STATE OF LIBYA
GOVERNMENT OF LIBYA
MINISTRY OF TRANSPORT
CIVIL AVIATION AUTHORITY

دولة ليبيا
الحكومة الليبية
وزارة المواصلات
مصلحة الطيران المدني

Libya Civil Aviation Regulations
Air Operations
LYCAR – Air Operations

PART-DEF	DEFINITIONS
PART-ARO	AUTHORITY REQUIREENTS FOR AIR OPERATIONS
PART-ORO	ORGANISATION REQUIREMENTS FOR AIR OPERATIONS
PART-CAT	COMMERCIAL AIR TRANSPORT OPERATIONS
PART SPA	SPECIFIC APPROVALS
PART NCC	NON-COMMERCIAL AIR OPERATIONS WITH COMPLEX MOTOR-POWERED AIRCRAFT
PART NCO	NON-COMMERCIAL AIR OPERATIONS WITH OTHER-THAN-COMPLEX MOTOR-POWERED AIRCRAFT
PART SPO	SPECIALISED OPERATIONS

Amendment 6 – March 2025

FOREWORD

1. The regulation contained herein is adopted under the provision of Article N5 of Libyan Civil Aviation Law N6 of 2005 and issued and signed up by the Director General of Libyan Civil Aviation by virtue of powers vested from the Minister of Transport under the resolution N154 issued on 13.05.2015.

2. The Libyan Civil Aviation Regulation of Air Operations (Amendment 6) establishes technical requirements, implementation, and the maintaining of compliance requirements for Commercial Air Transport Operators. The applicable punitive actions that can and will be enforced by the Authority against recognised actions of non-compliance.

3. This regulation is in compliance with ICAO Annexes and SARPs and it has also adapted regulation, associated compliance or interpretative material issued by EASA as Acceptable Means of Compliance (AMCs) and Guidance Materials (GMs) whenever possible.

4. The information contained herein is subject to constant review in the light of changing regulations and requirements. No subscriber or other reader should act on the basis of any such information without taking appropriate professional advice when/as indicated/required. Although, every effort has been made to ensure accuracy, the Libyan Civil Aviation Authority (LYCAA) shall not be held responsible for loss or damage caused by errors, omissions, misprints or misinterpretation of the content hereof.

5. The use of the male gender implies the female gender and vice versa.

6. Copies of this regulation can be obtained from the Safety Department of the LYCAA or can be downloaded on the official website: www.caa.gov.ly

7. Transition Period: The Libyan civil aviation industry is required to meet the compliancy requirements of this regulation within three months after its official publication. All new applications, after the publication of this regulation, will meet the requirements of this issue of regulation.

Published on 17 Mar 2025, and signed by:

Dr. Mohamed M. Shlebik
President of Libyan Civil Aviation Authority

Libyan Civil Aviation Regulation – Air Operations

TABLE OF CONTENT

THE CIVIL AVIATION AUTHORITY,

Having regard to Law No.6 of 2005 (as amended) on civil aviation in the State of Libya, and in particular the provisions of Article 5 and Article 10,

Having regard on the Re-organisation of the Civil Aviation Authority, defining the functions and responsibilities of the Flight Safety Department, Whereas:

(1) The Civil Aviation Authority (hereinafter referred to as the 'Authority') is the competent authority having exclusive jurisdiction over civil aviation and civil aerodromes in the State of Libya, and being empowered to prescribe and promulgate rules, regulations and orders for the discharge of its functions.

(2) It is necessary to establish and continuously update technical requirements and administrative procedures to amplify and implement the provisions of the Civil Aviation Law to ensure the safe operations of aircraft.

(3) Requirements related to the introduction of support programmes, psychological assessment of flight crew, as well as systematic and random testing of psychoactive substances to ensure medical fitness of flight and cabin crew members are necessary for the alignment with global best practice and applicable international standards.

(4) This amendment will contribute to the achievement of the overall objectives of the Authority by addressing current amendments to the ICAO Annex 6, Parts I, II and III and aligning with current EASA regulations where applicable.

PART-DEF

Definitions for terms used in Air Operations

Libyan Civil Aviation Regulation on Air operations is amended by the replacement of Part Definitions as follows:
Definitions

PART-DEFINITIONS

Definitions for terms used in Part-ARO to Part CC

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

(1) ‘accelerate-stop distance available (ASDA)’ means the length of the take-off run available plus the length of stopway, if such stopway is declared available by the State of the aerodrome and is capable of bearing the mass of the aeroplane under the prevailing operating conditions;

(2) ‘acceptable means of compliance (AMC)’ means standards adopted by the LYCAA Authority to illustrate means by which compliance with the Civil Aviation Law and Regulations are established;

(3) ‘acceptance checklist’ means a document used to assist in carrying out a check on the external appearance of packages of dangerous goods and their associated documents to determine that all appropriate requirements have been met;

(3a) 'acts of unlawful interference' means acts or attempted acts such as to jeopardise the safety of civil aviation and air transport, i.e. Unlawful seizure of aircraft in flight, unlawful seizure of aircraft on the ground, hostage-taking on board an aircraft or on aerodromes, forcible intrusion on board an aircraft, at an airport or on the premises of an aeronautical facility, introduction on board an aircraft or at an airport of a weapon or hazardous device or material intended for criminal purposes, communication of false information as to jeopardise the safety of an aircraft in flight or on the ground, of passengers, crew, ground personnel or the general public, at an airport or on the premises of a civil aviation facility.

(4) ‘adequate aerodrome’ means an aerodrome on which the aircraft can be operated, taking account of the applicable performance requirements and runway characteristics;

(4a) 'area navigation (RNAV)' A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

(4b) 'aerodrome' means a defined area on land or water (including any buildings, installations and equipment) intended to be used wholly or in part for the arrival, departure and surface movement of aircraft.

(4c) ‘aerodrome operating minima’ means the limits of usability of an aerodrome for:

(a) take-off operations, expressed in terms of visibility and/or runway visual range (RVR) and, if necessary, cloud conditions;

(b) two-dimensional (2D) instrument approach operations or circling approach operations, expressed in terms of visibility and/or RVR, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions; and

(c) three-dimensional (3D) instrument approach operations, expressed in terms of visibility and/or RVR and decision altitude/height (DA/H);

(5) For the purpose of passenger classification:

(a) ‘adult’ means a person of an age of 12 years and above;

(b) ‘child/children’ means persons who are of an age of two years and above but who are less than 12 years of age;

(c) ‘infant’ means a person under the age of two years;

(6) ‘aeroplane’ means an engine-driven fixed-wing aircraft heavier than air that is supported in flight by the dynamic reaction of the air against its wings;

(7) ‘aided night vision imaging system (NVIS) flight’ means, in the case of NVIS operations, that portion of a visual flight rules (VFR) flight performed at night when a crew member is using night vision goggles (NVG);

(8) ‘aircraft’ means a machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth’s surface;

(8a) ‘aircraft tracking’ means a ground based process that maintains and updates, at standardised intervals, a record of the four dimensional position of individual aircraft in flight;

(8b) ‘aircraft tracking system’ means a system that relies on aircraft tracking in order to identify abnormal flight behaviour and provide alert;

(8c) 'air operator certificate' (AOC) means a certificate authorising an operator to carry out specified commercial air transport operations.

(8d) 'air traffic service" (ATS) a generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

(8e) 'aircraft operating manual' means a manual, acceptable to the State of the Operator, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft.

(8f) 'airworthy' means the status of an aircraft, engine, propellor or part when it conforms to its approved design and is in a condition for safe operation.

(8g) 'alternate aerodrome' means an aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or land at the aerodrome of intended landing where the necessary services and facilities are available, where aircraft performance requirements can be met and which is operational at the expected time of use. Alternate aerodromes include the following:

Take-off alternate. An alternate aerodrome at which an aircraft would be able to land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.

En-route alternate. An alternate aerodrome at which an aircraft would be able to land in the event that a diversion becomes necessary while en route.

Destination alternate. An alternate aerodrome at which an aircraft would be able to land should it become either impossible or inadvisable to land at the aerodrome of intended landing.

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

(8h) 'Alternate heliport'. A heliport to which a helicopter may proceed when it becomes either impossible or inadvisable to proceed to or to land at the heliport of intended landing where the necessary services and facilities are available, where aircraft performance requirements can be met and which is operational at the expected time of use. Alternate heliports include the following:
Take-off alternate. An alternate heliport at which a helicopter would be able to land should this become necessary shortly after take-off and it is not possible to use the heliport of departure.

En-route alternate. An alternate heliport at which a helicopter would be able to land in the event that a diversion becomes necessary while En route.

Destination alternate. An alternate heliport at which a helicopter would be able to land should it become either impossible or inadvisable to land at the heliport of intended landing.

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

(9) ‘alternative means of compliance’ means those means that propose an alternative to an existing acceptable means of compliance or proposed new means to establish compliance with the Civil Aviation Law and Regulations for which no associated AMC have been adopted by the LYCAA Authority;

(9a) 'Altimetry system error (ASE)' means the difference between the altitude indicated by the altimeter display, assuming a correct altimeter barometric setting, and the pressure altitude corresponding to the undisturbed ambient pressure.

(10) ‘anti-icing’, in the case of ground procedures, means a procedure that provides protection against the formation of frost or ice and accumulation of snow on treated surfaces of the aircraft for a limited period of time (hold-over time);

(10a) 'applicable operational suitability data' means operational suitability data issued in accordance with the applicable airworthiness regulation. Where operational suitability data is not required by the Libyan airworthiness regulation then 'applicable operational suitability data' means data for the aircraft type issued in accordance with European Commission Regulation (EU) No 748/2012, as amended. Where no such data exists then Operational Evaluation Board Reports and master minimum equipment lists issued in accordance with JAA procedures or by EASA shall be deemed to constitute the applicable operational suitability data.

(10b) 'approach and landing phase - helicopters' means that part of the flight from 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or from the commencement of the descent in the other cases, to landing or to the balked landing point.

(11) ‘approach procedure with vertical guidance (APV) operation’ means an instrument approach which utilises lateral and vertical guidance, but does not meet the requirements established for precision approach and landing operations, with a decision height (DH) not lower than 250 ft and a runway visual range (RVR) of not less than 600 m;

(11a) 'approach and landing phase - helicopters' means that part of the flight from 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or from the commencement of the descent in the other cases, to landing or to the balked landing point.

(11a) ‘balloon empty mass’ means the mass determined by weighing the balloon with all the installed equipment a specified in the AFM;

(12) ‘cabin crew member’ means an appropriately qualified crew member, other than a flight crew or technical crew member, who is assigned by an operator or the pilot-in-command of the aircraft to perform duties related to the safety of passengers and flight during operations;

(12a) CARS means Cockpit Audio Recording System, it is a lightweight flight recording system installed in the aircraft for the purpose of recording the voice communication transmitted from or received in the aeroplane by radio and also the aural environment on the flight deck during flight time for the purpose of accident/ incident prevention and investigation.

(13) 'category I (CAT I) approach operation' means a precision instrument approach and landing using an instrument landing system (ILS), microwave landing system (MLS), GLS (ground-based augmented global navigation satellite system (GNSS/GBAS) landing system), precision approach radar (PAR) or GNSS using a satellite-based augmentation system (SBAS) with a decision height (DH) not lower than 200 ft and with a runway visual range (RVR) not less than 550 m for aeroplanes and 500 m for helicopters;

(14) 'category II (CAT II) operation' means a precision instrument approach and landing operation using ILS or MLS with:

(a) DH below 200 ft but not lower than 100 ft; and

(b) RVR of not less than 300 m;

(15) 'category IIIA (CAT IIIA) operation' means a precision instrument approach and landing operation using ILS or MLS with:

(a) DH lower than 100 ft; and

(b) RVR not less than 200 m;

(16) 'category IIIB (CAT IIIB) operation' means a precision instrument approach and landing operation using ILS or MLS with:

(a) DH lower than 100 ft, or no DH; and

(b) RVR lower than 200 m but not less than 75 m;

(17) 'Category A with respect to helicopters' means a multi-engined helicopter designed with engine and system isolation features specified in the applicable airworthiness codes certification specifications and capable of operations using take-off and landing data scheduled under a critical engine failure concept that assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected take-off in the event of engine failure;

(18) 'category B with respect to helicopters' means a single-engined or multi-engined helicopter that does not meet category A standard. Category B helicopters have no guaranteed capability to continue safe flight in the event of an engine failure, and unscheduled landing is assumed;

(19) 'Certification Specifications' (CS) means technical standards adopted by the LYCAA Authority indicating means to show compliance with the Civil Aviation Law and Regulations and which can be used by an organisation for the purpose of certification. If no such applicable standards have been adopted by the LYCAA then Certification Standards adopted by the European Aviation Safety Agency;

(20) 'circling' means the visual phase of an instrument approach to bring an aircraft into position for landing on a runway/FATO that is not suitably located for a straight-in approach;

(21) 'clearway' means a defined rectangular area on the ground or water under the control of the appropriate authority, selected or prepared as a suitable area over which an aeroplane may make a portion of its initial climb to a specified height;

(22) 'cloud base' means the height of the base of the lowest observed or forecast cloud element in the

vicinity of an aerodrome or operating site or within a specified area of operations, normally measured above aerodrome elevation or, in the case of offshore operations, above mean sea level;

(22a) 'cockpit voice recorder (CVR)' means a crash-protected flight recorder that uses a combination of microphones and other audio and digital inputs to collect and record the aural environment of the flight crew compartment and communications to, from and between the flight crew members;

(23) 'code share' means an arrangement under which an operator places its designator code on a flight operated by another operator, and sells and issues tickets for that flight;

(23a) 'COMAT' means operator material carried on an operator's aircraft for the operator's own purposes.

