month period;
    (iii) Compliance with the applicable requirements of MCAR M is ensured;
    (iv) The aircraft is equipped in accordance with Annex VIII [Part SPO].

ORO.SPO.110 Authorisation of high risk commercial specialised operations

(a) A commercial specialised operator shall apply for and obtain an authorisation issued by MCAA prior to commencing a high risk commercial specialised operation:
  (1) that is carried out over an area where the safety of third parties on the ground is likely to be endangered in the event of an emergency, or
  (2) that, as determined by the competent authority of the place where the operation is conducted, due to its specific nature and the local environment in which it is conducted, poses a high risk, in particular to third parties on the ground.

(b) The operator shall provide the following information to MCAA:
  (1) the official name and business name, address, and mailing address of the applicant;
  (2) a description of the management system, including organisational structure;
  (3) a description of the proposed operation, including the type(s), and number of aircraft to be operated;
  (4) the risk assessment documentation and related standard operating procedures, required by SPO.OP.230;
  (5) a statement that all the documentation sent to MCAA has been verified by the operator and found in compliance with the applicable requirements.

(c) The application for an authorisation or its amendment shall be made in a form and manner established by MCAA, taking into account the applicable requirements of MCAR Air Operations and its Implementing Rules.

ORO.SPO.115 Changes

(a) Any change affecting the scope of the authorisation or the authorised operations shall require prior approval of MCAA. Any change not covered by the initial risk assessment, shall require the submission of an amended risk assessment and SOP to MCAA.

(b) The application for approval of a change shall be submitted before any such change takes place, in order to enable MCAA to determine continued compliance with MCAR Air Operationsand its Implementing Rules and to amend, if necessary, the authorisation. The operator shall provide MCAA with any relevant documentation.

(c) The change shall only be implemented upon receipt of formal approval by MCAA in accordance with ARO.OPS.150.

(d) The operator shall operate under the conditions prescribed by MCAA during such changes, as applicable.

ORO.SPO.120 Continued validity

(a) An operator holding a specialised operation authorisation shall comply with the scope and privileges defined in the authorisation.

(b) The operator's authorisation shall remain valid subject to:
   (1) the operator remaining in compliance with the relevant requirements of MCAR Air Operations and its Implementing Rules, taking into account the provisions related to the handling of findings as specified under ORO.GEN.150;
   (2) MCAA being granted access to the operator as defined in ORO.GEN.140 to determine continued compliance with the relevant requirements of MCAR Air Operationsand its Implementing Rules; and
   (3) the authorisation not being surrendered or revoked.

(c) Upon revocation or surrender the authorisation shall be returned to MCAA without delay.

SUBPART MLR
MANUALS, LOGS AND RECORDS

ORO.MLR.100 Operations manual — general

(a) The operator shall establish an operations manual (OM) as specified under 8.b of the Essential Requirements to this Regulation.

(b) The content of the OM shall reflect the requirements set out in this Annex, Annex IV (Part-CAT), Annex V (Part-SPA), Annex VI (Part-NCC) and Annex VIII (Part-SPO), as applicable, and shall not contravene the conditions contained in the operations specifications to the air operator certificate (AOC), the SPO authorisation or the declaration and the list of specific approvals, as applicable.

(c) The OM may be issued in separate parts.

(d) All operations personnel shall have easy access to the portions of the OM that are relevant to their duties.

(e) The OM shall be kept up to date. All personnel shall be made aware of the changes that are relevant to their duties.

(f) Each crew member shall be provided with a personal copy of the relevant sections of the OM pertaining to their duties. Each holder of an OM, or appropriate parts of it, shall be responsible for keeping their copy up to date with the amendments or revisions supplied by the operator.

(g) For AOC holders:
(1) for amendments required to be notified in accordance with ORO.GEN.115(b) and ORO.GEN.130(c), the operator shall supply MCAA with intended amendments in advance of the effective date; and
(2) for amendments to procedures associated with prior approval items in accordance with ORO.GEN.130, approval shall be obtained before the amendment becomes effective.
For SPO authorisation holders, any amendment associated with the authorised standard operating procedures, prior approval shall be obtained before the amendment becomes effective.

(h) Notwithstanding (g), when immediate amendments or revisions are required in the interest of safety, they may be published and applied immediately, provided that any approval required has been applied for.

(i) The operator shall incorporate all amendments and revisions required by MCAA.

(j) The operator shall ensure that information taken from approved documents, and any amendment thereof, is correctly reflected in the OM. This does not prevent the operator from publishing more conservative data and procedures in the OM.

(k) The operator shall ensure that all personnel are able to understand the language in which those parts of the OM which pertain to their duties and responsibilities are written. The content of the OM shall be presented in a form that can be used without difficulty and observes human factors principles.

ORO.MLR.101 Operations manual — structure forcommercialairtransport'

Except for operations with single engined propeller-driven aeroplanes with a MOPSC of 5 or single engined non-complex helicopters with a MOPSC of 5, taking off and landing at the same aerodrome or operating site, under VFR by day, and for operations with sailplanes and balloons, the main structure of the OM shall be as follows:

(a) Part A: General/Basic, comprising all non-type-related operational policies, instructions and procedures;

(b) Part B: Aircraft operating matters, comprising all type-related instructions and procedures, taking into account differences between types/classes, variants or individual aircraft used by the operator;

(c) Part C: Commercial air transport operations, comprising route/role/area and aerodrome/operating site instructions and information;

(d) Part D: Training, comprising all training instructions for personnel required for a safe operation.

ORO.MLR.105 Minimum equipment list

(a) A minimum equipment list (MEL) shall be established as specified under 8.a.3 of the Essential Requirements to this Regulation, based on the relevant master minimum equipment list (MMEL).

(b) The MEL and any amendment thereto shall be approved by MCAA.

(c) The operator shall amend the MEL after any applicable change to the MMEL within the acceptable timescales.

(d) In addition to the list of items, the MEL shall contain:
  (1) a preamble, including guidance and definitions for flight crews and maintenance personnel using the MEL;
  (2) the revision status of the MMEL upon which the MEL is based and the revision status of the MEL;
  (3) the scope, extent and purpose of the MEL.

(e) The operator shall:
  (1) establish rectification intervals for each inoperative instrument, item of equipment or function listed in the MEL. The rectification interval in the MEL shall not be less restrictive than the corresponding rectification interval in the MMEL;
  (2) establish an effective rectification programme;
  (3) only operate the aircraft after expiry of the rectification interval specified in the MEL when:
    (i) the defect has been rectified; or
    (ii) the rectification interval has been extended in accordance with (f).

(f) Subject to approval of MCAA, the operator may use a procedure for the one time extension of category B, C and D rectification intervals, provided that:
  (1) the extension of the rectification interval is within the scope of the MMEL for the aircraft type;
  (2) the extension of the rectification interval is, as a maximum, of the same duration as the rectification interval specified in the MEL;
  (3) the rectification interval extension is not used as a normal means of conducting MEL item rectification and is used only when events beyond the control of the operator have precluded rectification;
  (4) a description of specific duties and responsibilities for controlling extensions is established by the operator;
  (5) MCAA is notified of any extension of the applicable rectification interval; and
  (6) a plan to accomplish the rectification at the earliest opportunity is established.

(g) The operator shall establish the operational and maintenance procedures referenced in the MEL taking into account the operational and maintenance procedures referenced in the MMEL. These procedures shall be part of the operator's manuals or the MEL.

(h) The operator shall amend the operational and maintenance procedures referenced in the MEL after any applicable change to the operational and maintenance procedures referenced in the MMEL.

(i) Unless otherwise specified in the MEL, the operator shall complete:
  (1) the operational procedures referenced in the MEL when planning for and/or operating with the listed item inoperative; and
  (2) the maintenance procedures referenced in the MEL prior to operating with the listed item inoperative.

(j) Subject to a specific case-by-case approval by MCAA, the operator may operate an aircraft with inoperative instruments, items of equipment or functions outside the constraints of the MEL but within the constraints of the MMEL, provided that:
  (1) the concerned instruments, items of equipment or functions are within the scope of the MMEL as defined in the data established in accordance with Regulations;
  (2) the approval is not used as a normal means of conducting operations outside the constraints of the approved MEL and is used only when events beyond the control of the operator have precluded the MEL compliance;

(3) a description of specific duties and responsibilities for controlling the operation of the aircraft under such approval is established by the operator; and
(4) a plan to rectify the inoperative instruments, items of equipment or functions or to return operating the aircraft under the MEL constraints at the earliest opportunity is established.

ORO.MLR.110 Journey log

Particulars of the aircraft, its crew and each journey shall be retained for each flight, or series of flights, in the form of a journey log, or equivalent.

ORO.MLR.115 Record-keeping

(a) The following records shall be stored for at least 5 years:
(1) for CAT operators, records of the activities referred to in ORO.GEN.200;
(2) for declared operators, a copy of the operator's declaration, details of approvals held and operations manual;
(3) for SPO authorisation holders, in addition to (a)(2), records related to the risk assessment conducted in accordance with SPO.OP.230 and related standard operating procedures.'

(b) The following information used for the preparation and execution of a flight, and associated reports, shall be stored for three months:
(1) the operational flight plan, if applicable;
(2) route-specific notice(s) to airmen (NOTAM) and aeronautical information services (AIS) briefing documentation, if edited by the operator;
(3) mass and balance documentation;
(4) notification of special loads, including written information to the commander/pilot-in-command about dangerous goods, if applicable;
(5) the journey log, or equivalent; and
(6) flight report(s) for recording details of any occurrence, or any event that the commander/pilot-in-command deems necessary to report or record;

(c) Personnel records shall be stored for the periods indicated below:

Flight crew licence and cabin crew licence	As long as the crew member is exercising the privileges of the licence for the aircraft operator
Crew member training, checking and qualifications	3 years
Records on crew member recent experience	15 months
Crew member route and aerodrome/task and area competence, as appropriate	3 years
Dangerous goods training, as appropriate	3 years
Training/qualification records of other personnel for whom a training programme is required	Last 2 training records

(d) The operator shall:
(1) maintain records of all training, checking and qualifications of each crew member, as prescribed in Part-ORO; and
(2) make such records available, on request, to the crew member concerned.

(e) The operator shall preserve the information used for the preparation and execution of a flight and personnel training records, even if the operator ceases to be the operator of that aircraft or the employer of that crew member, provided this is within the timescales prescribed in (c).

(f) If a crew member becomes a crew member for another operator, the operator shall make the crew member's records available to the new operator, provided this is within the timescales prescribed in (c).

SUBPART SEC
SECURITY

ORO.SEC.100.A Flight crew compartment security - Aeroplanes

(a) In an aeroplane which is equipped with a flight crew compartment door, this door shall be capable of being locked, and means shall be provided by which the cabin crew can notify the flight crew in the event of suspicious activity or security breaches in the cabin.

(b) All passenger-carrying aeroplanes of a maximum certificated take-off mass exceeding 45 500 kg, or with a MOPSC of more than 60 engaged in the commercial transportation of passengers, shall be equipped with an approved flight crew compartment door that is capable of being locked and unlocked from either pilot's station and designed to meet the applicable airworthiness requirements.

(c) In all aeroplanes which are equipped with a flight crew compartment door in accordance with point (b) above:
   (1) this door shall be closed prior to engine start for take-off and will be locked when required by security procedures or by the pilot-in-command until engine shut down after landing, except when deemed necessary for authorised persons to access or egress in compliance with national civil aviation security programmes; 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.

ORO.SEC.100.H Flight crew compartment security - Helicopters

If installed, the flight crew compartment door on a helicopter operated for the purpose of carrying passengers shall be capable of being locked from within the flight crew compartment in order to prevent unauthorised access.

SUBPART FC
FLIGHT CREW

ORO.FC.005 Scope

This Subpart establishes requirements to be met by the operator related to flight crew training, experience and qualification and comprises:

(a) Section 1 specifying common requirements applicable to both non-commercial operations of complex motor-powered aircraft and any commercial operations.

(b) Section 2 specifying additional requirements applicable to commercial air transport operations with the exception of:
  (1) commercial air transport operations of sailplanes or balloons; or
  (2) commercial air transport operations of passengers conducted under visual flight rules (VFR) by day, starting and ending at the same aerodrome or operating site and within a local area specified by MCAA, with
    — single-engined propeller-driven aeroplanes having a maximum certified take-off mass of 5 700 kg or less and a MOPSC of 5; or
    — other-than-complex motor-powered helicopters, single engined, with a MOPSC of 5.

(c) Section 3 specifying additional requirements for commercial specialised operations and for those referred to in b(1) and (2).

SECTION 1
Common requirements

ORO.FC.100 Composition of flight crew

(a) The composition of the flight crew and the number of flight crew members at designated crew stations shall be not less than the minimum specified in the aircraft flight manual or operating limitations prescribed for the aircraft.
  (1) Minimum flight crew for all turbo-propeller aeroplanes having a maximum take off mass less than 5700 kg and with a maximum approved passenger seating configuration of more than nine is two pilots;
  (2) Minimum flight crew for all turbojet aeroplanes and all aeroplanes exceeding maximum take-off mass of 5700 kg the minimum is two pilots;
  (3) Minimum flight crew for aeroplanes with two or more piston engines is two pilots unless it is equipped with an autopilot;

(b) The flight crew shall include additional flight crew members when required by the type of operation and shall not be reduced below the number specified in the operations manual.

(c) All flight crew members shall hold a licence and ratings issued or accepted in accordance with MCAR-Air Crew and appropriate to the duties assigned to them.

(d) The flight crew member may be relieved in flight of his/her duties at the controls by another suitably qualified flight crew member.

(e) When engaging the services of flight crew members who are working on a freelance or part-time basis, the operator shall verify that all applicable requirements of this Subpart and the relevant elements of Annex I (Part-FCL) to MCAR-Air Crew, including the requirements on recent experience, are complied with, taking into account all services rendered by the flight crew member to other operator(s) to determine in particular:
  (1) the total number of aircraft types or variants operated; and
  (2) the applicable flight and duty time limitations and rest requirements.