(23b) 'complex motor-powered aircraft' shall mean:

(a) an aeroplane:

(i) with a maximum certificated take-off mass exceeding 5 700 kg, or

(ii) certificated for a maximum passenger seating configuration of more than nineteen, or

(iii) certificated for operation with a minimum crew of at least two pilots, or

(iv) equipped with (a) turbojet engine(s) or more than one turboprop engine, or

(b) a helicopter certificated:

(i) for a maximum take-off mass exceeding 3 175 kg, or

(ii) for a maximum passenger seating configuration of more than nine, or

(iii) for operation with a minimum crew of at least two pilots, or

(c) a tilt rotor aircraft;

(24) 'congested area' means in relation to a city, town or settlement, any area which is substantially used for residential, commercial or recreational purposes;

(25) 'contaminated runway' means a runway of which a significant portion of its surface area (whether in isolated areas or not) within the length and width being used is covered by one or more of the substances listed under the runway surface condition descriptors;

(26) 'contingency fuel' means the fuel required to compensate for unforeseen factors that could have an influence on the fuel consumption to the destination aerodrome;

(27) 'continuous descent final approach (CDFA)' means a technique, consistent with stabilised approach procedures, for flying the final-approach segment of a non-precision instrument approach procedure as a continuous descent, without level-off, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare manoeuvre shall begin for the type of aircraft flown;

(28) 'converted meteorological visibility (CMV)' means a value, equivalent to an RVR, which is derived from the reported meteorological visibility;

(29) 'crew member' means a person assigned by an operator to perform duties on board an aircraft;

(30) 'critical phases of flight' in the case of aeroplanes means the take-off run, the take-off flight path, the final approach, the missed approach, the landing, including the landing roll, and any other phases of flight as determined by the pilot-in-command or commander;

(31) 'critical phases of flight' in the case of helicopters means taxiing, hovering, take-off, final approach, missed approach, the landing and any other phases of flight as determined by the pilot-in-command or commander;

(32) [reserved]

(33) 'dangerous goods (DG)' means articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the technical instructions or which are classified according to those instructions;

(34) 'dangerous goods accident' means an occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person or major property damage;

(35) 'dangerous goods incident' means:

(a) an occurrence other than a dangerous goods accident associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained;

(b) any occurrence relating to the transport of dangerous goods which seriously jeopardises an aircraft or its occupants;

(35a) 'decision altitude (DA) or decision height (DH)' means a specified altitude or height in a 3D instrument approach operation at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

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

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

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

(36) 'de-icing', in the case of ground procedures, means a procedure by which frost, ice, snow or slush is removed from an aircraft in order to provide uncontaminated surfaces;

(37) 'defined point after take-off (DPATO)' means the point, within the take-off and initial climb phase, before which the helicopter's ability to continue the flight safely, with the critical engine inoperative, is not assured and a forced landing may be required;

(38) 'defined point before landing (DPBL)' means the point within the approach and landing phase, after which the helicopter's ability to continue the flight safely, with the critical engine inoperative, is not assured and a forced landing may be required;

(39) 'distance DR' means the horizontal distance that the helicopter has travelled from the end of the take-off distance available;

(40) 'dry lease agreement' means an agreement between undertakings pursuant to which the aircraft is operated under the air operator certificate (AOC) of the lessee or, in the case of commercial operations other than CAT, under the responsibility of the lessee;

(41) 'dry operating mass' means the total mass of the aircraft ready for a specific type of operation, excluding usable fuel and traffic load;

(42) 'dry runway' means a runway which is neither wet nor contaminated within the required length and the width being used, and includes those paved runways which have been specially prepared with grooves or porous pavement and maintained to retain 'effectively dry' braking action even when moisture is present whose surface is free of visible moisture and not contaminated within the area intended to be used;

(42a) 'EASA' means the European Aviation Safety Agency;

(42b) 'EFB application' means a software application installed on an EFB host platform that provides one or more specific operational functions which support flight operations;

(42c) 'EFB host platform' means the hardware equipment in which the computing capabilities and basic software reside, including the operating system and the input/output software;

(42d) 'EFB system' means the hardware equipment (including any battery, connectivity provisions, input/ output components) and software (including databases and the operating system) needed to support the intended EFB application(s);

(43) 'ELA1 aircraft' means the following manned European Light Aircraft:

(a) an aeroplane with a Maximum Take-off Mass (MTOM) of 1 200 kg or less that is not classified as complex motor-powered aircraft;

(b) a sailplane or powered sailplane of 1 200 kg MTOM or less;

(c) a balloon with a maximum design lifting gas or hot air volume of not more than 3 400 m3 for hot air balloons, 1 050 m3 for gas balloons, 300 m3 for tethered gas balloons;

(44) 'ELA2 aircraft' means the following manned European Light Aircraft:

(a) an aeroplane with a Maximum Take-off Mass (MTOM) of 2 000 kg or less that is not classified as complex motor-powered aircraft;

(b) a sailplane or powered sailplane of 2 000 kg MTOM or less;

(c) a balloon;

(d) a Very Light Rotorcraft with a MTOM not exceeding 600 kg which is of a simple design, designed to carry not more than two occupants, not powered by turbine and/or rocket engines; restricted to VFR day operations;

(44a) 'electronic flight bag (EFB)' means an electronic information system, comprised of equipment and applications for flight crew, which allows for the storing, updating, displaying and processing of EFB functions to support flight operations or duties;

(45) ‘elevated final approach and take-off area (elevated FATO)’ means a FATO that is at least 3 m above the surrounding surface;

(45a) 'elevated heliport' means a heliport located on a raised structure on land

(45b) 'engine' means a unit used or intended to be used for aircraft propulsion. It consists of at least those components and equipment necessary for functioning and control, but excludes the propeller/rotors (if applicable);

(45c) ‘emergency exit’ means an installed exit-type egress point from the aircraft that allows maximum opportunity for cabin and flight crew compartment evacuation within an appropriate time period and includes floor level door, window exit or any other type of exit, for instance hatch in the flight crew compartment and tail cone exit

(46) ‘en-route alternate (ERA) aerodrome’ means an adequate aerodrome along the route, which may be required at the planning stage;

(47) ‘enhanced vision system (EVS)’ means a system to display electronic real-time images of the external scene achieved through the use of imaging sensors;

(47a) 'Emergency locator transmitter (ELT)' means a generic term describing equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be automatically activated by impact or be manually activated. An ELT may be any of the following:

Automatic fixed ELT (ELT(AF)). An automatically activated ELT which is permanently attached to an aircraft.

Automatic portable ELT (ELT(AP)). An automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.

Automatic deployable ELT (ELT(AD)). An ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and, in some cases, also by hydrostatic sensors. Manual deployment is also provided.

Survival ELT (ELT(S)). An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

(47b) 'Fatigue' means a physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase, and/or workload (mental and/or physical activity) that can impair a person’s alertness and ability to perform safety-related operational duties.

(48) ‘final approach and take-off area (FATO)’ means a defined area for helicopter operations, over which the final phase of the approach manoeuvre to hover or land is completed, and from which the take-off manoeuvre is commenced. In the case of helicopters operating in performance class 1, the defined area includes the rejected take-off area available;

(48a) 'final approach segment' means that segment of an instrument approach procedure in which alignment and descent for landing are accomplished.

(48b) 'flight crew member' means a licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period;

(48c) 'Flight manual' means a manual, associated with the certificate of airworthiness, containing limitations within which the aircraft is to be considered airworthy, and instructions and information necessary to the flight crew members for the safe operation of the aircraft.

(49) ‘flight data monitoring (FDM)’ means the proactive and non-punitive use of digital flight data from routine operations to improve aviation safety;

(49a) 'flight operations officer / or flight dispatcher means a person designated by the operator to engage in the control and supervision of flight operations, who is suitably qualified who supports, briefs, and/or assists the pilot-in-command in the safe conduct of the flight and is suitably qualified in accordance with the relevant LYCARs on Aircrew licensing and Annex 1 of the Chicago convention .

(49b) ‘flight data recorder (FDR)’ means a crash-protected flight recorder that uses a combination of data sources to collect and record parameters that reflect the state and performance of the aircraft;

(49bc) 'flight plan' means specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

(49cd) 'flight recorder' means any type of recorder installed in the aircraft for the purpose of complementing facilitating accident / or incident safety investigations.

(49de) 'flight safety documents system' means a set of interrelated documentation established by the operator, compiling and organising information necessary for flight and ground operations, and comprising, as a minimum, the operations manual and the operator’s maintenance control manual.

(50) ‘flight simulation training device (FSTD)’ Any one of the following three types of apparatus in which flight conditions are simulated on the ground: means a training device which is:

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

(a) in the case of aeroplanes, a full flight simulator (FFS), a flight training device (FTD), a flight and navigation procedures trainer (FNPT), or a basic instrument training device (BITD);

(b) in the case of helicopters, a full flight simulator (FFS), a flight training device (FTD) or a flight and navigation procedures trainer (FNPT);

(51) ‘fuel ERA aerodrome’ means an ERA aerodrome selected for the purpose of reducing contingency fuel;

(52) ‘GBAS landing system (GLS)’ means an approach landing system using ground based augmented global navigation satellite system (GNSS/GBAS) information to provide guidance to the aircraft based on its lateral and vertical GNSS position. It uses geometric altitude reference for its final approach slope;

(53) ‘ground emergency service personnel’ means any ground emergency service personnel (such as policemen, firemen, etc.) involved with helicopter emergency medical services (HEMSs) and whose tasks are to any extent pertinent to helicopter operations;

(53a) 'ground handling' means services necessary for an aircraft's arrival at, and departure from, an airport, other than air traffic services;

(54) ‘grounding’ means the formal prohibition of an aircraft to take-off and the taking of such steps as are necessary to detain it;

(55) ‘head-up display (HUD)’ means a display system which presents flight information to the pilot’s forward external field of view and which does not significantly restrict the external view;

(56) ‘head-up guidance landing system (HUDLS)’ means the total airborne system that provides head-up guidance to the pilot during the approach and landing and/or missed approach procedure. It includes all sensors, computers, power supplies, indications and controls;

(57) ‘helicopter’ means a heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes;

(58) ‘helicopter hoist operation (HHO) crew member’ means a technical crew member who performs assigned duties relating to the operation of a hoist;

(59) ‘helideck’ means a FATO located on a floating or fixed offshore structure;

(59a) 'heliport' means n aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters; when the term “heliport” is used, it is intended that the term also applies to aerodromes primarily meant for the use of aeroplanes.

(60) ‘HEMS crew member’ means a technical crew member who is assigned to a HEMS flight for the purpose of attending to any person in need of medical assistance carried in the helicopter and assisting the pilot during the mission;

(61) ‘HEMS flight’ means a flight by a helicopter operating under a HEMS approval, the purpose of which is to facilitate emergency medical assistance, where immediate and rapid transportation is essential, by carrying:

(a) medical personnel;

(b) medical supplies (equipment, blood, organs, drugs); or

(c) ill or injured persons and other persons directly involved;

(62) ‘HEMS operating base’ means an aerodrome at which the HEMS crew members and the HEMS helicopter may be on stand-by for HEMS operations;

(63) ‘HEMS operating site’ means a site selected by the commander during a HEMS flight for helicopter hoist operations, landing and take-off;

(64) ‘HHO flight’ means a flight by a helicopter operating under an HHO approval, the purpose of which is to facilitate the transfer of persons and/or cargo by means of a helicopter hoist;

(65) ‘HHO offshore’ means a flight by a helicopter operating under an HHO approval, the purpose of which is to facilitate the transfer of persons and/or cargo by means of a helicopter hoist from or to a vessel or structure in a sea area or to the sea itself;

(66) ‘HHO passenger’ means a person who is to be transferred by means of a helicopter hoist;

(67) ‘HHO site’ means a specified area at which a helicopter performs a hoist transfer;

(68) ‘hold-over time (HoT)’ means the estimated time the anti-icing fluid will prevent the formation of ice and frost and the accumulation of snow on the protected (treated) surfaces of an aeroplane;

(68a) “human-machine interface (HMI)” means a component of certain devices that is capable of handling human-machine interactions. The interface consists of hardware and software that allow user inputs

to be interpreted and processed by machines or systems that, in turn, provide the required results to the user

(69) 'hostile environment' means:

(a) an environment area in which:

(i) a safe forced landing cannot be accomplished because the surface is inadequate; or

(ii) the helicopter occupants cannot be adequately protected from the elements; or

(iii) search and rescue response/capability is being not provided consistent with anticipated exposure; or

(iv) there is an unacceptable risk of endangering persons or property on the ground;

(b) in any case, the following areas:

(i) for overwater operations, the open sea areas north of 45N and south of 45S unless any part is designated by the authority of the State concerned as non-hostile by the responsible authority in which the operations take place; and;

(ii) those parts of a congested area without adequate safe forced landing areas;

(69a) 'Human Factors principles' means principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

(69b) 'human performance' means human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations;

(69c) 'instrument approach operations' means approach and landing using instruments for navigation guidance based on an instrument approach procedure. There are two methods for executing instrument approach operations:

(a) a two-dimensional (2D) instrument approach operation, using lateral navigation guidance only; and

(b) a three-dimensional (3D) instrument approach operation, using both lateral and vertical navigation guidance.