ORO.FC.105 Designation as pilot-in-command/commander

(a) In accordance with MCAR-Air Operations, one pilot amongst the flight crew, qualified as pilot-in-command in accordance with Annex I (Part-FCL) to MCAR-Air Crew, shall be designated by the operator as pilot-in-command or, for commercial airtransportoperations,ascommander;.

(b) The operator shall only designate a flight crew member to act as pilot-in-command/commander if he/she has:
  (1) the minimum level of experience specified in the operations manual;
  (2) adequate knowledge of the route or area to be flown and of the aerodromes, including alternate aerodromes, facilities and procedures to be used;
  (3) in the case of multi-crew operations, completed an operator's command course if upgrading from co-pilot to pilot-in-command/commander.

(c) In the case of commercial operations of aeroplanes and helicopters, the pilot-in-command/commander or the pilot, to whom the conduct of the flight may be delegated, shall have had initial familiarisation training of the route or area to be flown and of the aerodromes, facilities and procedures to be used. This route/area and aerodrome knowledge shall be maintained by operating at least once on the route or area or to the aerodrome within a 12-month period.

(d) Point (c) shall not apply in the case of:
  (1) performance class B aeroplanes involved in commercial air transport operations under VFR by day; and
  (2) commercial air transport operations of passengers conducted under VFR by day, starting and ending at the same aerodrome or operating site or within a local area specified by MCAA, with other than complex motor-powered helicopters, single-engined, with a MOPSC of 5.

ORO.FC.110 Flight engineer

When a separate flight engineer station is incorporated in the design of an aeroplane, the flight crew shall include one crew member who is suitably qualified in accordance with applicable national rules.

ORO.FC.115 Crew resource management (CRM) training

(a) Before operating, the flight crew member shall have received CRM training, appropriate to his/her role, as specified in the operations manual.

(b) Elements of CRM training shall be included in the aircraft type or class training and recurrent training as well as in the command course.

ORO.FC.120 Operator conversion training

(a) In the case of aeroplane or helicopter operations, the flight crew member shall complete the operator conversion training course before commencing unsupervised line flying:
  (1) when changing to an aircraft for which a new type or class rating is required;
  (2) when joining an operator.

(b) The operator conversion training course shall include training on the equipment installed on the aircraft as relevant to flight crew members' roles.

ORO.FC.125 Differences training and familiarisation training

(a) Flight crew members shall complete differences or familiarisation training when required by Annex I (Part-FCL) to MCAR-Air Crew and when changing equipment or procedures requiring additional knowledge on types or variants currently operated.

(b) The operations manual shall specify when such differences or familiarisation training is required.

ORO.FC.130 Recurrent training and checking

(a) Each flight crew member shall complete annual recurrent flight and ground training relevant to the type or variant of aircraft on which he/she operates, including training on the location and use of all emergency and safety equipment carried.

(b) Each flight crew member shall be periodically checked to demonstrate competence in carrying out normal, abnormal and emergency procedures.

ORO.FC.135 Pilot qualification to operate in either pilot's seat

Flight crew members who may be assigned to operate in either pilot's seat shall complete appropriate training and checking as specified in the operations manual.

ORO.FC.140 Operation on more than one type or variant

(a) Flight crew members operating more than one type or variant of aircraft shall comply with the requirements prescribed in this Subpart for each type or variant, unless credits related to the training, checking, and recent experience requirements are defined in the data established in accordance with MCAR-Air Crew for the relevant types or variants.

(b) Appropriate procedures and/or operational restrictions shall be specified in the operations manual for any operation on more than one type or variant.

ORO.FC.145 Provision of training

(a) All the training required in this Subpart shall be conducted:
   (1) in accordance with the training programmes and syllabi established by the operator in the operations manual;
   (2) by appropriately qualified personnel. In the case of flight and flight simulation training and checking, the personnel providing the training and conducting the checks shall be qualified in accordance with Annex I (Part-FCL) to MCAR-Air Crew.

(b) When establishing the training programmes and syllabi, the operator shall include the mandatory elements for the relevant type as defined in the data established in accordance with MCAR-Air Crew.

(c) InthecaseofCAToperations, training and checking programmes, including syllabi and use of individual flight simulation training devices (FSTDs), shall be approved by MCAA.

(d) The FSTD shall replicate the aircraft used by the operator, as far as practicable. Differences between the FSTD and the aircraft shall be described and addressed through a briefing or training, as appropriate.

(e) The operator shall establish a system to adequately monitor changes to the FSTD and to ensure that those changes do not affect the adequacy of the training programmes.

SECTION 2
Additionalrequirementsforcommercialair transportoperations

ORO.FC.200 Composition of flight crew

(a) There shall not be more than one inexperienced flight crew member in any flight crew.

(b) The commander may delegate the conduct of the flight to another pilot suitably qualified in accordance with Annex I (Part-FCL) to MCAR-Air Crew provided that the requirements of ORO.FC.105(b)(1), (b)(2) and (c) are complied with.

(c) Specific requirements for aeroplane operations under instrument flight rules (IFR) or at night.

(1) The minimum flight crew shall be two pilots for all turbo-propeller aeroplanes with a maximum operational passenger seating configuration (MOPSC) of more than nine and all turbojet aeroplanes.
(2) Aeroplanes other than those covered by (c)(1) shall be operated with a minimum crew of two pilots, unless the requirements of ORO.FC.202 are complied with, in which case they may be operated by a single pilot.

(d) Specific requirements for helicopter operations.
(1) For all operations of helicopters with an MOPSC of more than 19 and for operations under IFR of helicopters with an MOPSC of more than 9:
(i) the minimum flight crew shall be two pilots; and
(ii) the commander shall be the holder of an airline transport pilot licence (helicopter) (ATPL(H)) with an instrument rating issued in accordance with Annex I (Part-FCL) to MCAR-Air Crew.
(2) Operations not covered by (d) (1) may be operated by a single pilot under IFR or at night provided that the requirements of ORO.FC.202 are complied with.

ORO.FC.A.201 In-flight relief of flight crew members

(a) The commander may delegate the conduct of the flight to:
(1) another qualified commander; or
(2) for operations only above flight level (FL) 200, a pilot who complies with the following minimum qualifications:
(i) ATPL;
(ii) conversion training and checking, including type rating training, in accordance with ORO.FC.220;
(iii) all recurrent training and checking in accordance with ORO.FC.230 and ORO.FC.240;
(iv) route/area and aerodrome competence in accordance with ORO.FC.105.

(b) The co-pilot may be relieved by:
(1) another suitably qualified pilot;
(2) for operations only above FL 200, a cruise relief co-pilot that complies with the following minimum qualifications:
(i) valid commercial pilot licence (CPL) with an instrument rating;
(ii) conversion training and checking, including type rating training, in accordance with ORO.FC.220 except the requirement for take-off and landing training;
(iii) recurrent training and checking in accordance with ORO.FC.230 except the requirement for take-off and landing training.

(c) A flight engineer may be relieved in flight by a crew member suitably qualified in accordance with applicable national rules.

ORO.FC.202 Single-pilot operations under IFR or at night

In order to be able to fly under IFR or at night with a minimum flight crew of one pilot, as foreseen in ORO.FC.200(c)(2) and (d)(2), the following shall be complied with:

(a) The operator shall include in the operations manual a pilot's conversion and recurrent training programme that includes the additional requirements for a single-pilot operation. The pilot shall have undertaken training on the operator's procedures, in particular regarding:
(1) engine management and emergency handling;
(2) use of normal, abnormal and emergency checklist;
(3) air traffic control (ATC) communication;
(4) departure and approach procedures;
(5) autopilot management, if applicable;
(6) use of simplified in-flight documentation;
(7) single-pilot crew resource management.

(b) The recurrent checks required by ORO.FC.230 shall be performed in the single-pilot role on the relevant type or class of aircraft in an environment representative of the operation.

(c) For aeroplane operations under IFR the pilot shall have:

(1) a minimum of 50 hours flight time under IFR on the relevant type or class of aeroplane, of which 10 hours are as commander; and
(2) completed during the preceding 90 days on the relevant type or class of aeroplane:
(i) five IFR flights, including three instrument approaches, in a single-pilot role; or
(ii) an IFR instrument approach check.

(d) For aeroplane operations at night the pilot shall have:
(1) a minimum of 15 hours flight time at night which may be included in the 50 hours flight time under IFR in (c)(1); and
(2) completed during the preceding 90 days on the relevant type or class of aeroplane:
(i) three take-offs and landings at night in the single pilot role; or
(ii) a night take-off and landing check.

(e) For helicopter operations under IFR the pilot shall have:
(1) 25 hours total IFR flight experience in the relevant operating environment; and
(2) 25 hours flight experience as a single pilot on the specific type of helicopter, approved for single-pilot IFR, of which 10 hours may be flown under supervision, including five sectors of IFR line flying under supervision using the single-pilot procedures; and
(3) completed during the preceding 90 days:
(i) five IFR flights as a single pilot, including three instrument approaches, carried out on a helicopter approved for this purpose; or
(ii) an IFR instrument approach check as a single pilot on the relevant type of helicopter, flight training device (FTD) or full flight simulator (FFS).

ORO.FC.205 Command course

(a) For aeroplane and helicopter operations, the command course shall include at least the following elements:
(1) training in an FSTD, which includes line oriented flight training (LOFT) and/or flight training;
(2) the operator proficiency check, operating as commander;
(3) command responsibilities training;
(4) line training as commander under supervision, for a minimum of:
(i) 10 flight sectors, in the case of aeroplanes; and
(ii) 10 hours, including at least 10 flight sectors, in the case of helicopters;
(5) completion of a line check as commander and demonstration of adequate knowledge of the route or area to be flown and of the aerodromes, including alternate aerodromes, facilities and procedures to be used; and
(6) crew resource management training.

ORO.FC.215 Initial operator's crew resource management (CRM) training

(a) The flight crew member shall have completed an initial CRM training course before commencing unsupervised line flying.

(b) Initial CRM training shall be conducted by at least one suitably qualified CRM trainer who may be assisted by experts in order to address specific areas.

(c) If the flight crew member has not previously received theoretical training in human factors to the ATPL level, he/she shall complete, before or combined with the initial CRM training, a theoretical course provided by the operator and based on the human performance and limitations syllabus for the ATPL as established in Annex I (Part-FCL) to MCAR-AIR Crew.

ORO.FC.220 Operator conversion training and checking

(a) CRM training shall be integrated into the operator conversion training course.

(b) Once an operator conversion course has been commenced, the flight crew member shall not be assigned to flying duties on another type or class of aircraft until the course is completed or terminated. Crew members operating only performance class B aeroplanes may be assigned to flights on other types of performance class B aeroplanes during conversion courses to the extent necessary to maintain the operation.

(c) The amount of training required by the flight crew member for the operator's conversion course shall be determined in accordance with the standards of qualification and experience specified in the operations manual, taking into account his/her previous training and experience.

(d) The flight crew member shall complete:
(1) the operator proficiency check and the emergency and safety equipment training and checking before commencing line flying under supervision (LIFUS); and
(2) the line check upon completion of line flying under supervision. For performance class B aeroplanes, LIFUS may be performed on any aeroplane within the applicable class.

(e) In the case of aeroplanes, pilots that have been issued a type rating based on a zero flight-time training (ZFTT) course shall:
(1) commence line flying under supervision not later than 21 days after the completion of the skill test or after appropriate training provided by the operator. The content of such training shall be described in the operations manual;
(2) complete six take-offs and landings in a FSTD not later than 21 days after the completion of the skill test under the supervision of a type rating instructor for aeroplanes (TRI(A)) occupying the other pilot seat. The number of take-offs and landings may be reduced when credits are defined in the data established in accordance with MCAR-Air Crew. If these take-offs and landings have not been performed within 21 days, the operator shall provide refresher training. The content of such training shall be described in the operations manual;
(3) conduct the first four take-offs and landings of the LIFUS in the aeroplane under the supervision of a TRI(A) occupying the other pilot seat. The number of take-offs and landings may be reduced when credits are defined in the data established in accordance with MCAR-Air Crew.

ORO.FC.230 Recurrent training and checking

(a) Each flight crew member shall complete recurrent training and checking relevant to the type or variant of aircraft on which they operate.

(b) *Operator proficiency check*
(1) Each flight crew member shall complete operator proficiency checks as part of the normal crew complement to demonstrate competence in carrying out normal, abnormal and emergency procedures.
(2) When the flight crew member will be required to operate under IFR, the operator proficiency check shall be conducted without external visual reference, as appropriate.
(3) The validity period of the operator proficiency check shall be six calendar months. For operations under VFR by day of performance class B aeroplanes conducted during seasons not longer than eight consecutive months, one operator proficiency check shall be sufficient. The proficiency check shall be undertaken before commencing commercial air transport operations.
(4) The flight crew member involved in operations by day and over routes navigated by reference to visual landmarks with other-than-complex motor-powered helicopter may complete the operator proficiency check in only one of the relevant types held. The operator proficiency check shall be performed each time on the type least recently used for the proficiency check. The relevant helicopter types that may be grouped for the purpose of the operator proficiency check shall be contained in the operations manual.

(5) Notwithstanding ORO.FC.145 (a) (2), for operations of other-than-complex motor-powered helicopters by day and over routes navigated by reference to visual landmarks and performance class B aeroplanes, the check may be conducted by a suitably qualified commander nominated by the operator, trained in CRM concepts and the assessment of CRM skills. The operator shall inform MCAA about the persons nominated.

(c) *Line check*
(1) Each flight crew member shall complete a line check on the aircraft to demonstrate competence in carrying out normal line operations described in the operations manual. The validity period of the line check shall be 12 calendar months.
(2) Notwithstanding ORO.FC.145 (a) (2), line checks may be conducted by a suitably qualified commander nominated by the operator, trained in CRM concepts and the assessment of CRM skills.