(69d) 'instrument approach procedures (IAP)' means a series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix or, where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply. Instrument approach procedures are classified as follows:

(a) non-precision approach (NPA) procedure, which means an instrument approach procedure designed for 2D instrument approach operations Type A;

(b) approach procedure with vertical guidance (APV) means a performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type A;

(c) precision approach (PA) procedure means an instrument approach procedure based on navigation systems designed for 3D instrument approach operations Type A or B;

(69e) Instrument meteorological conditions (IMC). Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

(69f) Isolated aerodrome. A destination aerodrome for which there is no destination alternate aerodrome suitable for a given aeroplane type.

(70) 'landing decision point (LDP)' means the point used in determining landing performance from which, an engine failure having been recognised at this point, the landing may be safely continued or a balked landing initiated;

(70a) landing distance at time of arrival (LDTA)" means a landing distance that is achievable in normal operations based on landing performance data and associated procedures determined for the prevailing conditions at the time of landing

(71) 'landing distance available (LDA)' means the length of the runway which is declared available by the State of the aerodrome and suitable for the ground run of an aeroplane landing;

(72) 'landplane' means a fixed wing aircraft which is designed for taking off and landing on land and includes amphibians operated as landplanes;

(72a) Large aeroplane means an aeroplane of a maximum certificated take-off mass of over 5 700 kg.

(73) 'local helicopter operation' means a commercial air transport operation of helicopters with a maximum certified take-off mass (MCTOM) over 3 175 kg and a maximum operational passenger seating configuration (MOPSC) of nine or less, by day, over routes navigated by reference to visual landmarks, conducted within a local and defined geographical area specified in the operations manual;

(74) 'low visibility procedures (LVP)' means procedures applied at an aerodrome for the purpose of ensuring safe operations during lower than standard category I, other than standard category II, category II and III approaches and low visibility take-offs;

(75) 'low visibility take-off (LVTO)' means a take-off with an RVR lower than 400 m but not less than 75 m;

(76) 'lower than standard category I (LTS CAT I) operation' means a category I instrument approach and landing operation using category I DH, with an RVR lower than would normally be associated with the applicable DH but not lower than 400 m;

(76a) 'maintenance' means the performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair;

"maintenance check flight ('MCF')" means a flight of an aircraft with an airworthiness certificate or with a permit to fly which is carried out for troubleshooting purposes or to check the functioning of one or more systems, parts or appliances after maintenance, if the functioning of the systems, parts or appliances cannot be established during ground checks and which is carried out in any of the following situations:

(a) as required by the aircraft maintenance manual ("AMM") or any other maintenance data issued by a design approval holder being responsible for the continuing airworthiness of the aircraft;

(b) after maintenance, as required by the operator or proposed by the organisation responsible for the continuing airworthiness of the aircraft;

(c) as requested by the maintenance organisation for verification of a successful defect rectification;

(d) to assist with fault isolation or troubleshooting;

(76b) Maximum diversion time means maximum allowable range, expressed in time, from a point on a route to an en- route alternate aerodrome."

(76c) Maximum mass means maximum certificated take-off mass."

(77) 'maximum operational passenger seating configuration (MOPSC)' means the maximum passenger seating capacity of an individual aircraft, excluding crew seats, established for operational purposes and specified in the operations manual. Taking as a baseline the maximum passenger seating configuration established during the certification process conducted for the type certificate (TC), supplemental type certificate (STC) or change to the TC or STC as relevant to the individual aircraft, the MOPSC may establish an equal or lower number of seats, depending on the operational constraints;

(78) 'medical passenger' means a medical person carried in a helicopter during a HEMS flight, including but not limited to doctors, nurses and paramedics;

(78a) 'minor failure condition' means a failure condition that would not significantly reduce aircraft safety, and which involves flight crew actions that are well within their capabilities;

(78b) 'misuse of substances' means the use of one or more psychoactive substances by flight crew, cabin crew members and other safety-sensitive personnel in a way that:

(a) constitutes a direct hazard to the user or endangers the lives, health or welfare of others, and/or

(b) causes or worsens an occupational, social, mental or physical problem or disorder;

(78ac) 'master minimum equipment list (MMEL)' means a list as defined in the applicable operational suitability data. If an MMEL has not been established as part of the operational suitability data, a list established for a the aircraft type by the organisation responsible for the type design with the approval of the State of Design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight.

(78bd) 'minimum descent altitude (MDA) or minimum descent height (MDH)' means a specified altitude or height in a 2D instrument approach operation or circling approach operation below which descent must not be made without the required visual reference;

Note 1.- Minimum descent altitude (MDA) is referenced to mean sea level and minimum descent height (MDH) is referenced to the aerodrome elevation or to the threshold elevation if that is more than 2 m (7 ft) below the aerodrome elevation. A minimum descent height for a circling approach is referenced to the aerodrome elevation.

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

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

(79) 'night' means the period between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise as may be prescribed by the Authority;

(80) 'night vision goggles (NVG)' means a head-mounted, binocular, light intensification appliance that enhances the ability to maintain visual surface references at night;

(81) ‘night vision imaging system (NVIS)’ means the integration of all elements required to successfully and safely use NVGs while operating a helicopter. The system includes as a minimum: NVGs, NVIS lighting, helicopter components, training and continuing airworthiness;

(81a) 'Non-congested hostile environment' means a hostile environment outside a congested area.

(82) ‘non-hostile environment’ means an environment in which:

(a) a safe forced landing can be accomplished;

(b) the helicopter occupants can be protected from the elements; and

(c) search and rescue response/capability is provided consistent with the anticipated exposure.

In any case, those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile;

(83) ‘non-precision approach (NPA) operation’ means an instrument approach with a minimum descent height (MDH), or DH when flying a CDFA technique, not lower than 250 ft and an RVR/CMV of not less than 750 m for aeroplanes and 600 m for helicopters;

(84) ‘NVIS crew member’ means a technical crew member assigned to an NVIS flight;

(85) ‘NVIS flight’ means a flight under night visual meteorological conditions (VMC) with the flight crew using NVGs in a helicopter operating under an NVIS approval;

(86) ‘offshore operations’ means a helicopter operation that has which routinely have a substantial proportion of any the flight conducted over open sea areas to or from an offshore location;

(86a) ‘offshore location’ means a facility intended to be used for helicopter operations on a fixed or floating offshore structure or a vessel;

(86b) ‘open sea area’ means the area of water to seaward of the coastline;

(87) ‘operating site’ means a site, other than an aerodrome, selected by the operator or pilot-in-command or commander for landing, take-off and/or external load operations;

(88) ‘operation in performance class 1’ means an operation that, in the event of failure of the critical engine, the helicopter is able to land within the rejected take-off distance available or safely continue the flight to an appropriate landing area, depending on when the failure occurs;

(89) ‘operation in performance class 2’ means an operation that, in the event of failure of the critical engine, performance is available to enable the helicopter to safely continue the flight, except when the failure occurs early during the take-off manoeuvre or late in the landing manoeuvre, in which cases a forced landing may be required;

(90) ‘operation in performance class 3’ means an operation that, in the event of an engine failure at any time during the flight, a forced landing may be required in a multi-engined helicopter and will be required in a single-engined helicopter;

(90a) 'operations manual' means manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

(90b) 'operations specifications' means the authorisations, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual.

(91) ‘operational control’ means the responsibility for the initiation, continuation, termination or diversion of a flight in the interest of safety;

(91a) 'operator' shall mean any legal or natural person, operating or proposing to operate one or more aircraft;

(92) 'other than standard category II (OTS CAT II) operation' means a precision instrument approach and landing operation using ILS or MLS where some or all of the elements of the precision approach category II light system are not available, and with:

(a) DH below 200 ft but not lower than 100 ft; and

(b) RVR of not less than 350 m;

(92a) 'operator' means a person, organisation or enterprise engaged in or offering to engage in an aircraft operation;

(93) 'performance class A aeroplanes' means multi-engined aeroplanes powered by turbo-propeller engines with an MOPSC of more than nine or a maximum take-off mass exceeding 5 700 kg, and all multi-engined turbo-jet powered aeroplanes;

(94) 'performance class B aeroplanes' means aeroplanes powered by propeller engines with an MOPSC of nine or less and a maximum take-off mass of 5 700 kg or less;

(95) 'performance class C aeroplanes' means aeroplanes powered by reciprocating engines with an MOPSC of more than nine or a maximum take-off mass exceeding 5 700 kg;

(95a) 'personnel-carrying device system (PCDS)' means a system including one or more devices that is either attached to a hoist or cargo hook or mounted to the rotorcraft airframe during human external cargo (HEC) or helicopter hoist operations (HHO). The devices have the structural capability and features needed to transport occupants external to the helicopter e.g. a life safety harness with or without a quick release and strop with a connector ring, a rigid basket or a cage;

(95b) 'simple personnel carrying device system (simple 'PCDS')' means a PCDS that complies with the following conditions:

(a) meets a harmonised personal protective equipment standard;

(b) is designed to restrain no more than a single person (for instance, hoist or cargo hook operator, task specialist or photographer) inside the cabin, or to restrain no more than two persons outside the cabin;

(c) is not a rigid structure such as a cage, a platform or a basket;

(96) 'pilot-in-command' means the pilot designated as being in command and charged with the safe conduct of the flight. For the purpose of commercial air transport operations, the 'pilot-in-command' shall be termed the 'commander';

(96a) 'portable EFB' means a portable EFB host platform, used on the flight deck, which is not part of the configuration of the certified aircraft;

(96b) 'portable electronic device (PED)' means any kind of electronic device, typically but not limited to consumer electronics, brought on board the aircraft by crew members, passengers, or as part of the cargo, that is not included in the configuration of the certified aircraft. It includes all equipment that is able to consume electrical energy. The electrical energy can be provided from internal sources such as batteries (chargeable or non-rechargeable) or the devices may also be connected to specific aircraft power sources;

(96ac) 'point of no return' means last possible geographic point at which an aircraft can proceed to the destination aerodrome as well as to an available en-route alternate aerodrome for a given flight.

(96bd) 'pressure altitude' means an atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere;

(97) ‘principal place of business’ means the head office or registered office of the organisation within which the principal financial functions and operational control of the activities referred to in this Regulation are exercised;

(98) ‘prioritisation of ramp inspections’ means the dedication of an appropriate portion of the total number of ramp inspections conducted by or on behalf of a competent authority on an annual basis as provided in Part-ARO;

(98a) 'psychoactive substances' means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine. other psychostimulants, hallucinogens, and volatile solvents, with the exception of caffeine whereas coffee and tobacco are excluded;

(99) ‘public interest site (PIS)’ means a site used exclusively for operations in the public interest;

(99a) 'LYCAA' means the Libyan Civil Aviation Authority;

(100) ‘ramp inspection’ means the inspection of aircraft, of flight and cabin crew qualifications and of flight documentation in order to verify the compliance with the applicable requirements;

(101) ‘rectification interval’ means a limitation on the duration of operations with inoperative equipment;

(102) ‘rejected take-off distance available (RTODAH)’ means the length of the final approach and take-off area declared available and suitable for helicopters operated in performance class 1 to complete a rejected take-off;

(103) ‘rejected take-off distance required (RTODRH)’ means the horizontal distance required from the start of the take-off to the point where the helicopter comes to a full stop following an engine failure and rejection of the take-off at the take-off decision point;

(103a) ‘required navigation performance (RNP) specification’ means a navigation specification for PBN operations which includes a requirement for on-board navigation performance monitoring and alerting;

(103b) ‘rules of the air’ means the rules established in LYCAR

(103c) ‘runway condition report (RCR)’ means a comprehensive standardised report relating to the conditions of the runway surface and their effect on the aeroplane landing and take-off performance, described by means of runway conditions code;

(103ad) 'repair' means the restoration of an aeronautical product to an airworthy condition to ensure that the aircraft continues to comply with the design aspects of the appropriate airworthiness requirements used for the issuance of the type certificate for the respective aircraft type, after it has been damaged or subjected to wear;

(104) ‘runway visual range (RVR)’ means the range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line;

(105) ‘safe forced landing’ means an unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface;

(105a) ‘safety-sensitive personnel’ means persons who might endanger aviation safety if they perform their duties and functions improperly, including flight crew and cabin crew members, aircraft maintenance personnel and air traffic controllers;

(105ab) 'safety management system (SMS)' means a systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures as part of the Management System required by Part -ORO;

(106) 'seaplane' means a fixed wing aircraft which is designed for taking off and landing on water and includes amphibians operated as seaplanes;

(107) 'separate runways' means runways at the same aerodrome that are separate landing surfaces. These runways may overlay or cross in such a way that if one of the runways is blocked, it will not prevent the planned type of operations on the other runway. Each runway shall have a separate approach procedure based on a separate navigation aid;

(107a) 'specially prepared winter runway' means a runway with a dry frozen surface of compacted snow or ice which has been treated with sand or grit or has been mechanically treated to improve runway friction;

(108) 'special VFR flight' means a VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC;

(109) 'stabilised approach (SAp)' means an approach that is flown in a controlled and appropriate manner in terms of configuration, energy and control of the flight path from a pre-determined point or altitude/ height down to a point 50 ft above the threshold or the point where the flare manoeuvre is initiated if higher;

(109a) 'sterile flight crew compartment' means any period of time when the flight crew members are not disturbed or distracted, except for matters critical to the safe operation of the aircraft or the safety of the occupants;

(109b) 'State of registry' means the State on whose register the aircraft is entered.

(109c) 'State of the aerodrome' means the State in whose territory the aerodrome is located.

(109d) 'State of the Operator' means the State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

(109e) 'synthetic vision system (SVS)' means a system to display data-derived synthetic images of the external scene from the perspective of the flight deck;

(110) 'take-off alternate aerodrome' means an alternate aerodrome at which an aircraft can land should this become necessary shortly after take-off and if it is not possible to use the aerodrome of departure;

(110a) 'take-off and initial climb phase' means, in the case of helicopter operations, that part of the flight from the start of take-off to 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or to the end of the climb in the other cases

(111) 'take-off decision point (TDP)' means the point used in determining take-off performance from which, an engine failure having been recognised at this point, either a rejected take-off may be made or a take-off safely continued;

(112) 'take-off distance available (TODA)' in the case of aeroplanes means the length of the take-off run available plus the length of the clearway, if provided;

(113) 'take-off distance available (TODAH)' in the case of helicopters means the length of the final approach and take-off area plus, if provided, the length of helicopter clearway declared available and suitable for helicopters to complete the take-off;

(114) 'take-off distance required (TODRH)' in the case of helicopters means the horizontal distance required from the start of the take-off to the point at which take-off safety speed (VTOSS), a selected height and a positive climb gradient are achieved, following failure of the critical engine being recognised at the TDP, the remaining engines operating within approved operating limits;

(115) ‘take-off flight path’ means the vertical and horizontal path, with the critical engine inoperative, from a specified point in the take-off for aeroplanes to 1 500 ft above the surface and for helicopters to 1 000 ft above the surface;

(116) ‘take-off mass’ means the mass including everything and everyone carried at the commencement of the take-off for helicopters and take-off run for aeroplanes;

(117) ‘take-off run available (TORA)’ means the length of runway that is declared available by the State of the aerodrome and suitable for the ground run of an aeroplane taking off;

(117a) 'take-off safety speed' means the minimum speed at which climb shall be achieved with the critical engine inoperative, the remaining engines operating within approved operating limits.

'Task specialist’ means a person assigned by the operator or a third party, or acting as an undertaking, who performs tasks on the ground directly associated with a specialised task or performs specialised tasks on board or from the aircraft;

(117b) 'target level of safety' means the level of risk which is considered acceptable in particular circumstances.

(117c) ‘task specialist’ means a person assigned by the operator or a third party, or acting as an undertaking, who performs tasks on the ground directly associated with a specialised task or performs specialised tasks on board or from the aircraft;

(118) 'technical crew member’ means a crew member in commercial air transport HEMS, HHO or NVIS operations other than a flight or cabin crew member, assigned by the operator to duties in the aircraft or on the ground for the purpose of assisting the pilot during HEMS, HHO or NVIS operations, which may require the operation of specialised on-board equipment;

(119) ‘Technical Instructions (TI)’ means the latest effective edition of the ‘Technical Instructions for the safe transport of dangerous goods by air’, including the supplement and any addenda, approved and published by the International Civil Aviation Organisation;

(119a) 'Threshold time'. The range, expressed in time, established by the State of the Operator, to an enroute alternate aerodrome, whereby any time beyond requires an EDTO approval from the State of the Operator."

(120) ‘traffic load’ means the total mass of passengers, baggage, cargo and carry-on specialist equipment and, except for balloons, including any ballast;

(120a) ‘type A EFB application’ means an EFB application whose malfunction or misuse has no safety effect;

(120b) ‘type B EFB application’ means an EFB application:

(a) whose malfunction or misuse is classified as minor failure condition or below; and

(b) which neither replaces nor duplicates any system or functionality required by airworthiness regulations, airspace requirements, or operational rules;

(120a) ‘Type A instrument approach operation’ means an operation with a minimum MDA/H or DA/H at or above 250 ft;

(120b) ‘Type B instrument approach operation’ means an operation with a minimum DA/H below 250 ft;

(121) ‘unaided NVIS flight’ means, in the case of NVIS operations, that portion of a VFR flight performed at night when a crew member is not using NVG;

(122) ‘undertaking’ means any natural or legal person, whether profit-making or not, or any official body whether having its own personality or not;

(123) 'V1' means the maximum speed in the take-off at which the pilot must take the first action to stop the aeroplane within the accelerate-stop distance. V1 also means the minimum speed in the take-off, following a failure of the critical engine at VEF, at which the pilot can continue the take-off and achieve the required height above the take-off surface within the take-off distance;

(124) 'VEF' means the speed at which the critical engine is assumed to fail during take-off;

(125) 'visual approach' means an approach when either part or all of an instrument approach procedure is not completed and the approach is executed with visual reference to the terrain;

(125a) 'visual meteorological conditions' means meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

(126) 'weather-permissible aerodrome' means an adequate aerodrome where, for the anticipated time of use, weather reports, or forecasts, or any combination thereof, indicate that the weather conditions will be at or above the required aerodrome operating minima, and the runway surface condition reports indicate that a safe landing will be possible;

(127) 'wet lease agreement' means an agreement:

- in the case of CAT operations, between air carriers pursuant to which the aircraft is operated under the AOC of the lessor; or
- in the case of commercial operations other than CAT, between operators pursuant to which the aircraft is operated under the responsibility of the lessor;

(128) 'wet runway' means a runway of which the surface is covered with water, or equivalent, less than specified by the 'contaminated runway' definition or when there is sufficient moisture on the runway surface to cause it to appear reflective, but without significant areas of standing water. whose surface is covered by any visible dampness or water up to and including 3 mm deep within the area intended to be used."

PART-ARO

AUTHORITY REQUIREMENTS FOR AIR OPERATIONS

C. Libyan Civil Aviation Regulation 5 of 2020 on Air operations is amended by the replacement of Authority Requirements for Air Operations - Part ARO as follows:

"**PART-ARO AUTHORITY REQUIREMENTS FOR AIR OPERATIONS**

PART-ARO

ARO.GEN.005 Scope

This Part establishes requirements for the administration and management system to be fulfilled by the Authority for the implementation and enforcement of the Civil Aviation Law and Regulations regarding civil aviation air operations.

SUBPART GEN GENERAL REQUIREMENTS

SECTION I General

ARO.GEN.115 Oversight documentation

The Authority shall provide all legislative acts, standards, rules, technical publications and related documents to relevant personnel in order to allow them to perform their tasks and to discharge their responsibilities.

ARO.GEN.120 Means of compliance

(a) The Authority shall develop Acceptable Means of Compliance (AMC) to be used to establish compliance with Civil Aviation Law and its Regulations and Implementing Rules. When the AMC are complied with, the related requirements of the Regulations and Implementing Rules are met.

(b) Notwithstanding Paragraph (a), Alternative means of compliance may be used to establish compliance with the Regulations and Implementing Rules when approved by the Authority.

(c) The Authority shall establish a system to consistently evaluate that all alternative means of compliance used by organisations and persons under its oversight allow the establishment of compliance with the Civil Aviation Law and Regulations and implementing rules.

(d) The Authority shall evaluate all alternative means of compliance proposed by an organisation in accordance with ORO.GEN.120 (b) of Part-ORO by analysing the documentation provided and, if considered necessary, conducting an inspection of the organisation.

When the Authority finds that the alternative means of compliance are in accordance with the Regulations, it shall without undue delay notify the applicant that the alternative means of compliance may be implemented and, if applicable, amend the approval, specialised operation authorisation or certificate of the applicant accordingly.

ARO.GEN.125 [reserved]

ARO.GEN.135 Immediate reaction to a safety problem

(a) The Authority shall implement a system to appropriately collect, analyse and disseminate safety information.

(b) The Authority shall implement a system to appropriately analyse any relevant safety information received and without undue delay provide any information, including recommendations or corrective actions to be taken, necessary for them to react in a timely manner to a safety problem involving products, parts, appliances, persons or organisations subject to Civil Aviation Law and Regulations

(c) Upon receiving the information referred to in (a) and (b), the Authority shall take adequate measures to address the safety problem.

(d) Measures taken under (c) shall immediately be notified to all persons or organisations which need to comply with them under the Civil Aviation Law and Regulations.

SECTION II Management

ARO.GEN.200 Management system

(a) The Authority shall establish and maintain a management system, including as a minimum:

(1) documented policies and procedures to describe its organisation, means and methods to achieve compliance with the Civil Aviation Law and Regulations. The procedures shall be kept up to date and serve as the basic working documents within the Authority for all related tasks;

(2) a sufficient number of personnel to perform its tasks and discharge its responsibilities. Such personnel shall be qualified to perform their allocated tasks and have the necessary knowledge, experience, initial and recurrent training to ensure continuing competence. A system shall be in place to plan the availability of personnel, in order to ensure the proper completion of all tasks;

(3) adequate facilities and office accommodation to perform the allocated tasks;

(4) a function to monitor compliance of the management system with the relevant requirements and adequacy of the procedures including the establishment of an internal audit process and a safety risk management process. Compliance monitoring shall include a feedback system of audit findings to the senior management of the Authority to ensure implementation of corrective actions as necessary; and

(5) a person or group of persons, ultimately responsible to the senior management of the Authority for the compliance monitoring function.

(b) The Authority shall, for each field of activity, including management system, appoint one or more persons with the overall responsibility for the management of the relevant task(s).

ARO.GEN.205 Allocation of tasks to qualified entities

(a) Tasks related to the initial certification, specialised operation authorisation or continuing oversight of persons or organisations subject to the Civil Aviation Law and Regulations shall be allocated by the Authority only to qualified entities. When allocating tasks, the Authority shall ensure that it has:

(1) put a system in place to initially and continuously assess that the qualified entity complies with Part - ARO to the Civil Aviation Law.
This system and the results of the assessments shall be documented.

(2) established a documented agreement with the qualified entity, approved by both parties at the appropriate management level, which clearly defines:

(i) the tasks to be performed;

(ii) the declarations, reports and records to be provided;

(iii) the technical conditions to be met in performing such tasks;

(iv) the related liability coverage; and

(v) the protection given to information acquired in carrying out such tasks.

(b) The Authority shall ensure that the internal audit process and safety risk management process required by ARO.GEN.200(a)(4) covers all certification, authorisation or continuing oversight tasks performed on its behalf.

ARO.GEN.210 Changes in the management system

(a) The Authority shall have a system in place to identify changes that affect its capability to perform its tasks and discharge its responsibilities as defined in the Civil Aviation Law and Regulations. This system shall enable it to take action as appropriate to ensure that its management system remains adequate and effective.

(b) The Authority shall update its management system to reflect any change to the Civil Aviation Law and Regulations in a timely manner, so as to ensure effective implementation.

ARO.GEN.220 Record-keeping

(a) The Authority shall establish a system of record-keeping providing for adequate storage, accessibility and reliable traceability of:

(1) the management system's documented policies and procedures;

(2) training, qualification and authorisation of its personnel;

(3) the allocation of tasks, covering the elements required by ARO.GEN.205 as well as the details of tasks allocated;

(4) certification processes and continuing oversight of certified organisations;

(4a) the process of authorisation of a high risk commercial specialised operation and continuing oversight of an authorisation holder;

(5) declaration processes and continuing oversight of declared organisations;

(6) details of training courses provided by certified organisations, and if applicable, records relating to FSTDs used for such training;

(7) [reserved];

(8) oversight of operations of other-than complex motor-powered aircraft by non-commercial operators;

(9) the evaluation and notification of alternative means of compliance proposed by organisations subject to certification, or authorisation;

(10) findings, corrective actions and date of action closure;

(11) enforcement measures taken;

(12) safety information and follow-up measures; and

(13) the use of flexibility provisions in accordance with the Civil Aviation Law.

(b) The Authority shall maintain a list of all organisation certificates and specialised operations authorisations it issued as well as declarations it received.

(c) All records shall be kept for the minimum period specified in this Regulation. In the absence of such indication, records shall be kept for a minimum period of five years subject to applicable data protection law.

SECTION III Oversight, certification and enforcement

ARO.GEN.300 Oversight

(a) The Authority shall verify:

(1) compliance with the requirements applicable to organisations or type of operations prior to the issue of a certificate, approval or authorisation, as applicable;

(2) continued compliance with the applicable requirements of organisations it has certified, specialised operations it has authorised and organisations from whom it received a declaration;

(3) continued compliance with the applicable requirements of non-commercial operators of other-than complex motor-powered aircraft; and

(4) implementation of appropriate safety measures mandated by the Authority as defined in ARO.GEN.135(c) and (d).