(d) *Emergency and safety equipment training and checking*

Each flight crew member shall complete training and checking on the location and use of all emergency and safety equipment carried. The validity period of an emergency and safety equipment check shall be 12 calendar months.

(e) *CRM training*
(1) Elements of CRM shall be integrated into all appropriate phases of the recurrent training.
(2) Each flight crew member shall undergo specific modular CRM training. All major topics of CRM training shall be covered by distributing modular training sessions as evenly as possible over each three-year period.

(f) Each flight crew member shall undergo ground training and flight training in an FSTD or an aircraft, or a combination of FSTD and aircraft training, at least every 12 calendar months.

(g) The validity periods mentioned in (b) (3), (c) and (d) shall be counted from the end of the month when the check was taken.

(h) When the training or checks required above are undertaken within the last three months of the validity period, the new validity period shall be counted from the original expiry date.

ORO.FC.235 Pilot qualification to operate in either pilot's seat

(a) Commanders whose duties require them to operate in either pilot seat and carry out the duties of a co-pilot, or commanders required to conduct training or checking duties, shall complete additional training and checking as specified in the operations manual. The check may be conducted together with the operator proficiency check prescribed in ORO.FC.230 (b).

(b) The additional training and checking shall include at least the following:
(1) an engine failure during take-off;
(2) a one-engine-inoperative approach and go-around; and
(3) a one-engine-inoperative landing.

(c) In the case of helicopters, commanders shall also complete their proficiency checks from left- and right-hand seats, on alternate proficiency checks, provided that when the type rating proficiency check is combined with the operator proficiency check the commander completes his/her training or checking from the normally occupied seat.

(d) When engine-out manoeuvres are carried out in an aircraft, the engine failure shall be simulated.

(e) When operating in the co-pilot's seat, the checks required by ORO.FC.230 for operating in the commander's seat shall, in addition, be valid and current.

(f) The pilot relieving the commander shall have demonstrated, concurrent with the operator proficiency checks prescribed in ORO.FC.230(b), practice of drills and procedures that would not, normally, be his/her responsibility. Where the differences between left- and right-hand seats are not significant, practice may be conducted in either seat.

(g) The pilot other than the commander occupying the commander's seat shall demonstrate practice of drills and procedures, concurrent with the operator proficiency checks prescribed in ORO.FC.230(b), which are the commander's responsibility acting as pilot monitoring. Where the differences between left- and right-hand seats are not significant, practice may be conducted in either seat.

ORO.FC.240 Operation on more than one type or variant

(a) The procedures or operational restrictions for operation on more than one type or variant established in the operations manual and approved by MCAA shall cover:
(1) the flight crew members' minimum experience level;
(2) the minimum experience level on one type or variant before beginning training for and operation of another type or variant;

(3) the process whereby flight crew qualified on one type or variant will be trained and qualified on another type or variant; and
(4) all applicable recent experience requirements for each type or variant.

(b) When a flight crew member operates both helicopters and aeroplanes, that flight crew member shall be limited to operations on only one type of aeroplane and one type of helicopter.

(c) Point (a) shall not apply to operations of performance class B aeroplane if they are limited to single-pilot classes of reciprocating engine aeroplanes under VFR by day. Point (b) shall not apply to operations of performance class B aeroplane if they are limited to single-pilot classes of reciprocating engine aeroplanes.

ORO.FC.A.245 Alternative training and qualification programme

(a) The aeroplane operator having appropriate experience may substitute one or more of the following training and checking requirements for flight crew by an alternative training and qualification programme (ATQP), approved by MCAA:
(1) SPA.LVO.120 on flight crew training and qualifications;
(2) conversion training and checking;
(3) differences training and familiarisation training;
(4) command course;
(5) recurrent training and checking; and
(6) operation on more than one type or variant.

(b) The ATQP shall contain training and checking that establishes and maintains at least an equivalent level of proficiency achieved by complying with the provisions of ORO.FC.220 and ORO.FC.230. The level of flight crew training and qualification proficiency shall be demonstrated prior to being granted the ATQP approval by MCAA.

(c) The operator applying for an ATQP approval shall provide MCAA with an implementation plan, including a description of the level of flight crew training and qualification proficiency to be achieved.

(d) In addition to the checks required by ORO.FC.230 and FCL.060 of Annex I (Part-FCL) to MCAR-Air Crew, each flight crew member shall complete a line oriented evaluation (LOE) conducted in an FSTD. The validity period of an LOE shall be 12 calendar months. The validity period shall be counted from the end of the month when the check was taken. When the LOE is undertaken within the last three months of the validity period, the new validity period shall be counted from the original expiry date.

(e) After two years of operating with an approved ATQP, the operator may, with the approval of MCAA, extend the validity periods of the checks in ORO.FC.230 as follows:
(1) Operator proficiency check to 12 calendar months. The validity period shall be counted from the end of the month when the check was taken. When the check is undertaken within the last three months of the validity period, the new validity period shall be counted from the original expiry date.
(2) Line check to 24 calendar months. The validity period shall be counted from the end of the month when the check was taken. When the check is undertaken within the last six months of the validity period, the new validity period shall be counted from the original expiry date.
(3) Emergency and safety equipment checking to 24 calendar months. The validity period shall be counted from the end of the month when the check was taken. When the check is undertaken within the last six months of the validity period, the new validity period shall be counted from the original expiry date.

ORO.FC.A.250 Commanders holding a CPL (A)

(a) The holder of a CPL (A) (aeroplane) shall only act as commander in commercial air transport on a single-pilot aeroplane if:
(1) when carrying passengers under VFR outside a radius of 50 NM (90 km) from an aerodrome of departure, he/she has a minimum of 500 hours of flight time on aeroplanes or holds a valid instrument rating; or

(2) when operating on a multi-engine type under IFR, he/she has a minimum of 700 hours of flight time on aeroplanes, including 400 hours as pilot-in-command. These hours shall include 100 hours under IFR and 40 hours in multi-engine operations. The 400 hours as pilot-in-command may be substituted by hours operating as co-pilot within an established multi-pilot crew system prescribed in the operations manual, on the basis of two hours of flight time as co-pilot for one hour of flight time as pilot-in command.

(b) For operations under VFR by day of performance class B aeroplanes (a) (1) shall not apply.

ORO.FC.H.250 Commanders holding a CPL (H)

(a) The holder of a CPL (H) (helicopter) shall only act as commander in commercial air transport on a single-pilot helicopter if:
(1) when operating under IFR, he/she has a minimum of 700 hours total flight time on helicopters, including 300 hours as pilot-in-command. These hours shall include 100 hours under IFR. The 300 hours as pilot-in-command may be substituted by hours operating as co-pilot within an established multi-pilot crew system prescribed in the operations manual on the basis of two hours of flight time as co-pilot for one hour flight time as pilot-in command;
(2) when operating under visual meteorological conditions (VMC) at night, he/she has:
(i) a valid instrument rating; or
(ii) 300 hours of flight time on helicopters, including 100 hours as pilot-in-command and 10 hours as pilot flying at night.

SECTION 3
Additional requirements for commercial specialised operations and CAT operations referred to in ORO.FC.005(b)(1) and (2)

ORO.FC.330 Recurrent training and checking — operator proficiency check

(a) Each flight crew member shall complete operator proficiency checks to demonstrate his/her competence in carrying out normal, abnormal and emergency procedures, covering the relevant aspects associated with the specialised tasks described in the operations manual.

(b) Appropriate consideration shall be given when operations are undertaken under IFR or at night.

(c) The validity period of the operator proficiency check shall be 12 calendar months. The validity period shall be counted from the end of the month when the check was taken. When the operator proficiency check is undertaken within the last three months of the validity period, the new validity period shall be counted from the original expiry date.

SUBPART CC
CABIN CREW

ORO.CC.005 Scope

This Subpart establishes the requirements to be met by the operator when operating an aircraft with cabin crew and comprises:

(a) Section 1 specifying common requirements applicable to all operations; and

(b) Section 2 specifying additional requirements only applicable to commercial air transport operations.

SECTION 1
Common requirements

ORO.CC.100 Number and composition of cabin crew

(a) The number and composition of cabin crew shall be determined in accordance with MCAR-Air Operations, taking into account operational factors or circumstances of the particular flight to be operated. Except for balloons, at least one cabin crew member shall be assigned for the operation of aircraft with an MOPSC of more than 19 for land operations and 9 for floatplane/amphibian operations, when carrying one or more passenger(s).

(b) For the purpose of complying with (a), the minimum number of cabin crew shall be the greater of the following:
   (1) the number of cabin crew members established during the aircraft certification process in accordance with the applicable certification specifications, for the aircraft cabin configuration used by the operator; or
   (2) if the number under (1) has not been established, the number of cabin crew established during the aircraft certification process for the maximum certified passenger seating configuration reduced by 1 for every whole multiple of 50 passenger seats of the aircraft cabin configuration used by the operator falling below the maximum certified seating capacity; or
   (3) one cabin crew member for every 50, or fraction of 50, passenger seats installed on the same deck of the aircraft to be operated.

(c) For operations where more than one cabin crew member is assigned, the operator shall nominate one cabin crew member to be responsible to the pilot-in-command/commander.

ORO.CC.110 Conditions for assignment to duties

(a) Cabin crew members shall only be assigned to duties on an aircraft if they:
   (1) are at least 18 years of age;
   (2) have been assessed, in accordance with the applicable requirements of Annex IV (Part-MED) to MCAR-Air Crew, as physically and mentally fit to perform their duties and discharge their responsibilities safely; and
   (3) have successfully completed all applicable training and checking required by this Subpart and are competent to perform the assigned duties in accordance with the procedures specified in the operations manual.

(b) Before assigning to duties cabin crew members who are working on a freelance or part-time basis, the operator shall verify that all applicable requirements of this Subpart are complied with, taking into account all services rendered by the cabin crew member to any other operator(s), to determine in particular:
   (1) the total number of aircraft types and variants operated; and
   (2) the applicable flight and duty time limitations and rest requirements.

(c) Operating cabin crew members, as well as their role with regard to the safety of passengers and flight, shall be clearly identified to the passengers.

ORO.CC.115 Conduct of training courses and associated checking

(a) A detailed programme and syllabus shall be established by the operator for each training course in accordance with the applicable requirements of this Subpart, and of Annex V (Part-CC) to MCAR-Air Crew where applicable, to cover the duties and responsibilities to be discharged by the cabin crew members.

(b) Each training course shall include theoretical and practical instruction together with individual or collective practice, as relevant to each training subject, in order that the cabin crew member achieves and maintains the adequate level of proficiency in accordance with this Subpart.

(c) Each training course shall be:
  (1) conducted in a structured and realistic manner; and
  (2) performed by personnel appropriately qualified for the subject to be covered.

(d) During or following completion of all training required by this Subpart, each cabin crew member shall undergo a check covering all training elements of the relevant training programme, except for crew resource management (CRM) training. Checks shall be performed by personnel appropriately qualified to verify that the cabin crew member has achieved and/or maintains the required level of proficiency.

(e) CRM training courses and CRM modules where applicable shall be conducted by a cabin crew CRM instructor. When CRM elements are integrated in other training, a cabin crew CRM instructor shall manage the definition and implementation of the syllabus.

ORO.CC.120 Initial training course

(a) Each new entrant who does not already hold a valid cabin crew licence issued in accordance with Annex V (Part-CC) to MCAR-Air Crew:
  (1) shall be provided with an initial training course as specified in CC.TRA.220 of that Annex; and
  (2) shall successfully undergo the associated examination before undertaking other training required by this Subpart.

(b) Elements of the initial training programme may be combined with the first aircraft type specific training and operator conversion training, provided that the requirements of CC.TRA.220 are met and any such element(s) are recorded as elements of the initial training course in the training records of the cabin crew members concerned.

ORO.CC.125 Aircraft type specific training and operator conversion training

(a) Each cabin crew member shall have completed appropriate aircraft type specific training and operator conversion training, as well as the associated checks, before being:
  (1) first assigned by the operator to operate as a cabin crew member; or
  (2) assigned by that operator to operate on another aircraft type.

(b) When establishing the aircraft type specific and the operator conversion training programmes and syllabi, the operator shall include, where available, the mandatory elements for the relevant type as defined in the data established in accordance with MCAR-Air Crew.

(c) The aircraft type specific training programme shall:
  (1) involve training and practice on a representative training device or on the actual aircraft; and
  (2) cover at least the following aircraft type specific training elements:
    (i) aircraft description as relevant to cabin crew duties;
    (ii) all safety equipment and systems installed relevant to cabin crew duties;
    (iii) operation and actual opening, by each cabin crew member, of each type or variant of normal and emergency doors and exits in the normal and emergency modes;
    (iv) demonstration of the operation of the other exits including flight crew compartment windows;
    (v) fire and smoke protection equipment where installed;
    (vi) evacuation slide training, where fitted;
    (vii) operation of the seat, restraint system and oxygen system equipment relevant to pilot incapacitation.

(d) The operator conversion training programme for each aircraft type to be operated shall:
  (1) involve training and practice on a representative training device or on the actual aircraft;
  (2) include training in the operator's standard operating procedures for cabin crew members to be first assigned to duties by the operator;
  (3) cover at least the following operator specific training elements as relevant to the aircraft type to be operated:
    (i) description of the cabin configuration;
    (ii) location, removal and use of all portable safety and emergency equipment carried on-board;
    (iii) all normal and emergency procedures;
    (iv) passenger handling and crowd control;
    (v) fire and smoke training including the use of all related fire-fighting and protective equipment representative of that carried on-board;
    (vi) evacuation procedures;
    (vii) pilot incapacitation procedures;
    (viii) applicable security requirements and procedures;
    (ix) crew resource management.

ORO.CC.130 Differences training

(a) In addition to the training required in ORO.CC.125, the cabin crew member shall complete appropriate training and checking covering any differences before being assigned on:
  (1) a variant of an aircraft type currently operated; or
  (2) a currently operated aircraft type or variant with different:
    (i) safety equipment;
    (ii) safety and emergency equipment location; or
    (iii) normal and emergency procedures.