(b) This verification shall:

(1) be supported by documentation specifically intended to provide personnel responsible for safety oversight with guidance to perform their functions;

(2) provide the persons and organisations concerned with the results of safety oversight activity;

(3) be based on audits and inspections, including ramp and unannounced inspections; and

(4) provide the Authority with the evidence needed in case further action is required, including the measures foreseen by ARO.GEN.350 and ARO.GEN.355.

(c) The scope of oversight defined in (a) and (b) shall take into account the results of past oversight activities and the safety priorities.

(d) Without prejudice to the competences of the Authority and to its obligations as set out in ARO.RAMP, the scope of the oversight of activities performed in the territory of another State by persons or organisations also established or residing in another State shall be determined on the basis of the safety priorities, as well as of past oversight activities.

(e) [reserved]

(f) The Authority shall collect and process any information deemed useful for oversight, including for ramp and unannounced inspections.

ARO.GEN.305 Oversight programme

(a) The Authority shall establish and maintain an oversight programme covering the oversight activities required by ARO.GEN.300 and by ARO.RAMP.

(b) For organisations certified by the Authority the oversight programme shall be developed taking into account the specific nature of the organisation, the complexity of its activities, the results of past certification and/or oversight activities required by ARO.GEN and ARO.RAMP and shall be based on the assessment of associated risks. It shall include within each oversight planning cycle:

(1) audits and inspections, including ramp and unannounced inspections as appropriate; and

(2) meetings convened between the accountable manager and the Authority to ensure both remain informed of significant issues.

(c) For organisations certified by the Authority an oversight planning cycle not exceeding 24 months shall be applied.

The oversight planning cycle may be reduced if there is evidence that the safety performance of the organisation has decreased.

The oversight planning cycle may be extended to a maximum of 36 months if the Authority has established that, during the previous 24 months:

(1) the organisation has demonstrated an effective identification of aviation safety hazards and management of associated risks;

(2) the organisation has continuously demonstrated under ORO.GEN.130 that it has full control over all changes;

(3) no level 1 findings have been issued; and

(4) all corrective actions have been implemented within the time period accepted or extended by the Authority as defined in ARO.GEN.350(d)(2).

The oversight planning cycle may be further extended to a maximum of 48 months if, in addition to the above, the organisation has established, and the Authority has approved, an effective continuous reporting system to the Authority on the safety performance and regulatory compliance of the organisation itself.

(d) For organisations declaring their activity to the Authority, the oversight programme shall be based on the specific nature of the organisation, the complexity of its activities and the data of past oversight activities and the assessment of risks associated with the type of activity carried out. It shall include audits and inspections, including ramp and unannounced inspections, as appropriate.

(d1) For organisations holding a specialised operations authorisation, the oversight programme shall be established in accordance with (d) and shall also take into account the past and current authorisation process and the validity period of the authorisation.

(e) For persons holding a licence, certificate, rating, or cabin crew certificate of competency issued by the Authority the oversight programme shall include inspections, including unannounced inspections, as appropriate.

(f) The oversight programme shall include records of the dates when audits, inspections and meetings are due and when such audits, inspections and meetings have been carried out.

ARO.GEN.310 Initial certification procedure - organisations

(a) Upon receiving an application for the initial issue of a certificate for an organisation, the Authority shall verify the organisation's compliance with the applicable requirements. This verification may take into account the statement referred to in ORO.AOC.100(b).

(b) When satisfied that the organisation is in compliance with the applicable requirements, the Authority shall issue the certificate(s), as established in Appendices I and II. The certificate(s) shall be issued for an unlimited duration. The privileges and scope of the activities that the organisation is approved to conduct shall be specified in the terms of approval attached to the certificate(s).

(c) To enable an organisation to implement changes without prior Authority approval in accordance with ORO.GEN.130, the Authority shall approve the procedure submitted by the organisation defining the scope of such changes and describing how such changes will be managed and notified.

ARO.GEN.330 Changes - organisations

(a) Upon receiving an application for a change that requires prior approval, the Authority shall verify the organisation's compliance with the applicable requirements before issuing the approval.

The Authority shall prescribe the conditions under which the organisation may operate during the change, unless the Authority determines that the organisation's certificate needs to be suspended.

When satisfied that the organisation is in compliance with the applicable requirements, the Authority shall approve the change.

(b) Without prejudice to any additional enforcement measures, when the organisation implements changes requiring prior approval without having received Authority approval as defined in (a), the Authority shall suspend, limit or revoke the organisation's certificate.

(c) For changes not requiring prior approval, the Authority shall assess the information provided in the notification sent by the organisation in accordance with ORO.GEN.130 to verify compliance with the applicable requirements. In case of any non-compliance, the Authority shall:

(1) notify the organisation about the non-compliance and request further changes;

(2) in case of level 1 or level 2 findings, act in accordance with ARO.GEN.350.

ARO.GEN.315 Procedure for issue, revalidation, renewal or change of cabin crew certificates of competency

(a) Upon receiving an application for the issue, revalidation, renewal or change of a cabin crew certificate of competency and any supporting documentation, the Authority shall verify whether the applicant meets the applicable requirements.

(b) When satisfied that the applicant meets the applicable requirements, the Authority shall issue, revalidate, renew or change the cabin crew certificate of competency

ARO.GEN.345 Declaration - organisations

(a) Upon receiving a declaration from an organisation carrying out or intending to carry out activities for which a declaration is required, the Authority shall verify that the declaration contains all the information required:

(1) pursuant to ORO.DEC.100 of Part-ORO;

(2) for balloon operators, pursuant to BOP.ADD.100 of Part-BOP to Regulation (To be Advised); or

(3) for sailplane operators, pursuant to SAO.DEC.100 of Part-SAO to Implementing Regulation (To be Advised)

After having verified the required information, the Authority shall acknowledge receipt of the declaration to the organisation.

(b) If the declaration does not contain the required information, or contains information that indicates noncompliance with applicable requirements, the Authority shall notify the organisation about the noncompliance and request further information. If deemed necessary the Authority shall carry out an inspection of the organisation. If the non-compliance is confirmed, the Authority shall take action as defined in ARO.GEN.350.

ARO.GEN.350 Findings and corrective actions - organisations

(a) The Authority, for oversight in accordance with ARO.GEN.300(a), shall have a system to analyse findings for their safety significance.

(b) A level 1 finding shall be issued by the Authority when any significant non-compliance is detected with the applicable requirements of the Civil Aviation Law and Regulations, with the organisation's procedures and manuals or with the terms of an approval, certificate, specialised operation authorisation or with the content of a declaration which lowers safety or seriously hazards flight safety.

The level 1 findings shall include:

(1) failure to give the Authority access to the facilities of the organisation as defined in ORO.GEN.140 of Part ORO during normal operating hours and after two written requests;

(2) obtaining or maintaining the validity of the organisation certificate or specialised operations authorisation by falsification of submitted documentary evidence;

(3) evidence of malpractice or fraudulent use of the organisation certificate or specialised operations authorisation; and

(4) the lack of an accountable manager.

(c) A level 2 finding shall be issued by the Authority when any non-compliance is detected with the applicable requirements of the Civil Aviation Law and Regulations, with the organisation's procedures and manuals or with the terms of an approval, certificate, specialised operation authorisation or with the content of a declaration which could lower safety or hazard flight safety.

(d) When a finding is detected during oversight or by any other means, the Authority shall, without prejudice to any additional action required by the Civil Aviation Law and Regulations, communicate the finding to the organisation in writing and request corrective action to address the non-compliance(s) identified. Where relevant, the Authority shall inform the State in which the aircraft is registered.

(1) In the case of level 1 findings the Authority shall take immediate and appropriate action to prohibit or limit activities, and if appropriate, it shall take action to revoke the certificate, specialised operations authorisation or specific approval or to limit or suspend it in whole or in part, depending upon the extent of the level 1 finding, until successful corrective action has been taken by the organisation.

(2) In the case of level 2 findings, the Authority shall:

(i) grant the organisation a corrective action implementation period appropriate to the nature of the finding that in any case initially shall not be more than three months. At the end of this period, and

subject to the nature of the finding, the Authority may extend the three-month period subject to a satisfactory corrective action plan agreed by the LYCAA; and

(ii) assess the corrective action and implementation plan proposed by the organisation and, if the assessment concludes that they are sufficient to address the non-compliance(s), accept these.

(3) Where an organisation fails to submit an acceptable corrective action plan, or to perform the corrective action within the time period accepted or extended by the Authority, the finding shall be raised to a level 1 finding and action taken as laid down in (d)(1).

(4) The Authority shall record all findings it has raised or that have been communicated to it and, where applicable, the enforcement measures it has applied, as well as all corrective actions and date of action closure for findings.

(e) Without prejudice to any additional enforcement measures, when the Authority, acting in accordance with point ARO.GEN.300(d) identifies any non-compliance with the essential requirements set out in this Regulation by an organisation certified by another contracting State, it shall inform the competent authority of that contracting state of the non-compliance.

ARO.GEN.355 Findings and enforcement measures - persons

(a) If, during oversight or by any other means, evidence is found by the Authority that shows a non-compliance with the applicable requirements by a person holding a licence, certificate, rating or cabin crew certificate of competency issued in accordance with the Civil Aviation Law and its Regulations, the Authority shall act in accordance with ARA.GEN.355(a) to (d) of Part-ARA to LYCAR on Aircrew Licensing.

(b) If, during oversight or by any other means, evidence is found showing a non-compliance with the applicable requirements by a person subject to the requirements laid down in the Civil Aviation Law and Regulations and not holding a licence, certificate, rating or cabin crew certificate of competency issued in accordance with the Civil Aviation Law and Regulations, the Authority shall take any enforcement measures necessary to prevent the continuation of that non-compliance.

ARO.GEN.360 Reserved

SUBPART OPS AIR OPERATIONS

SECTION I Certification of commercial air transport operators

ARO.OPS.100 Issue of the air operator certificate

(a) The Authority shall issue the air operator certificate (AOC) when satisfied that the operator has demonstrated compliance with the elements required in ORO.AOC.100.

(b) The certificate shall include the associated operations specifications.

(c) The Authority may determine specific operational limitations. Such limitations shall be documented in the operations specifications.

ARO.OPS.105 Code-share arrangements

In considering the safety of a code-share agreement involving a foreign operator, the Authority shall:

(1) satisfy itself, following the verification by the operator as set out in ORO.AOC.115, that the foreign operator complies with the applicable ICAO standards;

(2) liaise with the competent authority of the State of the foreign operator as necessary.

ARO.OPS.110 Lease agreements for aeroplanes and helicopters

(a) The Authority shall approve a lease agreement when satisfied that the operator certified in accordance with Part-ORO complies with:

(1) ORO.AOC.110(d), for dry leased-in foreign aircraft;

(2) ORO.AOC.110(c), for wet lease-in of an aircraft from a foreign operator;

(3) ORO.AOC.110(e), for dry lease-out of an aircraft to any operator except for the cases specified in ORO.GEN.310 of Part ORO;

(4) relevant requirements of continuing airworthiness and air operations, for dry lease-in of an aircraft registered in Libya and wet lease-in of an aircraft from a Libyan operator.

(b) The approval of a wet lease-in agreement shall be suspended or revoked whenever the AOC of the lessor or lessee is suspended or revoked;

(c) The approval of a dry lease-in agreement shall be suspended or revoked whenever:

(1) the certificate of airworthiness of the aircraft is suspended or revoked;

(2) [reserved]

(d) When asked for the prior approval of a dry-lease out agreement in accordance with ORO.AOC.110(e), the Authority shall ensure:

(1) proper coordination with the competent authority responsible for the continuing airworthiness of the aircraft, or for the operation of the aircraft, if it is not the same authority;

(2) that the aircraft is timely removed from the operator's AOC except for the cases specified in ORO.GEN.310 of Part ORO.

(e) When asked for prior approval of a dry lease-in agreement in accordance with point ORO.AOC.110(d), the Authority shall ensure proper coordination with the State of Registry of the aircraft as necessary to exercise the oversight responsibilities of the aircraft.

SECTION I Authorisation of high risk commercial specialised operations

ARO.OPS.150 Authorisation of high risk commercial specialised operations

(a) Upon receiving an application for the issue of a high risk commercial specialised operations authorisation, the Authority shall review the operator's risk assessment documentation and standard operating procedures (SOP), related to one or more planned operations and developed in accordance with the relevant requirements of Part-SPO.

(b) When satisfied with the risk assessment and SOP, the Authority shall issue the authorisation, as established in Appendix VI. The authorisation may be issued for a limited or an unlimited duration. The conditions under which an operator is authorised to conduct one or more high risk commercial specialised operations shall be specified in the authorisation.

(c) Upon receiving an application for a change to the authorisation, the Authority shall comply with (a) and (b). It shall prescribe the conditions under which the operator may operate during the change, unless the Authority determines that the authorisation needs to be suspended.

(d) Upon receiving an application for the renewal of the authorisation, the Authority shall comply with (a) and (b). It may take into account the past authorisation process and oversight activities.