(b) The differences training programme shall:
  (1) be determined as necessary on the basis of a comparison with the training programme completed by the cabin crew member, in accordance with ORO.CC.125(c) and (d), for the relevant aircraft type; and
  (2) involve training and practice in a representative training device or the actual aircraft as relevant to the difference training element to be covered.

(c) When establishing a differences training programme and syllabus for a variant of an aircraft type currently operated, the operator shall include, where available, the mandatory elements for the relevant aircraft type and its variants as defined in the data established in accordance with MCAR-Air Crew.

ORO.CC.135 Familiarisation

After completion of aircraft type specific training and operator conversion training on an aircraft type, each cabin crew member shall complete appropriate supervised familiarisation on the type before being assigned to operate as a member of the minimum number of cabin crew required in accordance with ORO.CC.100.

ORO.CC.140 Recurrent training

(a) Each cabin crew member shall complete annually recurrent training and checking.

(b) Recurrent training shall cover the actions assigned to each member of the cabin crew in normal and emergency procedures and drills relevant to each aircraft type and/or variant to be operated.

(c) Aircraft type specific training elements:
  (1) Recurrent training shall include annually touch-drills by each cabin crew member for simulating the operation of each type or variant of normal and emergency doors and exits for passenger evacuation.
  (2) Recurrent training shall also include at intervals not exceeding three years:
    (i) operation and actual opening by each cabin crew member, in a representative training device or in the actual aircraft, of each type or variant of normal and emergency exits in the normal and emergency modes;

(ii) actual operation by each cabin crew member, in a representative training device or in the actual aircraft, of the flight crew compartment security door, in both normal and emergency modes, and of the seat and restraint system, and a practical demonstration of the oxygen system equipment relevant to pilot incapacitation;
(iii) demonstration of the operation of all other exits including the flight crew compartment windows; and
(iv) demonstration of the use of the life-raft, or slide raft, where fitted.

(d) Operator specific training elements:
(1) Recurrent training shall include annually:
(i) by each cabin crew member:
(A) location and handling of all safety and emergency equipment installed or carried on board; and
(B) the donning of life-jackets, portable oxygen and protective breathing equipment (PBE);
(ii) stowage of articles in the passenger compartment;
(iii) procedures related to aircraft surface contamination;
(iv) emergency procedures;
(v) evacuation procedures;
(vi) incident and accident review;
(vii) crew resource management;
(viii) aero-medical aspects and first aid including related equipment;
(ix) security procedures.
(2) Recurrent training shall also include at intervals not exceeding three years:
(i) use of pyrotechnics (actual or representative devices);
(ii) practical demonstration of the use of flight crew checklists;
(iii) realistic and practical training in the use of all fire-fighting equipment, including protective clothing, representative of that carried in the aircraft;
(iv) by each cabin crew member:
(A) extinguishing a fire characteristic of an aircraft interior fire;
(B) donning and use of PBE in an enclosed simulated smoke-filled environment.

(e) Validity periods:
(1) The annual recurrent training validity period shall be 12 calendar months counted from the end of the month when the check was taken.
(2) If the recurrent training and checking required in (a) are undertaken within the last three calendar months of the validity period, the new validity period shall be counted from the original expiry date.
(3) For the additional triennial training elements specified in (c)(2) and (d)(2), the validity period shall be 36 calendar months counted from the end of the month when the checks were taken.

ORO.CC.145 Refresher training

(a) When a cabin crew member, during the preceding six months within the validity period of the last relevant recurrent training and checking:
(1) has not performed any flying duties, he/she shall, before being reassigned to such duties, complete refresher training and checking for each aircraft type to be operated; or
(2) has not performed flying duties on one particular aircraft type, he/she shall, before being reassigned to duties, complete on that aircraft type:
(i) refresher training and checking; or
(ii) twofamiliarisation flights in accordance with ORO.CC.135.

(b) The refresher training programme for each aircraft type shall at least cover:
(1) emergency procedures;
(2) evacuation procedures;
(3) operation and actual opening, by each cabin crew member, of each type or variant of normal and emergency exits and of the flight crew compartment security door in the normal and emergency modes;
(4) demonstration of the operation of all other exits including the flight crew compartment windows;
(5) location and handling of all relevant safety and emergency equipment installed or carried on-board.

(c) The operator may elect to replace refresher training by recurrent training if the reinstatement of the cabin crew member's flying duties commences within the validity period of the last recurrent training and checking. If that validity period has expired, refresher training may only be replaced by aircraft type specific and operator conversion training as specified in ORO.CC.125.

SECTION 2
Additional requirements for commercial air transport operations

ORO.CC.200 Senior cabin crew member

(a) When more than one cabin crew member is required, the composition of the cabin crew shall include a senior cabin crew member nominated by the operator.

(b) The operator shall nominate cabin crew members to the position of senior cabin crew member only if they:
  (1) have at least one year of experience as operating cabin crew member; and
  (2) have successfully completed a senior cabin crew training course and the associated check.

(c) The senior cabin crew training course shall cover all duties and responsibilities of senior cabin crew members and shall include at least the following elements:
  (1) pre-flight briefing;
  (2) cooperation with the crew;
  (3) review of operator requirements and legal requirements;
  (4) accident and incident reporting;
  (5) human factors and crew resource management (CRM); and
  (6) flight and duty time limitations and rest requirements.

(d) The senior cabin crew member shall be responsible to the commander for the conduct and coordination of normal and emergency procedures specified in the operations manual, including for discontinuing non-safety-related duties for safety or security purposes.

(e) The operator shall establish procedures to select the most appropriately qualified cabin crew member to act as senior cabin crew member if the nominated senior cabin crew member becomes unable to operate. Changes to these procedures shall be notified to MCAA.

ORO.CC.205 Reduction of the number of cabin crew during ground operations and in unforeseen circumstances

(a) Whenever any passengers are on board an aircraft, the minimum number of cabin crew required in accordance with ORO.CC.100 shall be present in the passenger compartment.

(b) Subject to the conditions specified in (c), this number may be reduced:
  (1) during normal ground operations not involving refuelling/defuelling when the aircraft is at its parking station; or
  (2) in unforeseen circumstances if the number of passengers carried on the flight is reduced. In this case a report shall be submitted to MCAA after completion of the flight.

(c) Conditions:
  (1) procedures ensuring that an equivalent level of safety is achieved with the reduced number of cabin crew, in particular for evacuation of passengers, are established in the operations manual;
  (2) the reduced cabin crew includes a senior cabin crew member as specified in ORO.CC. 200;

  (3) at least one cabin crew member is required for every 50, or fraction of 50, passengers present on the same deck of the aircraft;
  (4) in the case of normal ground operations with aircraft requiring more than one cabin crew member, the number determined in accordance with (c)(3) shall be increased to include one cabin crew member per pair of floor level emergency exits.

ORO.CC.210 Additional conditions for assignment to duties

Cabin crew members shall only be assigned to duties, and operate, on a particular aircraft type or variant if they:

(a) hold a valid licence issued in accordance with Annex V (Part-CC) to MCAR-Air Crew;

(b) are qualified on the type or variant in accordance with this Subpart;

(c) comply with the other applicable requirements of this Subpart and Annex IV (Part-CAT);

(d) wear the operator's cabin crew uniform.

ORO.CC.215 Training and checking programs and related documentation

(a) Training and checking programmes including syllabi required by this Subpart shall be approved by MCAA and specified in the operations manual.

(b) After a cabin crew member has successfully completed a training course and the associated check, the operator shall:
   (1) update the cabin crew member's training records in accordance with ORO.MLR.115; and
   (2) provide him/her with a list showing updated validity periods as relevant to the aircraft type(s) and variant(s) on which the cabin crew member is qualified to operate.

ORO.CC.250 Operation on more than one aircraft type or variant

(a) A cabin crew member shall not be assigned to operate on more than three aircraft types, except that, with the approval of MCAA, the cabin crew member may be assigned to operate on four aircraft types if for at least two of the types:
   (1) safety and emergency equipment and type-specific normal and emergency procedures are similar; and
   (2) non-type-specific normal and emergency procedures are identical.

(b) For the purpose of (a) and for cabin crew training and qualifications, the operator shall determine:
   (1) each aircraft as a type or a variant taking into account, where available, the relevant data established in accordance with MCAR-Air Operations for the relevant aircraft type or variant; and
   (2) variants of an aircraft type to be different types if they are not similar in the following aspects:
      (i) emergency exit operation;
      (ii) location and type of portable safety and emergency equipment;
      (iii) type-specific emergency procedures.

ORO.CC.255 Single cabin crew member operations

(a) The operator shall select, recruit, train and check the proficiency of cabin crew members to be assigned to single cabin crew member operations according to criteria appropriate to this type of operation.

(b) Cabin crew members who have no previous operating experience as single cabin crew member shall only be assigned to such type of operation after they have:
   (1) completed training as required in (c) in addition to other applicable training and checking required by this Subpart;
   (2) successfully passed the checks verifying their proficiency in discharging their duties and responsibilities in accordance with the procedures specified in the operations manual; and
   (3) undertakenfamiliarisation flying of at least 20 hours and 15 sectors on the relevant aircraft type under the supervision of an appropriately experienced cabin crew member.

(c) The following additional training elements shall be covered with particular emphasis to reflect single cabin crew operations:
   (1) responsibility to the commander for the conduct of normal and emergency procedures;

(2) importance of coordination and communication with the flight crew, in particular when managing unruly or disruptive passengers;
(3) review of operator requirements and legal requirements;
(4) documentation;
(5) accident and incident reporting; and
(6) flight and duty time limitations and rest requirements.

SUBPART TC
TECHNICAL CREW IN HEMS, HHO OR NVIS OPERATIONS

ORO.TC.100 Scope

This Subpart establishes the requirements to be met by the operator when operating an aircraft with technical crew members in commercial air transport helicopter emergency medical service (HEMS), night vision imaging system (NVIS) operations or helicopter hoist operations (HHO).

ORO.TC.105 Conditions for assignment to duties

(a) Technical crew members in commercial air transport HEMS, HHO or NVIS operations shall only be assigned duties if they:
  (1) are at least 18 years of age;
  (2) are physically and mentally fit to safely discharge assigned duties and responsibilities;
  (3) have completed all applicable training required by this Subpart to perform the assigned duties;
  (4) have been checked as proficient to perform all assigned duties in accordance with the procedures specified in the operations manual.

(b) Before assigning to duties technical crew members who are self-employed and/or working on a freelance or part-time basis, the operator shall verify that all applicable requirements of this Subpart are complied with, taking into account all services rendered by the technical crew member to other operator(s) to determine in particular:
  (1) the total number of aircraft types and variants operated;
  (2) the applicable flight and duty time limitations and rest requirements.

ORO.TC.110 Training and checking

(a) The operator shall establish a training programme in accordance with the applicable requirements of this Subpart to cover the duties and responsibilities to be performed by technical crew members.

(b) Following the completion of initial, operator conversion, differences and recurrent training, each technical crew member shall undergo a check to demonstrate their proficiency in carrying out normal and emergency procedures.

(c) Training and checking shall be conducted for each training course by personnel suitably qualified and experienced in the subject to be covered. The operator shall inform MCAA about the personnel conducting the checks.

ORO.TC.115 Initial training

Before undertaking the operator conversion training, each technical crew member shall complete initial training, including:

(a) general theoretical knowledge on aviation and aviation regulations covering all elements relevant to the duties and responsibilities required of technical crew;

(b) fire and smoke training;

(c) survival training on ground and in water, appropriate to the type and area of operation;

(d) aero-medical aspects and first-aid;

(e) communication and relevant CRM elements of ORO.FC.115 and ORO.FC.215.

ORO.TC.120 Operator conversion training

Each technical crew member shall complete:

(a) operator conversion training, including relevant CRM elements,
  (1) before being first assigned by the operator as a technical crew member; or

(2) when changing to a different aircraft type or class, if any of the equipment or procedures mentioned in (b) are different.

(b) Operator conversion training shall include:
(1) the location and use of all safety and survival equipment carried on the aircraft;
(2) all normal and emergency procedures;
(3) on-board equipment used to carry out duties in the aircraft or on the ground for the purpose of assisting the pilot during HEMS, HHO or NVIS operations.

ORO.TC.125 Differences training

(a) Each technical crew member shall complete differences training when changing equipment or procedures on types or variants currently operated.
(b) The operator shall specify in the operations manual when such differences training is required.

ORO.TC.130 Familiarisation flights

Following completion of the operator conversion training, each technical crew member shall undertake familiarisation flights prior to operating as a required technical crew member in HEMS, HHO or NVIS operations.

ORO.TC.135 Recurrent training

(a) Within every 12-month period, each technical crew member shall undergo recurrent training relevant to the type or class of aircraft and equipment that the technical crew member operates. Elements of CRM shall be integrated into all appropriate phases of the recurrent training.

(b) Recurrent training shall include theoretical and practical instruction and practice.

ORO.TC.140 Refresher training

(a) Each technical crew member who has not undertaken duties in the previous six months shall complete the refresher training specified in the operations manual.

(b) The technical crew member who has not performed flying duties on one particular aircraft type or class during the preceding six months shall, before being assigned on that type or class, complete either:
(1) refresher training on the type or class; or
(2) twofamiliarisation sectors on the aircraft type or class.

SUBPART FTL
FLIGHT AND DUTY TIME LIMITATIONS AND REST REQUIREMENTS

SECTION 1
General

ORO.FTL.100 Scope

This Subpart establishes the requirements to be met by an operator with regard to flight and duty time limitations and rest requirements for crew members.

ORO.FTL.105 Definitions

For the purpose of this Subpart, the following definitions shall apply:

'**Acclimatised'**: means that a crew member is considered to be acclimatised to a 2-hour wide time zone surrounding the local time of his/her point of departure. When the local time of the place where a duty commences differs by more than 2 hours from that at the place where a duty ends, the crew member is considered to be acclimatised in accordance with the values in the table below for the calculation of the maximum daily FDP.