(e) Without prejudice to any additional enforcement measures, when the operator implements changes without having submitted an amended risk assessment and SOP, the Authority shall suspend, limit or revoke the authorisation.

(f) [Reserved]

ARO.OPS.155 Lease agreements

(a) The Authority shall approve a lease agreement involving a foreign registered aircraft or a foreign operator when the SPO operator has demonstrated compliance with ORO.SPO.100.

(b) The approval of a dry lease-in agreement shall be suspended or revoked whenever the certificate of airworthiness of the aircraft is suspended or revoked.

SECTION II Approvals

ARO.OPS.200 Specific approval procedure

(a) Upon receiving an application for the issue of a specific approval or changes thereof, the Authority shall assess the application in accordance with the relevant requirements of Part-SPA and conduct, where relevant, an appropriate inspection of the operator.

(b) When satisfied that the operator has demonstrated compliance with the applicable requirements, the Authority shall issue or amend the approval. The approval shall be specified in:

(1) the operations specifications, as established in Appendix II, for commercial air transport operations; or

(2) the list of specific approvals, as established in Appendix V, for non-commercial operations and specialised operations.

(c) The Authority may grant special approvals for deviation from the Technical Instructions, as specifically provided therein, provided that in such instances overall level of safety in transport which is equivalent to

the level of safety provided for in the Technical Instructions, is achieved.

ARO.OPS.205 Minimum equipment list approval

(a) When receiving an application for initial approval of a minimum equipment list (MEL) or an amendment thereof from an operator, the Authority shall assess each item affected, to verify compliance with the applicable requirements, before issuing the approval.

(b) The Authority shall approve the operator's procedure for the extension of the applicable rectification intervals B, C and D, if the conditions specified in ORO.MLR.105(f) are demonstrated by the operator and verified by the Authority.

(c) The Authority shall approve, on a case-by-case basis, the operation of an aircraft outside the constraints of the MEL but within the constraints of the master minimum equipment list (MMEL), if the conditions specified in ORO.MLR.105 are demonstrated by the operator and verified by the Authority.

ARO.OPS.210 Determination of distance or local area

The Authority may determine a distance or local area for the purpose of operations.

ARO.OPS.215 Approval of helicopter operations over a hostile environment located outside a congested area

(a) The Authority shall designate those areas where helicopter operations may be conducted without an assured safe forced landing capability, as described in CAT.POL. H.420.

(b) Before issuing the approval referred to in CAT.POL. H.420 the Authority shall have considered the operator's substantiation precluding the use of the appropriate performance criteria.

ARO.OPS.220 Approval of helicopter operations to or from a public interest site

The approval referred to in CAT.POL. H.225 shall include a list of the public interest site(s) specified by the operator to which the approval applies.

ARO.OPS.225 Approval of operations to an isolated aerodrome

The approval referred to in CAT.OP.MPA.106 shall include a list of the aerodromes specified by the operator to which the approval applies.

ARO.OPS.230 Determination of disruptive schedules

For the purpose of flight time limitations, Operators shall operate, in accordance with the definitions of an "early type" disruptive schedules in point ORO.FTL.105 of Part ORO.

ARO.OPS.235 Approval of individual flight time specification schemes

(a) The Authority shall approve flight time specification schemes proposed by CAT operators if the operator demonstrates compliance with the Civil Aviation Law and Subpart FTL of Part ORO to this Regulation.

(b) Whenever a flight time specification scheme proposed by an operator deviates from the applicable certification specifications, the Authority shall assess the scheme on the basis of a scientific and medical evaluation. Following this assessment, the Authority shall either approve the scheme or propose changes.

(c) Whenever a flight time specification scheme proposed by an operator deviates from applicable implementing rules the Authority may consider granting an exemption in accordance with Rule making.

(d) Approved deviations or exemptions shall be subject, after being applied, to an assessment to determine whether such deviations or exemptions should be confirmed or amended. The Authority shall conduct an independent assessment based on information provided by the operator. The assessment shall be proportionate, transparent and based on scientific principles and knowledge.

ARO.OPS.240 Specific approval of RNP AR APCH

(a) When compliance with the requirements in SPA.PBN.105 has been demonstrated by the applicant, the Authority shall grant a generic specific approval or a procedure- specific approval for RNP AR APCH

(b) in the case of a procedure-specific approval, the Authority shall:

(1) list the approved instrument approach procedures at specific aerodromes in the PBN approval.

(2) establish coordination with the competent authorities for these aerodromes, if appropriate; and

(3) take into account possible credits stemming from RNP AR APCH specific approvals already issued to the applicant.

SECTION III Oversight of operations

ARO.OPS.300 Introductory Flights

The Authority may establish additional conditions for introductory flights carried out in accordance with Part - NCO in the territory of the State of Libya. Such conditions shall ensure safe operations and be proportionate.

SUBPART DG - AUTHORITY REQUIREMENTS FOR AIR TRANSPORT OF DANGEROUS GOODS

ARO.DG.005

[Reserved]

ARO.DG.100 - Information to passengers

The Authority shall ensure that information is promulgated in such a manner that passengers are warned as to the types of dangerous goods which they are forbidden from transporting aboard an aircraft as provided for in the Technical Instructions.

ARO.DG.105 Inspection system

The Authority shall establish inspection, surveillance and enforcement procedures for all entities performing any function prescribed in its regulations for air transport of dangerous goods with a view to achieving compliance with those regulations.

ARO.DG.110 Cooperation between States

The Authority should participate in cooperative efforts with other States concerning violations of dangerous goods regulations, with the aim of eliminating such violations. Cooperative efforts could include coordination of investigations and enforcement actions; exchanging information on a regulated party's compliance history; joint inspections and other technical liaisons, exchange of technical staff, and joint meetings and conferences. Appropriate information that could be exchanged include safety alerts, bulletins or dangerous goods advisories;

proposed and completed regulatory actions; incident reports; documentary and other evidence developed in the investigation of incidents; proposed and final enforcement actions; and educational/outreach materials suitable for public dissemination.

ARO.DG.115 Penalties for violations

(a) The Authority shall take such measures as it may deem appropriate to achieve compliance with its dangerous goods regulations including the prescription of appropriate penalties for violations.

(b) The Authority should take appropriate action to achieve compliance with its dangerous goods regulations, including the prescription of appropriate penalties for violations, when information about a violation is received from another Contracting State.

ARO.DG.120 Dangerous goods Accidents and Incidents Reporting

(a) With the aim of preventing the recurrence of dangerous goods accidents and incidents, the Authority shall establish procedures for investigating and compiling information concerning such accidents and incidents which occur in the territory of the State of Libya and which involve the transport of dangerous goods originating in or destined for another State. Reports on such accidents and incidents shall be made in accordance with the detailed provisions of the Technical Instructions.

(b) With the aim of preventing the recurrence of dangerous goods accidents and incidents, the Authority should establish procedures for investigating and compiling information concerning such accidents and incidents which occur in the territory of State of Libya other than those described in Paragraph (a) above. Reports on such accidents and incidents should be made in accordance with the detailed provisions of the Technical Instructions.

(c) With the aim of preventing the recurrence of instances of undeclared or misdeclared dangerous goods in cargo, the Authority shall establish procedures for investigating and compiling information concerning such occurrences which occur in the territory of State of Libya and which involve the transport of dangerous goods originating in or destined for another State. Reports on such instances shall be made in accordance with the detailed provisions of the Technical Instructions.

(d) With the aim of preventing the recurrence of instances of undeclared or misdeclared dangerous goods in cargo, the Authority should establish procedures for investigating and compiling information concerning such occurrences which occur in the territory of State of Libya other than those described in paragraph (c) above. Reports on such instances should be made in accordance with the detailed provisions of the Technical Instructions.

SUBPART CC - SPECIFIC REQUIREMENTS RELATING TO CABIN CREW

SECTION I - CABIN CREW CERTIFICATES OF COMPETENCY

ARO.CC.100 Procedures for cabin crew certificates of competency

(a) The Authority shall establish procedures for the issue, record-keeping and oversight of cabin crew certificates of competency in accordance with ARO.GEN.315, ARO.GEN.220 and ARO.GEN.300 respectively.

(b) Cabin crew certificates of competency shall be issued, using the format and specifications established in Appendix V to this Part, either

(1) by the Authority;

(2) by an organisation approved to do so by the Authority.

(c) The Authority shall make publicly available:

(1) which body(ies) issue cabin crew certificates of competency in their territory; and

(2) if organisations are approved to do so, the list of such organisations.

ARO.CC.105 Suspension or revocation of cabin crew certificates of competency

The Authority shall take measures in accordance with ARO.GEN.355, including the suspension or revocation of a cabin crew certificate of competency, at least in the following cases:

(a) non-compliance with Part-CC or with the applicable requirements of Part-ORO and Part-CAT, where a safety issue has been identified;

(b) obtaining or maintaining the validity of the cabin crew certificate of competency by falsification of submitted documentary evidence;

(c) exercising the privileges of the cabin crew certificate of competency when adversely affected by alcohol or drugs; and

(d) evidence of malpractice or fraudulent use of the cabin crew certificate of competency.

SECTION II - ORGANISATIONS PROVIDING CABIN CREW TRAINING OR ISSUING CABIN CREW CERTIFICATES OF COMPETENCY

ARO.CC.200 Approval of organisations to provide cabin crew training or to issue cabin crew certificates of competency

(a) Before issuing an approval to a training organisation or a commercial air transport operator to provide cabin crew training, the Authority shall verify that:

(1) the conduct, the syllabi and associated programmes of the training courses provided by the organisation comply with the relevant requirements of Part-CC;

(2) the training devices used by the organisation realistically represent the passenger compartment environment of the aircraft type(s) and the technical characteristics of the equipment to be operated by the cabin crew; and

(3) the trainers and instructors conducting the training sessions are suitably experienced and qualified in the training subject covered.

(b) If some organisations is approved to issue cabin crew certificates of competency, the Authority shall only grant such approvals to organisations complying with the requirements in (a). Before granting such an approval, the Authority shall:

(1) assess the capability and accountability of the organisation to perform the related tasks;

(2) ensure that the organisation has established documented procedures for the performance of the related tasks, including for the conduct of examination(s) by personnel who are qualified for this purpose and free from conflict of interest, and for the issue of cabin crew certificates of competency in accordance with ARO.GEN.315 and ARO.CC.100(b); and

(3) require the organisation to provide information and documentation related to the cabin crew certificates of competency it issues and their holders, as relevant for the Authority to conduct its record- keeping, oversight and enforcement tasks.

SUBPART RAMP - RAMP INSPECTIONS OF AIRCRAFT OF OPERATORS UNDER THE REGULATORY OVERSIGHT OF ANOTHER STATE

ARO.RAMP.005 Scope

This Subpart establishes the requirements to be followed by the Authority when exercising its tasks and responsibilities regarding the performance of ramp inspections of aircraft used by foreign operators when landed at aerodromes located in the territory of the State of Libya.

ARO.RAMP.100 General

(a) Aircraft, as well as their crew, shall be inspected against the applicable requirements.

(b) In addition to conducting ramp inspections included in its oversight programme established in accordance with ARO.GEN.305, the Authority shall perform a ramp inspection of an aircraft suspected of not being compliant with the applicable requirements.

(c) Within the development of the oversight programme established in accordance with ARO.GEN.305, the Authority shall establish an annual programme for the conduct of ramp inspections of aircraft. This programme shall:

(1) be based on a calculation methodology that takes into account historical information on the number and nature of operators and their number of landings at its aerodromes, as well as safety risks;

(2) enable the Authority to give priority to the inspections of aircraft on the basis of the list referred to in ARO.RAMP.105(a).

ARO.RAMP.105 Prioritisation Criteria

(a) The EASA shall provide the Authority with a list of operators or aircraft identified as presenting a potential risk, for the prioritisation of ramp inspections.

(b) The list shall be produced, in accordance with procedures established by the EASA.

ARO.RAMP.106 Alcohol testing

(a) The Authority shall carry out alcohol testing on flights and cabin crew

(b) The EASA shall provide competent authorities with a list of foreign operators for the prioritisation of alcohol testing within the ramp inspection programme in accordance with ARO.RAMP.105 based on a risk assessment performed by the EASA, taking into account the robustness and effectiveness of existing psychoactive testing programmes.

(c) When selecting operators for alcohol testing of flight and cabin crew, the Authority shall use the list established in accordance with point (b)

(d) Whenever data concerning alcohol tests is included in the centralised database in accordance with point (b) of point ARO.RAMP.145, the Authority shall ensure that such data excludes any personal data of the crew member concerned.

(e) In case of a reasonable cause or suspicion, alcohol test may be carried out at any time.

(f) The alcohol testing methodology shall apply recognised quality standards that ensure accurate testing results.

(g) A flight crew or cabin crew member who refuses to cooperate during tests or who has been identified to be under the influence of alcohol after a positive test shall not be allowed to continue his or her duty.

ARO.RAMP.110 Collection of information

The Authority shall collect and process any information deemed useful for conducting ramp inspections.

ARO.RAMP.115 Qualification of ramp inspectors

(a) The Authority shall have qualified inspectors to conduct ramp inspections.