Table 1

Time difference (h) between reference time and local time where the crew member starts the subsequent duty	**Time elapsed since reporting at reference time**				
	<48	**48-71:59**	**71-95:59**	**96-119:59**	**≥120**
<4	B	D	D	D	D
≤6	B	X	D	D	D
≤9	B	X	X	D	D
≤12	B	X	X	X	D

'B' means acclimatised to the local time of the departure time zone,
'D' means acclimatised to the local time where the crew member starts his/her subsequent duty, and
'X' means that a crew member is in an unknown state of acclimatisation

'**Accommodation'** means, for the purpose of standby and split duty, a quiet and comfortable place not open to the public with the ability to control light and temperature, equipped with adequate furniture that provides a crew member with a possibility to sleep, with enough capacity to accommodate all crew members present at the same time and with access to food and drink.

'**Airport duty'** means a pre-notified and defined period of time during which a crew member is required by the operator to be at the airport immediately available to receive an assignment for a flight, positioning or other duty.

'Air taxi' means an air charter passenger or cargo aircraft which operates on an on-demand basis.

'Air taxi operation' means an air taxi operation is a non-scheduled on demand commercial operation with aircraft of a passenger seating configuration of 19 or less.

'**Augmented flight crew'**means a flight crew which comprises more than the minimum number required to operate the aircraft, allowing each flight crew member to leave the assigned post, for the purpose of in-flight rest, and to be replaced by another appropriately qualified flight crew member.

'**Break'** means a period of time within a flight duty period, shorter than a rest period, counting as duty and during which a crew member is free of all tasks.

'**Delayed reporting'** means the postponement of a scheduled FDP by the operator before a crew member has left his/her place of rest.

'**Disruptive schedule'** means a crew member's roster comprising an FDP or a combination of FDPs starting, finishing during or encroaching any portion of the day or of the night where a crew member is acclimatised which disrupts the sleep opportunity during the optimal sleep time window. A schedule may be disruptive due to early starts, late finishes and night duties.

(a) '**Early type'** of disruptive schedule means:
   (1) for '***early start'*** a duty period starting in the period between 05:00 and 05:59 in the time zone to which a crew member is acclimatised; and
   (2) for '***late finish'*** a duty period finishing in the period between 23:00 and 01:59 in the time zone to which a crew member is acclimatised.

(b) '**Late type'** of disruptive schedule means:
   (1) for '***early start'*** a duty period starting in the period between 05:00 and 06:59 in the time zone to which a crew member is acclimatised; and
   (2) for '***late finish'*** a duty period finishing in the period between 00:00 and 01:59 in the time zone to which a crew member is acclimatised.

'**Duty'** means any task that a crew member performs for the operator, including flight duty, administrative work, giving or receiving training and checking, positioning, and some elements of standby.

'**Duty period'** means a period which starts when a crew member is required by an operator to report for or to commence a duty and ends when that person is free of all duties, including post-flight duty.

'**Eastward-Westward and Westward-Eastward transition'** means the transition at home base between a rotation crossing 6 or more time zones in one direction and a rotation crossing 4 or more time zones in the opposite direction.

'Emergency Flight' means aflight undertaken for the sole purpose of assisting in the resolution of an emergency, which is, or under slightly different circumstances could be, a threat to human life.

'**Flight duty period (FDP)**' means a period that commences when a crew member is required to report for duty, which includes a sector or a series of sectors, and finishes when the aircraft finally comes to rest and the engines are shut down, at the end of the last sector on which the crew member acts as an operating crew member.

'**Flight time'** means, for aeroplanes and touring motor gliders, the time between an aircraft first moving from its parking place for the purpose of taking off until it comes to rest on the designated parking position and all engines or propellers are shut down.

'**Home base'** means the location, assigned by the operator to the crew member, from where the crew member normally starts and ends a duty period or a series of duty periods and where, under normal circumstances, the operator is not responsible for the accommodation of the crew member concerned.

'**Local day'** means a 24-hour period commencing at 00:00 local time.

'**Local night'** means a period of 8 hours falling between 22:00 and 08:00 local time.

'Night duty' means a duty period encroaching any portion of the period between 02:00 and 04:59 in the time zone to which the crew is acclimatised.

'Offshore Based and Remote Site Operations' means anoperation in support of the oil/gas industry, where a helicopter and a crew are based on a rig or at a remote operating site.

'**Operating crew member'** means a crew member carrying out his/her duties in an aircraft during a sector.

'**Positioning'** means the transferring of a non-operating crew member from one place to another, at the behest of the operator, excluding:

- the time of travel from a private place of rest to the designated reporting place at home base and vice versa, and
- the time for local transfer from a place of rest to the commencement of duty and vice versa;

'**Reference time'** means the local time at the reporting point in a 2 hours wide time zone band around the local time where a crew member is acclimatised.

'**Rest facility'** means a bunk or seat with leg and foot support suitable for crew members' sleeping on board an aircraft.

'**Reserve'** means a period of time during which a crew is required by the operator to be available to receive an assignment for anFDP, positioning or other duty notified at least 10 hour in advance.

'**Rest period'** means a continuous, uninterrupted and defined period of time, following duty or prior to duty, during which a crew member is free of all duties, standby and reserve.

'**Rotation'** is a duty or a series of duties, including at least one flight duty, and rest periods out of home base, starting at home base and ending when returning to home base for a rest period where the operator is no longer responsible for the accommodation of the crew member.

'**Single day free of duty'** means,a time free of all duties and standby consisting of one day and two local nights, which is notified in advance. A rest period may be included as part of the single day free of duty;

'**Sector'** means the time between an aircraft first moving for the purpose of taking off until it comes to rest after landing on the designated parking position.

'**Standby'** means a pre-notified and defined period of time during which a crew member is required by the operator to be available to receive an assignment for a flight, positioning or other duty without an intervening rest period.
(a) ***airport standby*** means a standby performed at the airport;
(b) ***other standby*** means a standby either at home or in a suitable accommodation.

'**Suitable accommodation'** means, for the purpose of standby, split duty and rest, a separate roomfor each crew member located in a quietenvironment, equipped with a bed, which is sufficiently ventilated, has a device for regulating temperature and light intensity, and access to food and drink.

'**Ultra long range operations (ULR)**' means long range flights having a planned flight duration greater than 16 hours or a flight duty period that exceeds 18 hours.

'**Window of Circadian Low (WOCL)**' means the period between 02:00 and 05:59 hours in the time zone to which a crew member is acclimatised.

ORO.FTL.110 Operator responsibilities

An operator shall:

(a) publish duty rosters sufficiently in advance to provide the opportunity for crew members to plan adequate rest;

(b) ensure that flight duty periods are planned in a way that enables crew members to remain sufficiently free from fatigue so that they can operate to a satisfactory level of safety under all circumstances;

(c) specify reporting times that allow sufficient time for ground duties;

(d) take into account the relationship between the frequency and pattern of flight duty periods and rest periods and give consideration to the cumulative effects of undertaking long duty hours combined with minimum rest periods;

(e) allocate duty patterns which avoid practices that cause a serious disruption of an established sleep/work pattern, such as alternating day/night duties;

(f) comply with the provisions concerning disruptive schedules in accordance with ARO.OPS.230;

(g) provide rest periods of sufficient time to enable crew members to overcome the effects of the previous duties and to be rested by the start of the following flight duty period;

(h) plan recurrent extended recovery rest periods and notify crew members sufficiently in advance;

(i) plan flight duties in order to be completed within the allowable flight duty period taking into account the time necessary for pre-flight duties, the sector and turnaround times;

(j) change a schedule and/or crew arrangements if the actual operation exceeds the maximum flight duty period on more than 33 % of the flight duties in that schedule during a scheduled seasonal period.

ORO.FTL.115 Crew member responsibilities

Crew members shall:
(a) comply with point CAT.GEN.MPA.100(b) of Annex IV (Part-CAT); and

(b) make optimum use of the opportunities and facilities for rest provided and plan and use their rest periods properly.

ORO.FTL.120 Fatigue risk management (FRM)

(a) When FRM is required by this Subpart or an applicable certification specification, the operator shall establish, implement and maintain a FRM as an integral part of its management system. The FRM shall ensure compliance with the essential requirements in points 7.f, 7.g and 8.f of the Essential Requirements. The FRM shall be described in the operations manual.

(b) The FRM established, implemented and maintained shall provide for continuous improvement to the overall performance of the FRM and shall include:
  (1) a description of the philosophy and principles of the operator with regard to FRM, referred to as the FRM policy;
  (2) documentation of the FRM processes, including a process for making personnel aware of their responsibilities and the procedure for amending this documentation;
  (3) scientific principles and knowledge;
  (4) a hazard identification and risk assessment process that allows managing the operational risk(s) of the operator arising from crew member fatigue on a continuous basis;
  (5) a risk mitigation process that provides for remedial actions to be implemented promptly, which are necessary to effectively mitigate the operator's risk(s) arising from crew member fatigue and for continuous monitoring and regular assessment of the mitigation of fatigue risks achieved by such actions;
  (6) FRM safety assurance processes;
  (7) FRM promotion processes.

(c) The FRM shall correspond to the flight time specification scheme, the size of the operator and the nature and complexity of its activities, taking into account the hazards and associated risks inherent in those activities and the applicable flight time specification scheme.

(d) The operator shall take mitigating actions when the FRM safety assurance process shows that the required safety performance is not maintained.

ORO.FTL.125 Flight time specification schemes

(a) Operators shall establish, implement and maintain flight time specification schemes that are appropriate for the type(s) of operation performed and that comply with MCAR Air Operations, this Subpart and other applicable legislation.

(b) Before being implemented, flight time specification schemes, including any related FRM where required, shall be approved by MCAA.

(c) To demonstrate compliance with MCAR Air Operationsand this Subpart, the operator shall apply the applicable certification specifications. Alternatively, if the operator wants to deviate from the certification specifications, it shall provide MCAA with a full description of the intended deviation prior to implementing it. The description shall include any revisions to manuals or procedures that may be relevant, as well as an assessment demonstrating that the requirements of MCAR Air Operationsand of this Subpart are met.

(d) For the purpose of point ARO.OPS.235 (b), within 2 years of the implementation of a deviation or derogation, the operator shall collect data concerning the granted deviation or derogation and analyse that data using scientific principles with a view to assessing the effects of the deviation or derogation on aircrew fatigue. Such analysis shall be provided in the form of a report to MCAA.

SECTION 2
Commercial Air Transport Operators

ORO.FTL.200 Home base

An operator shall assign a home base to each crew member.

ORO.FTL.205 Flight duty period (FDP)

(a) The operator shall:
(1) define reporting times appropriate to each individual operation taking into account ORO.FTL.110(c);
(2) establish procedures specifying how the commander shall, in case of special circumstances which could lead to severe fatigue, and after consultation with the crew members concerned, reduce the actual FDP and/or increase the rest period in order to eliminate any detrimental effect on flight safety.

(b) Basic maximum daily FDP.
(1) The maximum daily FDP without the use of extensions for acclimatised crew members shall be in accordance with the following table:

Table 2
Maximum daily FDP — Acclimatised crew members

INTERNATIONAL OPERATIONS ONLY

Local time of start	Sectors						
	1-2	3	4	5	6	7	8
0600-0759	13:00	12:30	12:00	11:30	10:30	10:00	9:30
0800-1259	14:00	13:30	13:00	12:30	11:30	11:00	10:30
1300-2159	13:00	12:30	12:00	11:30	10:30	10:00	9:30
2200-0559	11:00	10:30	10:00	9:30	9:00	9:00	9:00

INTERNATIONAL AND DOMESTIC OR DOMESTIC OPEATIONS

Local time of start	Sectors						
	1-4	5	6	7	8	9	10
0600-0759	13:00	12:30	12:00	11:30	10:30	10:00	9:30
0800-1259	14:00	13:30	13:00	12:30	11:30	11:00	10:30
1300-2159	13:00	12:30	12:00	11:30	10:30	10:00	9:30
2200-0559	11:00	10:30	10:00	9:30	9:00	9:00	9:00

(2) The maximum daily FDP when crew members are in an unknown state of acclimatisation shall be in accordance with the following table:

Table 3
Crew members in an unknown state of acclimatisation

Maximum daily FDP according to sectors						
1–2	3	4	5	6	7	8
11:00	10:30	10:00	09:30	09:00	09:00	09:00

(3) The maximum daily FDP when crew members are in an unknown state of acclimatisation and the operator has implemented a FRM shall be in accordance with the following table:

Table 4
Crew members in an unknown state of acclimatisation under FRM

The values in the following table may apply provided the operator's FRM continuously monitors that the required safety performance is maintained.

Maximum daily FDP according to sectors						
1–2	3	4	5	6	7	8
12:00	11:30	11:00	10:30	10:00	09:30	09:00

(c) FDP with different reporting time for flight crew and cabin crew.

Whenever cabin crew requires more time than the flight crew for their pre-flight briefing for the same sector or series of sectors, the FDP of the cabin crew may be extended by the difference in reporting time between the cabin crew and the flight crew. The difference shall not exceed 1 hour. The maximum daily FDP for cabin crew shall be based on the time at which the flight crew report for their FDP, but the FDP shall start at the reporting time of the cabin crew.

(d) Maximum daily FDP for acclimatised crew members with the use of extensions without in-flight rest.
(1) The maximum daily FDP may be extended by up to 1 hour not more than twice in any 7 consecutive days. In that case:
(i) the minimum pre-flight and post-flight rest periods shall be increased by 2 hours; or
(ii) the post-flight rest period shall be increased by 4 hours.
(2) When extensions are used for consecutive FDPs, the additional pre- and post-flight rest between the two extended FDPs required under subparagraph 1 shall be provided consecutively.
(3) The use of the extension shall be planned in advance, and shall be limited to a maximum of:
(i) 5 sectors when the WOCL is not encroached; or
(ii) 4 sectors, when the WOCL is encroached by 2 hours or less; or
(iii) 2 sectors, when the WOCL is encroached by more than 2 hours.
(4) Extension of the maximum basic daily FDP without in-flight rest shall not be combined with extensions due to in- flight rest or split duty in the same duty period.
(5) Flight time specification schemes shall specify the limits for extensions of the maximum basic daily FDP in accordance with the certification specifications applicable to the type of operation, taking into account:
(i) the number of sectors flown; and
(ii) WOCL encroachment.