(b) Ramp inspectors shall:

(1) possess the necessary aeronautical education or practical knowledge relevant to their area(s) of inspection;

(2) have successfully completed:

(i) appropriate specific theoretical and practical training, in one or more of the following areas of inspection:

(A) flight deck;

(B) cabin safety;

(C) aircraft condition;

(D) cargo;

(ii) appropriate on-the-job training delivered by a senior ramp inspector appointed by the Authority;

(3) maintain the validity of their qualification by undergoing recurrent training and by performing a minimum of 12 inspections in every 12-month period.

(c) The training in (b)(2)(i) shall be delivered by the Authority or by any training organisation approved in accordance with ARO.RAMP.120(a).

(d) The Authority or other qualified entity shall develop and maintain training syllabi and promote the organisation of training courses and workshops for inspectors to improve the understanding and uniform implementation of this Subpart.

(e) The Authority may enter into an agreement with EASA to facilitate and coordinate an inspector exchange programme aimed at allowing inspectors to obtain practical experience and contributing to the harmonisation of procedures.

ARO.RAMP.120 Approval of training organisations

(a) The Authority shall approve a training organisation when satisfied that the training organisation:

(1) has nominated a head of training possessing sound managerial capability to ensure that the training provided is in compliance with the applicable requirements;

(2) has available training facilities and instructional equipment suitable for the type of training provided;

(3) provides training in accordance with the syllabi developed by the LYCAA in accordance with ARO.RAMP.115(d);

(4) uses qualified training instructors.

(b) If so requested by the Authority, the verification of compliance and continuous compliance with the requirements referred to in (a) may be performed by the LYCAA.

(c) The training organisation shall be approved to provide one or more of the following types of training:

(1) initial theoretical training;

(2) initial practical training;

(3) recurrent training.

ARO.RAMP.125 Conduct of ramp inspections

(a) Ramp inspections shall be performed in a standardised manner.

(b) When performing a ramp inspection, the inspector(s) shall make all possible efforts to avoid an unreasonable delay of the aircraft inspected.

(c) On completion of the ramp inspection, the pilot-in-command or, in his/her absence, another flight crew member or a representative of the operator shall be informed of the ramp inspection's results.

ARO.RAMP.130 Categorisation of findings

For each inspection item, three categories of possible non-compliance with the applicable requirements are defined as findings. Such findings shall be categorised as follows:

(1) a category 3 finding is any detected significant non-compliance with the applicable requirements or the terms of a certificate that has a major influence on safety;

(2) a category 2 finding is any detected non-compliance with the applicable requirements or the terms of a certificate that has a significant influence on safety;

(3) a category 1 finding is any detected non-compliance with the applicable requirements or the terms a certificate that has a minor influence on safety.

ARO.RAMP.135 Follow-up actions on findings

(a) For a category 2 or 3 finding the Authority, or where applicable, the EASA, shall:

(1) communicate the finding in writing to the operator, including a request for evidence of corrective actions taken; and

(2) inform the competent authority of the State of the operator and, where relevant, the State in which the aircraft is registered and where the licence of the flight crew was issued. Where appropriate, the Authority, or where applicable, the EASA, shall request confirmation of their acceptance of the corrective actions taken by the operator in accordance with ARO.GEN.350 or ARO.GEN.355.

(b) In addition to (a), in the case of a category 3 finding, the Authority shall take immediate steps by:

(1) imposing a restriction on the aircraft flight operation;

(2) requesting immediate corrective actions; or

(3) grounding the aircraft in accordance with ARO.RAMP.140;

(4) [Reserved]

(c) When the EASA has raised a category 3 finding, it shall request the competent authority where the aircraft is landed to take the appropriate measures in accordance with (b).

ARO.RAMP.140 Grounding of aircraft

(a) In the case of a category 3 finding where it appears that the aircraft is intended or is likely to be flown without completion by the operator or owner of the appropriate corrective action, the Authority shall:

(1) notify the pilot-in-command/commander or the operator that the aircraft is not permitted to commence the flight until further notice; and

(2) ground that aircraft.

(b) The Authority shall immediately inform the competent authority of the State of the operator and of the State in which the aircraft is registered in the case of a grounded aircraft used by a foreign operator.

(c) The Authority shall, in coordination with the State of the operator or the State of Registry, prescribe the necessary conditions under which the aircraft can be allowed to take-off.

(d) If the non-compliance affects the validity of the certificate of airworthiness of the aircraft, the grounding shall only be lifted by the Authority when the operator shows evidence that:

(1) compliance with the applicable requirements has been re-established;

(2) it has obtained a permit-to-fly or equivalent document of the State of Registry or the State of the operator;

(3) [reserved] and

(4) permission from foreign countries which will be overflown, if applicable.

ARO.RAMP.145 Reporting

(a) Information collected in accordance with ARO.RAMP.125(a) shall be entered into the centralised database referred to in ARO.RAMP.150(b)(2) within 21 calendar days after the inspection.

(b) the Authority shall enter into the centralised database any information useful for the application of the Civil Aviation Law and regulations and for the accomplishment by the Authority of the tasks assigned to it by this Part including the relevant information referred to in ARO.RAMP.110

(c) Whenever the information as referred to in ARO.RAMP.110 shows the existence of a potential safety threat, such information shall also be communicated to each competent authority and the EASA without delay.

(d) Whenever information concerning aircraft deficiencies is given by a person to the Authority, the information referred to in ARO.RAMP.110 and ARO.RAMP.125(a) shall be de-identified regarding the source of such information.

ARO.RAMP.150 Coordination Tasks

Where applicable and under the terms of an agreement between the Authority and the EASA:

(a) The EASA shall manage and operate the tools and procedures necessary for the storage and exchange of:

(1) the information referred to in ARO.RAMP.145;

(2) the information provided by third countries or international organisations with whom appropriate agreements have been concluded with the EU, or organisations with whom the EASA has concluded appropriate arrangements.

(b) This management shall include the following tasks:

(1) store data from the States relevant to the safety information on aircraft landing at aerodromes located in the territory subject to the provisions of the Treaty;

(2) develop, maintain and continuously update a centralised database containing all the information referred to in (a)(1) and (2);

(3) provide necessary changes and enhancements to the database application;

(4) analyse the centralised database and other relevant information concerning the safety of aircraft and of air operators and, on that basis:

(i) advise the Commission and the competent authorities on immediate actions or follow-up policy;

(ii) report potential safety problems to the Commission and to the competent authorities;

(iii) propose coordinated actions to the Commission and to the competent authorities, when necessary on safety grounds, and ensure coordination at the technical level of such actions;

(5) liaise with other European institutions and bodies, international organisations and third country competent authorities on information exchange.

ARO.RAMP.155 Coordination Tasks

Where applicable and under the terms of an agreement, the EASA shall prepare and submit an annual report on the ramp inspection system containing at least the following information:

(a) status of the progress of the system;

(b) status of the inspections performed in the year;

(c) analysis of the inspection results with indication of the categories of findings;

(d) actions taken during the year;

(e) proposals for further improving the ramp inspection system; and

(f) annexes containing lists of inspections sorted out by State of operation, aircraft type, operator and ratios per item.

ARO.RAMP.160 Information to the public and Protection of information

(a) Information received pursuant to ARO.RAMP.105 and ARO.RAMP.145 shall be used solely for the purpose of the Civil Aviation Law and Regulations and shall be protected accordingly.

(b) The Authority shall publish an aggregated information report annually that shall be available to the public containing an analysis of the information received in accordance with ARO.RAMP.145. The report shall be simple and easy to understand, and the source of the information shall be de-identified.

Appendices to Part-ARO

Appendix I to Part-ARO

AIR OPERATOR CERTIFICATE

(Approval schedule for air transport operators)

Types of operation: Commercial air transport (CAT) ☐ Passengers; ☐ Cargo ☐ Other ([1]):

([4])	State of the operator ([2]) Issuing authority ([3])	([5])
AOC # ([6]): 	Operator name ([7]) Dba trading name ([8]) Operator address ([10]): Telephone ([11]): Fax Email:	Operational points of contact: ([9]) Contact details, at which operational management can be contacted without undue delay, are listed in…….. ([12]).

This certificate certifies that ([13]) is authorised to perform commercial air operations, as defined in the attached operations specifications, in accordance with the operations manual, Law No.6 of 2005 (as amended) and its regulations.

Date of issue ([14]):	Name and Signature ([15]): Title:

(1) Other type of transportation to be specified.
(2) Replaced by the name of the State of the operator.
(3) Replaced by the identification of the issuing competent authority.
(4) For use of the competent authority.
(5) For use of the competent authority.
(6) Approval reference, as issued by the competent authority.
(7) Replaced by the operator's registered name.
(8) Operator's trading name, if different. Insert "Dba" (for "Doing business as") before the trading name.
(9) The contact details include the telephone and fax numbers, including the country code, and the email address (if available) at which operational management can be contacted without undue delay for issues related to flight operations, airworthiness, flight and cabin crew members' competency, dangerous goods and other matters as appropriate.
(10) Operator's principal place of business address.
(11) Operator's principal place of business telephone and fax details, including the country code. Email to be provided if available.
(12) Insertion of the controlled document, carried on board, in which the contact details are listed, with the appropriate paragraph or page reference. E.g.: "Contact details … are listed in the operations manual, gen/basic, chapter 1, 1.1"; or "… are listed in the operations specifications, page 1"; or "… are listed in an attachment to this document".
(13) Operator's registered name.
(14) Issue date of the AOC (dd-mm-yyyy).
(15) Title, name and signature of the competent authority representative. In addition, an official stamp may be applied on the AOC.

Appendix II to Part-ARO

OPERATIONS SPECIFICATIONS (subject to the approved conditions in the operations manual)				
Issuing authority contact details Telephone ([1]): _____; Fax: _____; E-mail: _____				
AOC ([2]): Operator name ([3]): Dba trading name			Date ([4]):	Signature:
Operations specifications#:				
Aircraft model ([5]): Registration marks ([6]):				
Types of operations: Commercial air transport ☐ Passengers ☐ Cargo ☐ Others ([7]): _____				
Area of operation ([8]):				
Special limitations ([9]):				
Specific approvals:	Yes	No	Specification ([10])	Remarks
Dangerous goods	☐	☐		
Low-visibility operations Take-off Approach and landing	☐	☐	CAT ([11]).... RVR ([12]): m DA/H: ft RVR: m	
RVSM ([13]) ☐ N/A	☐	☐		
ETOPS ([14]) ☐ N/A	☐	☐	Maximum diversion time ([15]): min.	
Complex navigation specifications for PBN operations ([16])	☐	☐		([17])
Minimum navigation performance specification	☐	☐		
Operations of single-engined turbine aeroplane at night or in IMC (SET-IMC)	☐	☐	([18])	
Helicopter operations with the aid of night-vision imaging systems	☐	☐		
Helicopter hoist operations	☐	☐		
Helicopter emergency medical service operations	☐	☐		
Helicopter offshore operations	☐	☐		
Cabin crew training ([19])	☐	☐		
Issue of CC Certificate of Competency ([20])	☐	☐		
Use of type B EFB applications	☐	☐	([21])	
Continuing airworthiness	☐	☐	([22])	
Others ([23])				

(1) Telephone and fax contact details of the competent authority, including the country code. E-mail to be provided if available.

(2) Insertion of associated air operator certificate (AOC) number.

(3) Insertion of the operator's registered name and the operator's trading name, if different. Insert 'Dba' before the trading name (for 'Doing business as').

(4) Issue date of the operations specifications (dd-mm-yyyy) and signature of the competent authority representative.

(5) Insertion of ICAO designation of the aircraft make, model and series, or master series, if a series has been designated (e.g. Boeing-737-3K2 or Boeing-777-232).

(6) Either the registration marks are listed in the operations specifications or in the operations manual. In the latter case, the related operations specifications must make a reference to the related page in the

	operations manual. In case not all specific approvals apply to the aircraft model, the registration marks of the aircraft may be entered in the remark column to the related specific approval.
(7)	Other type of transportation to be specified (e.g. emergency medical service).
(8)	Listing of geographical areas of authorised operation (by geographical coordinates or specific routes, flight information region, or national or regional boundaries).
(9)	Listing of applicable special limitations (e.g. VFR only, Day only, etc.).
(10)	List in this column the most permissive criteria for each approval or the approval type (with appropriate criteria).
(11)	Insertion of applicable precision approach category: LTS CAT I, CAT II, OTS CAT II, CAT IIIA, CAT IIIB or CAT IIIC. Insertion of minimum runway visual range (RVR) in meters and decision height (DH) in feet. One line is used per listed approach category.
(12)	Insertion of approved minimum take-off RVR in metres. One line per approval may be used if different approvals are granted.
(13)	The Not Applicable (N/A) box may be checked only if the aircraft maximum ceiling is below FL290.
(14)	Extended range operations (ETOPS) currently applies only to two-engined aircraft. Therefore, the not applicable (N/A) box may be checked if the aircraft model has less or more than two engines.
(15)	The threshold distance may also be listed (in NM), as well as the engine type.
(16)	Performance-based navigation (PBN): one line is used for each complex PBN specific approval (e.g. RNP AR APCH), with appropriate limitations listed in the 'Specifications' or 'Remarks' columns, or in both. Procedure-specific approvals of specific RNP AR APCH procedures may be listed in the operations specifications or in the operations manual. In the latter case, the related operations specifications must have a reference to the related page in the operations manual.
(17)	Specify if the specific approval is limited to certain runway ends or aerodromes, or both.
(18)	Insertion of the particular airframe or engine combination.
(19)	Approval to conduct the training course and examination to be completed by applicants for a cabin crew certificate of competency as specified in (Part-CC)..
(20)	Approval to issue cabin crew Certificates of Competency as specified in 'Part-CC).
(21)	Insertion of the list of type B EFB applications together with the reference of the EFB hardware (for portable EFBs). Either this list is contained in the operations specifications or in the operations manual. In the latter case, the related operations specifications must make a reference to the related page in the operations manual.
(22)	The name of the person or organisation responsible for ensuring that the continuing airworthiness is maintained and a reference to the regulation that requires the work, i.e. Subpart G of (Part-M)
(23)	Other approvals or data may be entered here, using one line (or one multi-line block) per authorisation (e.g. short landing operations, steep approach operations, reduced required landing distance, helicopter operations to or from a public interest site, helicopter operations over a hostile environment located outside a congested area, helicopter operations without a safe forced landing capability, operations with increased bank angles, maximum distance from an adequate aerodrome for two-engined aeroplanes without an ETOPS approval).