(e) Maximum daily FDP with the use of extensions due to in-flight rest

Flight time specification schemes shall specify the conditions for extensions of the maximum basic daily FDP with in- flight rest in accordance with the certification specifications applicable to the type of operation, taking into account:
(i) the number of sectors flown;
(ii) the minimum in-flight rest allocated to each crew member;
(iii) the type of in-flight rest facilities; and
(iv) the augmentation of the basic flight crew.

(f) Unforeseen circumstances in flight operations — commander's discretion
  (1) The conditions to modify the limits on flight duty, duty and rest periods by the commander in the case of unforeseen circumstances in flight operations, which start at or after the reporting time, shall comply with the following:
    (i) the maximum daily FDP which results after applying points (b) and (e) of point ORO.FTL.205 or point ORO.FTL.220 may not be increased by more than 2 hours unless the flight crew has been augmented, in which case the maximum flight duty period may be increased by not more than 3 hours;
    (ii) if on the final sector within an FDP the allowed increase is exceeded because of unforeseen circumstances after take-off, the flight may continue to the planned destination or alternate aerodrome; and
    (iii) the rest period following the FDP may be reduced but can never be less than 10 hours.
  (2) In case of unforeseen circumstances which could lead to severe fatigue, the commander shall reduce the actual flight duty period and/or increase the rest period in order to eliminate any detrimental effect on flight safety.
  (3) The commander shall consult all crew members on their alertness levels before deciding the modifications under subparagraphs 1 and 2.
  (4) The commander shall submit a report to the operator when an FDP is increased or a rest period is reduced at his or her discretion.
  (5) Where the increase of an FDP or reduction of a rest period exceeds 1 hour, a copy of the report, to which the operator shall add its comments, shall be sent by the operator to the competent authority not later than 28 days after the event.
  (6) The operator shall implement a non-punitive process for the use of the discretion described under this provision and shall describe it in the operations manual.

(g) Unforeseen circumstances in flight operations — delayed reporting

The operator shall establish procedures, in the operations manual, for delayed reporting in the event of unforeseen circumstances, in accordance with the certification specifications applicable to the type of operation.

ORO.FTL.210 Flight times and duty periods

(a) The total duty periods to which a crew member may be assigned shall not exceed:
  (1) 60 duty hours in any 7 consecutive days;
  (2) 110 duty hours in any 14 consecutive days; and
  (3) 190 duty hours in any 28 consecutive days, spread as evenly as practicable throughout that period.

(b) The total flight time of the sectors on which an individual crew member is assigned as an operating crew member shall not exceed:
  (1) 100 hours of flight time in any 28 consecutive days;
  (2) 900 hours of flight time in any calendar year; and
  (3) 1 000 hours of flight time in any 12 consecutive calendar months.

(c) Post-flight duty shall count as duty period. The operator shall specify in its operations manual the minimum time period for post-flight duties.

ORO.FTL.215 Positioning

If an operator positions a crew member, the following shall apply:

(a) positioning after reporting but prior to operating shall be counted as FDP but shall not count as a sector;

(b) all time spent on positioning shall count as duty period.

ORO.FTL.220 Split duty

The conditions for extending the basic maximum daily FDP due to a break on the ground shall be in accordance with the following:

(a) flight time specification schemes shall specify the following elements for split duty in accordance with the certification specifications applicable to the type of operation:
  (1) the minimum duration of a break on the ground; and
  (2) the possibility to extend the FDP prescribed under point ORO.FTL.205(b) taking into account the duration of the break on the ground, the facilities provided to the crew member to rest and other relevant factors;

(b) the break on the ground shall count in full as FDP;

(c) split duty shall not follow a reduced rest.

ORO.FTL.225 Standby and duties at the airport

If an operator assigns crew members to standby or to any duty at the airport, the following shall apply in accordance with the certification specifications applicable to the type of operation:

(a) standby and any duty at the airport shall be in the roster and the start and end time of standby shall be defined and notified in advance to the crew members concerned to provide them with the opportunity to plan adequate rest;

(b) a crew member is considered on airport standby from reporting at the reporting point until the end of the notified airport standby period;

(c) airport standby shall count in full as duty period for the purpose of points ORO.FTL.210 and ORO.FTL.235;

(d) any duty at the airport shall count in full as duty period and the FDP shall count in full from the airport duty reporting time;

(e) the operator shall provide accommodation to the crew member on airport standby;

(f) flight time specification schemes shall specify the following elements:
  (1) the maximum duration of any standby;
  (2) the impact of the time spent on standby on the maximum FDP that may be assigned, taking into account facilities provided to the crew member to rest, and other relevant factors such as:
    — the need for immediate readiness of the crew member,
    — the interference of standby with sleep, and
    — sufficient notification to protect a sleep opportunity between the call for duty and the assigned FDP;
  (3) the minimum rest period following standby which does not lead to assignment of an FDP;
  (4) how time spent on standby other than airport standby shall be counted for the purpose of cumulative duty periods.

ORO.FTL.230 Reserve

If an operator assigns crew members to reserve, the following requirements shall apply in accordance with the certification specifications applicable to the type of operation:

(a) reserve shall be in the roster;

(b) flight time specification schemes shall specify the following elements:
  (1) the maximum duration of any single reserve period;
  (2) the number of consecutive reserve days that may be assigned to a crew member.

ORO.FTL.235 Rest periods

(a) Minimum rest period at home base.
  (1) The minimum rest period provided before undertaking an FDP starting at home base shall be at least as long as the preceding duty period, or 12 hours, whichever is greater.

(2) By way of derogation from point (1), the minimum rest provided under point (b) applies if the operator provides suitable accommodation to the crew member at home base.

(b) Minimum rest period away from home base.

The minimum rest period provided before undertaking an FDP starting away from home base shall be at least as long as the preceding duty period, or 10 hours, whichever is greater. This period shall include an 8-hour sleep opportunity in addition to the time for travelling and physiological needs.

(c) Reduced rest

By derogation from points (a) and (b), flight time specification schemes may reduce the minimum rest periods in accordance with the certification specifications applicable to the type of operation and taking into account the following elements:
(1) the minimum reduced rest period;
(2) the increase of the subsequent rest period; and
(3) the reduction of the FDP following the reduced rest.

(d) Recurrent extended recovery rest periods

Flight time specification schemes shall specify recurrent extended recovery rest periods to compensate for cumulative fatigue. The minimum recurrent extended recovery rest period shall be 36 hours, including 2 local nights, and in any case the time between the end of one recurrent extended recovery rest period and the start of the next extended recovery rest period shall not be more than 168 hours. The recurrent extended recovery rest period shall be increased to 2 local days twice every month.

(e) Flight time specification schemes shall specify additional rest periods in accordance with the applicable certification specifications to compensate for:
(1) the effects of time zone differences and extensions of the FDP;
(2) additional cumulative fatigue due to disruptive schedules; and
(3) a change of home base.

ORO.FTL.240 Nutrition

(a) During the FDP there shall be the opportunity for a meal and drink in order to avoid any detriment to a crew member's performance, especially when the FDP exceeds 6 hours.

(b) An operator shall specify in its operations manual how the crew member's nutrition during FDP is ensured.

ORO.FTL.245 Records of home base, flight times, duty and rest periods

(a) An operator shall maintain, for a period of 24 months:
(1) individual records for each crew member including:
(i) flight times;
(ii) start, duration and end of each duty period and FDP;
(iii) rest periods and days free of all duties; and
(iv) assigned home base;
(2) reports on extended flight duty periods and reduced rest periods.

(b) Upon request, the operator shall provide copies of individual records of flight times, duty periods and rest periods to:
(1) the crew member concerned; and
(2) to another operator, in relation to a crew member who is or becomes a crew member of the operator concerned.

(c) Records referred to in point CAT.GEN.MPA.100 (b)(5) in relation to crew members who undertake duties for more than one operator shall be kept for a period of 24 months.

ORO.FTL.250 Fatigue management training

(a) The operator shall provide initial and recurrent fatigue management training to crew members, personnel responsible for preparation and maintenance of crew rosters and management personnel concerned.

(b) This training shall follow a training programme established by the operator and described in the operations manual. The training syllabus shall cover the possible causes and effects of fatigue and fatigue countermeasure.'

SECTION 3
Air Taxi, Pleasure flying and Air Ambulance Operations

ORO.FTL.300 Home base

An operator shall assign a home base to each crew member.

ORO.FTL.305 Flight duty period (FDP)

(a) The operator shall:
(1) define reporting times appropriate to each individual operation taking into account ORO.FTL.110(c);
(2) establish procedures specifying how the commander shall, in case of special circumstances which could lead to severe fatigue, and after consultation with the crew members concerned, reduce the actual FDP and/or increase the rest period in order to eliminate any detrimental effect on flight safety.

(b) **Basic maximum daily FDP.**

(1) The maximum daily FDP without the use of extensions for acclimatised crew members shall be in accordance with the following table:

Table 2
Maximum daily FDP — Air Taxi, Pleasure Flying and Air Ambulance

MULTI-CREW OPEATIONS

Local time of start	Sectors				
	1-10	11	12	13	14
0600-0759	13:00	12:30	12:00	11:30	10:30
0800-1259	14:00	13:30	13:00	12:30	11:30
1300-2159	13:00	12:30	12:00	11:30	10:30
2200-0559	12:00	11:30	11:00	10:30	10:00

SINGLE-CREW OPEATIONS

Local time of start	Sectors				
	1-4	5	6	7	8
0600-0759	10:00	9:30	9:00	8:30	8:00
0800-1259	11:00	10:30	10:00	9:30	8:30
1300-2159	10:00	9:30	9:00	8:30	8:00
2200-0559	8:00	8:00	8:00	8:00	8:00

(2) The maximum daily FDP when crew members are in an unknown state of acclimatisation shall be in accordance with the following table:

Table 3
Crew members in an unknown state of acclimatisation

Maximum daily FDP according to sectors						
1–2	3	4	5	6	7	8
11:00	10:30	10:00	09:30	09:00	09:00	09:00

(3) The maximum daily FDP when crew members are in an unknown state of acclimatisation and the operator has implemented a FRM shall be in accordance with the following table:

Table 4
Crew members in an unknown state of acclimatisation under FRM

The values in the following table may apply provided the operator's FRM continuously monitors that the required safety performance is maintained.

Maximum daily FDP according to sectors						
1–2	3	4	5	6	7	8
12:00	11:30	11:00	10:30	10:00	09:30	09:00

(c) **FDP with different reporting time for flight crew and cabin crew**

Whenever cabin crew requires more time than the flight crew for their pre-flight briefing for the same sector or series of sectors, the FDP of the cabin crew may be extended by the difference in reporting time between the cabin crew and the flight crew. The difference shall not exceed 1 hour. The maximum daily FDP for cabin crew shall be based on the time at which the flight crew report for their FDP, but the FDP shall start at the reporting time of the cabin crew.

(d) **Maximum daily FDP for acclimatised crew members with the use of extensions without in-flight rest**

(1) The maximum daily FDP may be extended by 3 hour not more than thrice in any 7 consecutive days. In that case:
   (i) the minimum post-flight rest period shall be increased by the amount exceeded; or
   (ii) if away from home base, the amount exceeded shall be reduced from the next consecutive allowable FDP.
(2) Extensions shall not be used in any two consecutive FDPs, unless separated by an extended recovery rest period.
(3) Extension of the maximum basic daily FDP without in-flight rest shall not be combined with extensions due to in- flight rest or split duty in the same duty period.
(4) Flight time specification schemes shall specify the limits for extensions of the maximum basic daily FDP in accordance with the certification specifications applicable to the type of operation, taking into account:
   (i) the number of sectors flown; and
   (ii) WOCL encroachment.

(e) **Maximum daily FDP with the use of extensions due to in-flight rest**

Flight time specification schemes shall specify the conditions for extensions of the maximum basic daily FDP with in- flight rest in accordance with the certification specifications applicable to the type of operation, taking into account:
(i) the number of sectors flown;
(ii) the minimum in-flight rest allocated to each crew member;
(iii) the type of in-flight rest facilities; and
(iv) the augmentation of the basic flight crew.

(f) **Unforeseen circumstances in flight operations — commander's discretion**

(1) The conditions to modify the limits on flight duty, duty and rest periods by the commander in the case of unforeseen circumstances in flight operations, which start at or after the reporting time, shall comply with the following:
  (i) the maximum daily FDP which results after applying points (b) and (e) of point ORO.FTL.205 or point ORO.FTL.220 may not be increased by more than 3 hours unless the flight crew has been augmented, in which case the maximum flight duty period may be increased by not more than 5hours;
  (ii) if on the final sector within an FDP the allowed increase is exceeded because of unforeseen circumstances after take-off, the flight may continue to the planned destination or alternate aerodrome; and
  (iii) the rest period following the FDP may be reduced but can never be less than 10 hours.
(2) In case of unforeseen circumstances which could lead to severe fatigue, the commander shall reduce the actual flight duty period and/or increase the rest period in order to eliminate any detrimental effect on flight safety.
(3) The commander shall consult all crew members on their alertness levels before deciding the modifications under subparagraphs 1 and 2.
(4) The commander shall submit a report to the operator when an FDP is increased or a rest period is reduced at his or her discretion.
(5) Where the increase of an FDP or reduction of a rest period exceeds 1 hour, a copy of the report, to which the operator shall add its comments, shall be sent by the operator to MCAA not later than 28 days after the event.
(6) The operator shall implement a non-punitive process for the use of the discretion described under this provision and shall describe it in the operations manual.

(g) **Unforeseen circumstances in flight operations — delayed reporting**

The operator shall establish procedures, in the operations manual, for delayed reporting in the event of unforeseen circumstances, in accordance with the certification specifications applicable to the type of operation.

(h) **Mixed Duties**

(1) **Fixed Wing and Rotary Wing Flying**
When both fixed wing and rotary wing flying is carried out the more restrictive flight and duty time limitations apply.
(2) **Mixed Single Pilot/Two Pilot Operations**
In one duty period a pilot may fly as single flight crew up to the point where the total duty hours reach the single flight crew FDP limit. During this time the pilot may fly either in command or as a co-pilot on a two pilot aircraft. The pilot may then continue beyond the single flight crew FDP limit in a two pilot operation up to the two flight crew FDP maxima, but may only fly as a co-pilot.
(3) **Mixed Simulator and Aircraft Flying**
When a flight crew member flies in the simulator, either on a check or training flight, or as a Training Captain or Instructor, and then within the same duty period flies as a flight crew member on a public transport flight, all the time spent in the simulator is counted in full towards the subsequent FDP and daily flying hour maxima. The FDP allowable is calculated from the report time of the simulator detail.

(i) **Dedicated Air Ambulance operations - Fixed Wing**

When carrying out an Air Ambulance flight, the allowable FDP may be increased by up to a maximum of 4 hours, subject to all the following conditions being met:
(1) Where an FDP is extended under the terms of this provision, a qualified medical attendant must accompany the flight.
(2) The only passengers that may be carried in addition to the patient and medical attendants are the immediate family or next of kin. One close friend only may be carried in lieu of any immediate family or next of kin.
(3) The crew must have had the full entitlement of rest relating to the preceding duty prior to starting an air ambulance flying duty.

(4) **Single Pilot Crew**
If, exceptionally, the FDP is scheduled to be extended beyond the maximum of the 4 hours then an additional qualified commander must be carried as a relief pilot at least until the aircraft reaches the site where the patient or organ is disembarked. Commander's discretion cannot be used to extend the FDP after the patient or organ has been disembarked. A discretion report must be submitted to MCAA.

(5) **Two Pilot Crew**
The use of Commander's discretion to further extend the FDP, beyond the extra 4 hours permitted, may be exercised only to offload/deliver the patient or organ to the destination. Such discretion cannot be used after the patient or organ has been offloaded. A discretion report must be submitted to MCAA.

(6) Following an Air Ambulance FDP the appropriate full rest period must be taken.

(7) At least 48 hours must elapse between the end of one extended Air Ambulance FDP and the start of another Air Ambulance FDP. In one Air Ambulance operation involving two or more extended FDP duties (the first of which is positioning to uplift a patient or organ) the necessity for the 48 hours rest may be deferred until return to base. In this case the Commander may reduce the rest following the first FDP by up to 3 hours or to 10 hours in suitable accommodation, whichever is the greater.

(8) A pilot can only fly 3 air ambulance extended FDPs in any 28 consecutive days. (This shall only apply where extensions exceed 1½ hours).

(9) The use of split duty to extend the FDP is not permitted.

(j) **Combined Public Transport/Air Ambulance**

On a day, if an operator wishes to use an aircraft and crew for a combination of Public Transport and Air Ambulance work then the FDP specified must be that obtained from paragraph (b)(1) above. Extension of the allowable FDP by the use of split duty and Commander's discretion is allowed. The extension permitted for dedicated air ambulance (in paragraph (i) above), does not apply in this case.

(k) **Air Ambulance - Heavy Crew**

(1) **Heavy Crew Additional Requirements**
A further 2 hours may be added to the 4 already allowable subject to the following additional conditions being met:
a) A third Captain qualified crew member must be on board.
b) A stretcher or comfortable reclining seat must be available for the resting crew member.
c) Maximum duty will be 18 hours or plus 6 hours whichever is the lesser.
d) The air ambulance operation will terminate when the patient or organ has been off- loaded and full rest entitlement must be taken at that point.
e) An additional 'day off' (minimum 34 hours which includes 2 local nights) must be taken on completion of the full rest entitlement.
f) All 'heavy crew' duty days carried out must be notified to MCAA.

(2) Revised Cumulative Duty Hours Limitations
a) Only 2 'heavy crew' duty days will be permitted in any 28 consecutive days.
b) In any 28 day period containing a 'heavy crew' duty day:
i) A minimum of 10 days off will be achieved.
ii) Maximum duty hours must not exceed 160 hours.
iii) Maximum flying hours shall be limited to 75 hours.
iv) A maximum of 60 hours flying averaged over 3 such 28 consecutive day periods.
v) If one or more such periods contain 'heavy crew' duty days then the allowable flying hours for the 12 month period must be reduced to 700 hours.

(l) **Pleasure Flying and Aerial Photography in single engined aircraft**

(1) A single FDP shall not exceed 10 hours, except that this may be extended to a maximum of 2 hours for the sole purpose of positioning the aircraft from/to the operator's base.

(2) A pilot shall not spend more than 7 hours at the controls in any one flying duty period. When positioning the aircraft, the pilot may spend up to an additional 2 hours at the controls for the sole purpose of completing this task.

(3) A pilot shall not be at the controls continuously for more than 3 hours.

(4) During an FDP a pilot shall have breaks of not less than 30 minutes duration, according to the following scale:

FDP up to 3 hours	Breaks totalling at least 30 minutes
FDP up to 6 hours	Breaks totalling at least 1 hour
FDP between 6 and 8 hours	Breaks totalling at least 1½ hours
FDP over 8 hours	Breaks totalling at least 2 hours

ORO.FTL.310 Flight times and duty periods

(a) The total duty periods to which a crew member may be assigned shall not exceed:
  (1) 60 duty hours in any 7 consecutive days;
  (2) 110 duty hours in any 14 consecutive days; and
  (3) 210 duty hours in any 28 consecutive days, spread as evenly as practicable throughout that period.

(b) The total flight time of the sectors on which an individual crew member is assigned as an operating crew member shall not exceed:
  (1) 100 hours of flight time in any 28 consecutive days; and
  (2) 1 000 hours of flight time in any consecutive 12 months.

(c) Post-flight duty shall count as duty period. The operator shall specify in its operations manual the minimum time period for post-flight duties.

ORO.FTL.315 Positioning

If an operator positions a crew member, the following shall apply:

(a) positioning after reporting but prior to operating shall be counted as FDP but shall not count as a sector;

(b) all time spent on positioning shall count as duty period.

ORO.FTL.320 Split duty

The conditions for extending the basic maximum daily FDP due to a break on the ground shall be in accordance with the following:

(a) flight time specification schemes shall specify the following elements for split duty in accordance with the certification specifications applicable to the type of operation:
  (1) the minimum duration of a break on the ground; and
  (2) the possibility to extend the FDP prescribed under point ORO.FTL.305(b) taking into account the duration of the break on the ground, the facilities provided to the crew member to rest and other relevant factors;

(b) the break on the ground shall count in full as FDP;

(c) split duty shall not follow a reduced rest.

ORO.FTL.325 Standby and duties at the airport

If an operator assigns crew members to standby or to any duty at the airport, the following shall apply in accordance with the certification specifications applicable to the type of operation:

(a) standby and any duty at the airport shall be in the roster and the start and end time of standby shall be defined and notified in advance to the crew members concerned to provide them with the opportunity to plan adequate rest;

(b) a crew member is considered on airport standby from reporting at the reporting point until the end of the notified airport standby period;

(c) airport standby shall count in full as duty period for the purpose of points ORO.FTL.310 and ORO.FTL.335;

(d) any duty at the airport shall count in full as duty period and the FDP shall count in full from the airport duty reporting time;

(e) the operator shall provide accommodation to the crew member on airport standby;

(f) flight time specification schemes shall specify the following elements:
  (1) the maximum duration of any standby;
  (2) the impact of the time spent on standby on the maximum FDP that may be assigned, taking into account facilities provided to the crew member to rest, and other relevant factors such as:
    — the need for immediate readiness of the crew member,
    — the interference of standby with sleep, and
    — sufficient notification to protect a sleep opportunity between the call for duty and the assigned FDP;
  (3) the minimum rest period following standby which does not lead to assignment of an FDP;
  (4) how time spent on standby other than airport standby shall be counted for the purpose of cumulative duty periods.

ORO.FTL.330 Reserve

If an operator assigns crew members to reserve, the following requirements shall apply in accordance with the certification specifications applicable to the type of operation:

(a) reserve shall be in the roster;

(b) flight time specification schemes shall specify the following elements:
  (1) the maximum duration of any single reserve period;
  (2) the number of consecutive reserve days that may be assigned to a crew member.

ORO.FTL.335 Rest periods

(a) Minimum rest period at home base.
  (1) The minimum rest period provided before undertaking an FDP starting at home base shall be at least as long as the preceding duty period, or 11 hours, whichever is greater.
  (2) By way of derogation from point (1), the minimum rest provided under point (b) applies if the operator provides suitable accommodation to the crew member at home base.

(b) Minimum rest period away from home base.

The minimum rest period provided before undertaking an FDP starting away from home base shall be at least 10 hours. This period shall include an 8-hour sleep opportunity in addition to the time for travelling and physiological needs.

(c) Reduced rest

By derogation from points (a) and (b), flight time specification schemes may reduce the minimum rest periods in accordance with the certification specifications applicable to the type of operation and taking into account the following elements:
(1) the minimum reduced rest period;
(2) the increase of the subsequent rest period; and
(3) the reduction of the FDP following the reduced rest.

(d) Recurrent extended recovery rest periods

Flight time specification schemes shall specify recurrent extended recovery rest periods to compensate for cumulative fatigue. The minimum recurrent extended recovery rest period shall be 58 hours, including 2 local nights, and in any case the time between the end of one recurrent extended recovery rest period and the start of the next extended recovery rest period shall not be more than 110 hours. The recurrent extended recovery rest period shall be increased to 2 local days twice every month.

(e) Flight time specification schemes shall specify additional rest periods in accordance with the applicable certification specifications to compensate for:
(1) the effects of time zone differences and extensions of the FDP;
(2) additional cumulative fatigue due to disruptive schedules; and
(3) a change of home base.

ORO.FTL.340 Nutrition

(a) During the FDP there shall be the opportunity for a meal and drink in order to avoid any detriment to a crew member's performance, especially when the FDP exceeds 6 hours.

(b) An operator shall specify in its operations manual how the crew member's nutrition during FDP is ensured.

ORO.FTL.345 Records of home base, flight times, duty and rest periods

(a) An operator shall maintain, for a period of 24 months:
(1) individual records for each crew member including:
(i) flight times;
(ii) start, duration and end of each duty period and FDP;
(iii) rest periods and days free of all duties; and
(iv) assigned home base;
(2) reports on extended flight duty periods and reduced rest periods.

(b) Upon request, the operator shall provide copies of individual records of flight times, duty periods and rest periods to:
(1) the crew member concerned; and
(2) to another operator, in relation to a crew member who is or becomes a crew member of the operator concerned.

(c) Records referred to in point CAT.GEN.MPA.100 (b)(5) in relation to crew members who undertake duties for more than one operator shall be kept for a period of 24 months.

ORO.FTL.350 Fatigue management training

(a) The operator shall provide initial and recurrent fatigue management training to crew members, personnel responsible for preparation and maintenance of crew rosters and management personnel concerned.

(b) This training shall follow a training programme established by the operator and described in the operations manual. The training syllabus shall cover the possible causes and effects of fatigue and fatigue countermeasure.'

SECTION 4
Helicopters Operations

ORO.FTL.400 Home base

An operator shall assign a home base to each crew member.

ORO.FTL.405 Flight duty period (FDP)

(a) The operator shall:
(1) define reporting times appropriate to each individual operation taking into account ORO.FTL.110(c);
(2) establish procedures specifying how the commander shall, in case of special circumstances which could lead to severe fatigue, and after consultation with the crew members concerned, reduce the actual FDP and/or increase the rest period in order to eliminate any detrimental effect on flight safety.

(b) Basic maximum daily FDP.
The maximum daily FDP without the use of extensions for crew members shall be in accordance with the following table:

Maximum daily FDP — Helicopters Operations

Local time of start	SINGLE PILOT		TWO PILOTS	
	Max. Length of Flying Duty Period (Hours)	Maximum Flying Time (Hours)	Max. Length of Flying Duty Period (Hours)	Maximum Flying Time (Hours)
0600-0659	9	6	10	7
0700-0759	10	7	11	8
0800-1359	10	7	12	8
1400-2159	9	6	10	7
2200-0559	8	5	9	6

(c) **FDP with different reporting time for flight crew and cabin crew**

Whenever cabin crew requires more time than the flight crew for their pre-flight briefing for the same sector or series of sectors, the FDP of the cabin crew may be extended by the difference in reporting time between the cabin crew and the flight crew. The difference shall not exceed 1 hour. The maximum daily FDP for cabin crew shall be based on the time at which the flight crew report for their FDP, but the FDP shall start at the reporting time of the cabin crew.

(d) **Maximum daily FDP for crew members with the use of extensions**

(1) The maximum daily FDP may be extended by 3 hour not more than thrice in any 7 consecutive days. In that case:
(i) the minimum post-flight rest period shall be increased by the amount exceeded; or
(ii) if away from home base, the amount exceeded shall be reduced from the next consecutive allowable FDP.
(2) Extensions shall not be used in any two consecutive FDPs, unless separated by an extended recovery rest period.
(3) Extension of the maximum basic daily FDP without in-flight rest shall not be combined with extensions due to in- flight rest or split duty in the same duty period.
(4) Flight time specification schemes shall specify the limits for extensions of the maximum basic daily FDP in accordance with the certification specifications applicable to the type of operation, taking into account:
(i) the number of sectors flown; and
(ii) WOCL encroachment.

(e) **Unforeseen circumstances in flight operations — commander's discretion**

(1) The conditions to modify the limits on flight duty, duty and rest periods by the commander in the case of unforeseen circumstances in flight operations, which start at or after the reporting time, shall comply with the following:
   (i) the maximum daily FDP which results after applying points (b) and (e) of point ORO.FTL.205 or point ORO.FTL.220 may not be increased by more than 3 hours unless the flight crew has been augmented, in which case the maximum flight duty period may be increased by not more than 5hours;
   (ii) if on the final sector within an FDP the allowed increase is exceeded because of unforeseen circumstances after take-off, the flight may continue to the planned destination or alternate aerodrome; and
   (iii) the rest period following the FDP may be reduced but can never be less than 10 hours.

(2) In case of unforeseen circumstances which could lead to severe fatigue, the commander shall reduce the actual flight duty period and/or increase the rest period in order to eliminate any detrimental effect on flight safety.

(3) The commander shall consult all crew members on their alertness levels before deciding the modifications under subparagraphs 1 and 2.

(4) The commander shall submit a report to the operator when an FDP is increased or a rest period is reduced at his or her discretion.

(5) Where the increase of an FDP or reduction of a rest period exceeds 1 hour, a copy of the report, to which the operator shall add its comments, shall be sent by the operator to MCAA not later than 28 days after the event.

(6) The operator shall implement a non-punitive process for the use of the discretion described under this provision and shall describe it in the operations manual.

(f) **Unforeseen circumstances in flight operations — delayed reporting**

The operator shall establish procedures, in the operations manual, for delayed reporting in the event of unforeseen circumstances, in accordance with the certification specifications applicable to the type of operation.

(g) **Repetitive Short Sectors**

(1) Crew flying repetitive short sectors, for example pleasure flying, offshore short sector shuttles, at an average rate of 10 or more landings per hour, will have a break of at least 30 minutes away from the helicopter within any continuous period of 3 hours.

(2) When carrying out the more demanding roles of helicopter flying, for example, winching and external load carrying, crew shall have a break of 45 minutes away from the helicopter within any continuous period of 3 hours.

(3) After 3 hours shuttle operations between offshore installations in conditions other than day VMC, a rest of 30 minutes free of all duty shall be allowed.

(h) **Mixed Duties**

(1) **Fixed Wing and Rotary Wing Flying**
When both fixed wing and rotary wing flying is carried out the more restrictive flight and duty time limitations apply.

(2) **Mixed Single Pilot/Two Pilot Operations**
In one duty period a pilot may fly as single flight crew up to the point where the total duty hours reach the single flight crew FDP limit. During this time the pilot may fly either in command or as a co-pilot on a two pilot aircraft. The pilot may then continue beyond the single flight crew FDP limit in a two pilot operation up to the two flight crew FDP maxima, but may only fly as a co-pilot.

(3) **Mixed Simulator and Aircraft Flying**
When a flight crew member flies in the simulator, either on a check or training flight, or as a Training Captain or Instructor, and then within the same duty period flies as a flight crew member on a public transport flight, all the time spent in the simulator is counted in full towards the subsequent FDP and daily flying hour maxima. The FDP allowable is calculated from the report time of the simulator detail.

(i) **Dedicated Air Ambulance operations**

When carrying out an Air Ambulance flight, the allowable FDP may be increased by up to a maximum of 4 hours, subject to all the following conditions being met:

(1) Where an FDP is extended under the terms of this provision, a qualified medical attendant must accompany the flight.

(2) The only passengers that may be carried in addition to the patient and medical attendants are the immediate family or next of kin. One close friend only may be carried in lieu of any immediate family or next of kin.

(3) The crew must have had the full entitlement of rest relating to the preceding duty prior to starting an air ambulance flying duty.

(4) **Single Pilot Crew**
If, exceptionally, the FDP is scheduled to be extended beyond the maximum of the 4 hours then an additional qualified commander must be carried as a relief pilot at least until the aircraft reaches the site where the patient or organ is disembarked. Commander's discretion cannot be used to extend the FDP after the patient or organ has been disembarked. A discretion report must be submitted to MCAA.

(5) **Two Pilot Crew**
The use of Commander's discretion to further extend the FDP, beyond the extra 4 hours permitted, may be exercised only to offload/deliver the patient or organ to the destination. Such discretion cannot be used after the patient or organ has been offloaded. A discretion report must be submitted to MCAA.

(6) Following an Air Ambulance FDP the appropriate full rest period must be taken.

(7) At least 48 hours must elapse between the end of one extended Air Ambulance FDP and the start of another Air Ambulance FDP. In one Air Ambulance operation involving two or more extended FDP duties (the first of which is positioning to uplift a patient or organ) the necessity for the 48 hours rest may be deferred until return to base. In this case the Commander may reduce the rest following the first FDP by up to 3 hours or to 10 hours in suitable accommodation, whichever is the greater.

(8) A pilot can only fly 3 air ambulance extended FDPs in any 28 consecutive days. (This shall only apply where extensions exceed 1½ hours).

(9) The use of split duty to extend the FDP is not permitted.

(j) **Combined Public Transport/Air Ambulance**

On a day, if an operator wishes to use an aircraft and crew for a combination of Public Transport and Air Ambulance work then the FDP specified must be that obtained from paragraph (b) above. Extension of the allowable FDP by the use of split duty and Commander's discretion is allowed. The extension permitted for dedicated air ambulance (in paragraph (i) above), does not apply in this case.

(k) Survival Suits

The wearing of survival suits can prove an irritant and be uncomfortable. Therefore:

a) a flight crew member should not participate in moving freight or baggage, or any other activity requiring excessive physical effort. His role should be supervisory;

b) schedules which involve continuous flying in excess of 4½ hours will include provisions for a break free of all duty of at least 30 minutes, not including a total of 30 minutes for immediate post and pre-flight duties. The break will be scheduled prior to exceeding a total of 6 hours flying.

(l) **Pleasure Flying and Aerial Photography**

(1) A single FDP shall not exceed 10 hours, except that this may be extended to a maximum of 2 hours for the sole purpose of positioning the aircraft from/to the operator's base.

(2) A pilot shall not spend more than 7 hours at the controls in any one flying duty period. When positioning the aircraft, the pilot may spend up to an additional 2 hours at the controls for the sole purpose of completing this task.

(3) A pilot shall not be at the controls continuously for more than 3 hours.

(4) During an FDP a pilot shall have breaks of not less than 30 minutes duration, according to the following scale:

FDP up to 3 hours	Breaks totalling at least 30 minutes
FDP up to 6 hours	Breaks totalling at least 1 hour
FDP between 6 and 8 hours	Breaks totalling at least 1½ hours
FDP over 8 hours	Breaks totalling at least 2 hours

ORO.FTL.410 Flight times and duty periods

(a) The total duty periods to which a crew member may be assigned shall not exceed:
  (1) 60 duty hours in any 7 consecutive days;
  (2) 200 duty hours in any 28 consecutive days, spread as evenly as practicable throughout that period.

(b) The total flight time of the sectors on which an individual crew member is assigned as an operating crew member shall not exceed:
  (1) 90 hours of flight time in any 28 consecutive days; and
  (2) 800 hours of flight time in any consecutive 12 months.

(c) Post-flight duty shall count as duty period. The operator shall specify in its operations manual the minimum time period for post-flight duties.

ORO.FTL.415 Positioning

If an operator positions a crew member, the following shall apply:

(a) positioning after reporting but prior to operating shall be counted as FDP but shall not count as a sector;

(b) all time spent on positioning shall count as duty period.

ORO.FTL.420 Split duty

The conditions for extending the basic maximum daily FDP due to a break on the ground shall be in accordance with the following:

(a) flight time specification schemes shall specify the following elements for split duty in accordance with the certification specifications applicable to the type of operation:
  (1) the minimum duration of a break on the ground; and
  (2) the possibility to extend the FDP prescribed under point ORO.FTL.405(b) taking into account the duration of the break on the ground, the facilities provided to the crew member to rest and other relevant factors;

(b) the break on the ground shall count in full as FDP;

(c) split duty shall not follow a reduced rest.

ORO.FTL.425 Standby and duties at the airport

If an operator assigns crew members to standby or to any duty at the airport, the following shall apply in accordance with the certification specifications applicable to the type of operation:

(a) standby and any duty at the airport shall be in the roster and the start and end time of standby shall be defined and notified in advance to the crew members concerned to provide them with the opportunity to plan adequate rest;

(b) a crew member is considered on airport standby from reporting at the reporting point until the end of the notified airport standby period;

(c) airport standby shall count in full as duty period for the purpose of points ORO.FTL.410 and ORO.FTL.435;

(d) any duty at the airport shall count in full as duty period and the FDP shall count in full from the airport duty reporting time;

(e) the operator shall provide accommodation to the crew member on airport standby;

(f) flight time specification schemes shall specify the following elements:
  (1) the maximum duration of any standby;
  (2) the impact of the time spent on standby on the maximum FDP that may be assigned, taking into account facilities provided to the crew member to rest, and other relevant factors such as:
    — the need for immediate readiness of the crew member,
    — the interference of standby with sleep, and
    — sufficient notification to protect a sleep opportunity between the call for duty and the assigned FDP;
  (3) the minimum rest period following standby which does not lead to assignment of an FDP;
  (4) how time spent on standby other than airport standby shall be counted for the purpose of cumulative duty periods.

ORO.FTL.430 Reserve

If an operator assigns crew members to reserve, the following requirements shall apply in accordance with the certification specifications applicable to the type of operation:

(a) reserve shall be in the roster;

(b) flight time specification schemes shall specify the following elements:
  (1) the maximum duration of any single reserve period;
  (2) the number of consecutive reserve days that may be assigned to a crew member.

ORO.FTL.435 Rest periods

(a) Minimum rest period at home base.
  (1) The minimum rest period provided before undertaking an FDP starting at home base shall be at least as long as the preceding duty period, or 11 hours, whichever is greater.
  (2) By way of derogation from point (1), the minimum rest provided under point (b) applies if the operator provides suitable accommodation to the crew member at home base.

(b) Minimum rest period away from home base.

The minimum rest period provided before undertaking an FDP starting away from home base shall be at least 10 hours. This period shall include an 8-hour sleep opportunity in addition to the time for travelling and physiological needs.

(c) Reduced rest

By derogation from points (a) and (b), flight time specification schemes may reduce the minimum rest periods in accordance with the certification specifications applicable to the type of operation and taking into account the following elements:
  (1) the minimum reduced rest period;
  (2) the increase of the subsequent rest period; and
  (3) the reduction of the FDP following the reduced rest.

(d) Recurrent extended recovery rest periods

Flight time specification schemes shall specify recurrent extended recovery rest periods to compensate for cumulative fatigue. The minimum recurrent extended recovery rest period shall be 58 hours, including 2 local nights, and in any case the time between the end of one recurrent extended recovery rest period and the start of the next extended recovery rest period shall not be more than 110 hours. The recurrent extended recovery rest period shall be increased to 2 local days twice every month.

(e) Flight time specification schemes shall specify additional rest periods in accordance with the applicable certification specifications to compensate for:
  (1) the effects of time zone differences and extensions of the FDP;
  (2) additional cumulative fatigue due to disruptive schedules; and
  (3) a change of home base.

ORO.FTL.440 Nutrition

(a) During the FDP there shall be the opportunity for a meal and drink in order to avoid any detriment to a crew member's performance, especially when the FDP exceeds 6 hours.

(b) An operator shall specify in its operations manual how the crew member's nutrition during FDP is ensured.

ORO.FTL.445 Records of home base, flight times, duty and rest periods

(a) An operator shall maintain, for a period of 24 months:
  (1) individual records for each crew member including:
    (i) flight times;
    (ii) start, duration and end of each duty period and FDP;
    (iii) rest periods and days free of all duties; and
    (iv) assigned home base;
  (2) reports on extended flight duty periods and reduced rest periods.

(b) Upon request, the operator shall provide copies of individual records of flight times, duty periods and rest periods to:
  (1) the crew member concerned; and
  (2) to another operator, in relation to a crew member who is or becomes a crew member of the operator concerned.

(c) Records referred to in point CAT.GEN.MPA.100 (b)(5) in relation to crew members who undertake duties for more than one operator shall be kept for a period of 24 months.

ORO.FTL.450 Fatigue management training

(a) The operator shall provide initial and recurrent fatigue management training to crew members, personnel responsible for preparation and maintenance of crew rosters and management personnel concerned.

(b) This training shall follow a training programme established by the operator and described in the operations manual. The training syllabus shall cover the possible causes and effects of fatigue and fatigue countermeasure.'

APPENDIX I

بسم الله الرحمن الرحيم

MALDIVES CIVIL AVIATION AUTHORITY
Republic of Maldives

DECLARATION
in accordance with MCAR Air Operations

Operator	
Name:	
Place in which the operator is established or residing and place from which the operations are directed:	
Name and contact details of the accountable manager:	
Aircraft operation	
Starting date of operation/applicability date of the change:	
Type(s) of operation:	
Part-NCC: (specify if passenger and/or cargo)	
Part-SPO: (specify which type of activity)	
Type(s) of aircraft, registration(s) and main base:	
Details of approvals held (attach list of specific approvals to the declaration, if applicable)	
Details of specialised operation authorisations held (attach authorisations, if applicable)	
List of alternative means of compliance with references to the AMCs they replace (attach to the declaration)	
Statements	
The management system documentation including the operations manual reflects the applicable requirements set out in Part-ORO, Part-NCC and Part-SPA. All flights will be carried out in accordance with the procedures and instructions specified in the operations manual.	
All aircraft operated hold a valid certificate of airworthiness and comply with all applicable Regulations.	
All flight crew members and cabin crew members, as applicable, are trained in accordance with the applicable requirements.	
The operator has implemented and demonstrated conformance to an officially recognised industry standard.	
Reference of the standard:	
Certifying body:	
Date of the last conformance audit:	
Any change in the operation that affects the information disclosed in this declaration will be notified to MCAA.	
The operator confirms that the information disclosed in this declaration is correct.	
Date, name and signature of the accountable manager	