Appendix III to Part-ARO

List of specific approvals
Non-commercial operations

Specialised operations
(subject to the conditions specified in the approval and contained in the operations manual or pilot's operating handbook)

Issuing Authority ([1]):		
List of Specific Approvals # ([2]): Name of Operator: Date ([3]): Signature:		
Aircraft Model and Registration Marks ([4]):		
Types of specialised operation (SPO), if applicable: ☐ ([5]) …		
Specific Approvals ([6]):	Specification ([7])	Remarks
…		
…		
…		
…		

([1]) Insertion of name and contact details.

([2]) Insertion of the associated number.

([3]) Issue date of the specific approvals (dd-mm-yyyy) and signature of the competent authority representative.

([4]) Insertion of the Commercial Aviation Safety Team (CAST)/ICAO designation of the aircraft make, model and series, or master series, if a series has been designated (e.g. Boeing-737-3K2 or Boeing-777-232). The CAST/ICAO taxonomy is available at: http://www.intlaviationstandards.org/

The registration marks shall be either listed in the list of specific approvals or in the operations manual. In the latter case the list of specific approvals shall refer to the related page in the operation manual.

([5]) Specify the type of operation, e.g., agriculture, construction, photography, surveying, observation and patrol, aerial advertisement, maintenance check flights.

([6]) List in this column any approved operations, e.g., dangerous goods, LVO, RVSM, PBN, MNPS, HOFO.

([7]) List in this column the most permissive criteria for each approval, e.g. the decision height and RVR minima for CAT II.

Appendix IV to Part-ARO

AUTHORISATION OF HIGH RISK COMMERCIAL SPECIALISED OPERATIONS	
Issuing Authority: (1) Authorisation no: (2)	
Operator name: (3) Operator address: (4) Telephone: (5) Fax: E-mail:	
Aircraft model and registration marks: (6)	
Authorised specialised operation: (7)	
Authorised area or site of operation: (8)	
Special limitations: (9)	
This is to confirm that …… is authorised to perform high risk commercial specialised operation(s) in accordance with this authorisation, operator's Standard Operating Procedures, and its delegated and implementing acts.	
Date of issue (10):	Name and Signature (11): Title:

(1) Name and contact details of the competent authority.

(2) Insertion of associated authorisation number.

(3) Insertion of the operator's registered name and the operator's trading name, if different. Insert "Dba" before the trading name (for "Doing business as").

(4) Operator's principal place of business address.

(5) Operator's principal place of business telephone and fax details, including the country code. Email to be provided if available.

(6) Insertion of the Commercial Aviation Safety Team (CAST)/ICAO designation of the aircraft make, model and series, or master series, if a series has been designated (e.g. Boeing-737-3K2 or Boeing- 777-232). The CAST/ICAO taxonomy is available at: http://www.intlaviationstandards.org/. The registration marks shall be either listed in the list of specific approvals or in the operations manual. In the latter case the list of specific approvals shall refer to the related page in the operation manual.

(7) Specify the type of operation, e.g., agriculture, construction, photography, surveying, observation and patrol, aerial advertisement, maintenance check flights.

(8) Listing of geographical area(s) or site(s) of authorised operation (by geographical coordinates or flight information region or national or regional boundaries).

(9) Listing of applicable special limitations (e.g. VFR only, Day only, etc.).

(10) Issue date of the authorisation (dd-mm-yyyy).

(11) Title, name and signature of the competent authority representative. In addition, an official stamp may be applied on the authorisation.

Form ops-001

Appendix V to Part-ARO

Standard format for Cabin Crew Certificate of Competency

Cabin crew Certificates of Competency issued in accordance with Part-CC shall conform to the following specifications:

1. CABIN CREW CERTIFICATE OF COMPETENCY
2. Reference number:
3. State of issue
4. Full name of holder
5. Date and place of birth:
6. Nationality:
7. Signature of holder:
8. Competent authority:
9. Issuing body: *Official seal, Stamp or Logo*
10. Signature of issuing officer:
11. Date of issue:
12. The holder may only exercise the privileges to act as cabin crew on aircraft engaged in commercial air transport operations if he/she complies with the requirements in Part-CC for continuous fitness and valid aircraft type qualifications.

(a) The cabin crew certificate of competency shall include all items specified in table 1 above in accordance with items 1 - 12 as listed and described below.

(b) Size shall be either 105mm × 74mm (one-eighth A4) or 85mm × 54mm, and the material used shall prevent or readily show any alterations or erasures.

(c) The document shall be printed in English and such other languages as the Authority deems appropriate.

(d) The document shall be issued by the Authority or by an organisation approved to issue cabin crew certificates of competency. In that latter case reference to the approval by the Authority shall be stated.

(e)

Item 1: The title "CABIN CREW CERTIFICATE OF COMPETENCY" and the reference to Part-CC.

Item 2: Certificate reference number shall commence with the UN country code for Libya followed by at least the two last numbers of the year of issue and an individual reference/number according to a code established by the Authority (e.g. BE-08-xxxx).

Item 3: The State where the certificate of competency is issued.

Item 4: The full name (surname and first name) stated in the official identity document of the holder.

Items 5 and 6: Date and place of birth as well as nationality as stated in the official identity document of the holder.

Item 7: The signature of the holder.

Item 8: Identification details of the Authority where the certificate of competency is issued shall be entered and shall provide the full name of the Authority, postal address, and official seal, stamp or logo as applicable.

Item 9: If the authority is the issuing body, the term “competent authority” and official seal, stamp or logo shall be entered. In this case only, the Authority may determine if its official seal, stamp or logo shall also be entered under Item 8. In the case of an approved organisation, identification details shall be entered and shall at least provide the full name of the organisation, postal address and if applicable, the logo and:

(a) in the case of a commercial air transport operator, the air operator certificate (AOC) number and detailed reference to the approvals by the Authority to provide cabin crew training and to issue certificates of competency; or

(b) in the case of an approved training organisation, the reference number of the relevant approval by the Authority.

Item 10: The signature of the officer acting on behalf of the issuing body.

Item 11: Standard date format shall be used: i.e. day/month/year in full (e.g. 22/08/2023).

Item 12: The same sentence in English and its full and precise translation into such other languages as the Authority deems appropriate.

PART-ORO: ORGANISATION REQUIREMENTS FOR AIR OPERATIONS

D. Libyan Civil Aviation Regulation 5 of 2020 on Air operations is amended by the replacement of Organisation Requirements for Air Operations - Part ORO as follows:

" **ORGANISATION REQUIREMENTS FOR AIR OPERATIONS**

PART-ORO

ORO.GEN.005 Scope

This Part 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.110 Operator responsibilities

(a) The operator is responsible for the operation of the aircraft in accordance with the relevant requirements of this Part 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 and supervision over any flight operated under the terms of its certificate, SPO authorisation or 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. Those procedures and instructions 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. Procedures and instructions for a sterile flight crew compartment shall also be included.

(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 for each aircraft type to be used by crew members in all phases of flight under normal, abnormal and emergency conditions in order to ensure that the operating procedures in the operations manual are followed. The design and the usage of checklists shall observe human factors principles and take into account the latest relevant documentation from the design approval holder

(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. Such training programmes shall be commensurate with the functions for which the personnel are responsible. Training programmes of operators performing CAT, whether they transport dangerous goods or not, and of operators conducting operations other than CAT referred to in points (b), (c) and (d) of point ORO.GEN.005 that transport dangerous goods shall be subject to review and approval by the Authority. Review of training programmes shall include consideration of facilities and the qualification and competence of instructors.

(k) Notwithstanding point (j), operators conducting commercial operations with either of the following aircraft shall ensure that the flight crew has received an appropriate dangerous goods training or briefing, to enable them to recognise undeclared dangerous goods brought on-board by passengers or as cargo:

(1) a single-engined propeller-driven aeroplane having a maximum certified take-off mass of 5 700 kg or less and a MOPSC of 5 or less operated in a flight taking off and landing at the same aerodrome or operating site, under VFR by day; or

(2) an other-than complex motor-powered helicopters, single-engined, with a MOPSC of 5 or less operated in a flight taking off and landing at the same aerodrome or operating site, under VFR by day.

(l) The operator shall ensure that crew members are not exposed to harmful levels of cosmic radiation during aircraft operations.

(m) The operator shall transport aircraft spares and/or Company Materials (COMAT) classified as Dangerous Goods in accordance with the provisions of the Technical Instructions.

(n) The operator shall establish operating procedures containing information and instructions on the removal of any possible contamination of Dangerous Goods.

(o) Information related to the level of RFFS protection that is deemed acceptable by the operator shall be contained in the operations manual.

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 the Authority, taking into account the applicable requirements of the Civil Aviation Law and Regulations.

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

ORO.GEN.120 Means of compliance

(a) Alternative means of compliance to the AMC adopted by the Authority may be used by an organisation to establish compliance with Civil Aviation law and its Regulations and Implementing Rules provided such Alternative Means of Compliance are approved by the Authority prior to implementation.

(b) When an operator subject to certification wishes to use an alternative means of compliance to the acceptable means of compliance (AMC) adopted by the Authority to establish compliance with the Civil Aviation Law and Regulations, it shall, prior to implementing it, provide the Authority 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 Regulations and implementing rules are complied with.

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

(c) An operator required to declare its activity shall notify to the Authority the list of alternative means of compliance it uses to establish compliance with the Civil Aviation Law and Regulations.

(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 the Authority.

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

The operator shall provide the Authority with any relevant documentation.

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

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

(c) All changes not requiring prior approval shall be managed and notified to the Authority as defined in the procedure approved by the Authority 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 the Civil Aviation Law and its Regulations and implementing rules, taking into account the provisions related to the handling of findings as specified under ORO.GEN.150;

(2) the Authority being granted access to the operator as defined in ORO.GEN.140 to determine continued compliance with the relevant requirements of the Civil Aviation Law and Regulations; and

(3) the certificate not being surrendered or revoked.

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

ORO.GEN.140 Access

(a) For the purpose of determining compliance with the relevant requirements of the Civil Aviation Law and its Regulations, 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 the Authority;

(b) Where possible the documentation requirement concerning FDR and ADRS parameters provided by operators to accident investigation authorities should be in electronic format and take account of industry specifications.

(c) Access to the aircraft mentioned under (a) shall, in the case of CAT, 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.

(d) All aeroplanes of a maximum certificated take-off mass of over 27 000 kg and authorized to carry more than nineteen passengers for which the application for type certification is submitted to a Contracting State on or after 1 January 2021, shall be equipped with a means approved by the Authority, to recover flight recorder data and make it available in a timely manner.

1) In approving the means to make flight recorder data available in a timely manner, the State of the operator shall take into account the following:

(i) the capabilities of the operator;

(ii) overall capability of the aeroplane and its systems as certified by the State of Design;

(iii) the reliability of the means to recover the appropriate CVR channels and appropriate FDR data; and

(iv) specific mitigation measures

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 the Authority 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 the Authority in accordance with ARO.GEN.135(c); and

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

ORO.GEN.160 Occurrence reporting

(a) The operator shall report to the Authority any accident, serious incident and occurrence as defined in the Libyan regulations relating to Accident and Incident Investigations.

(b) Without prejudice to point (a) the operator shall report to the Authority and to the organisation responsible for the design of the aircraft any incident, malfunction, technical defect, exceeding of technical limitations or occurrence that would highlight inaccurate, incomplete or ambiguous information contained in the applicable operational suitability data 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) Without prejudice to LYCAR Part-19 on Occurrence Reporting, the reports referred to in paragraphs (a) and (b) shall be made in a form and manner established by the Authority and contain all pertinent information about the conditions known to the operator. Flight safety department shall establish occurrence reporting and investigation procedures.

(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 the Authority.

(f) Health related incidents requiring immediate action: the commander shall notify the appropriate air traffic services unit to relay information to destination aerodrome, as soon as he/she becomes aware or suspects that there is a traveller on board suffering from a communicable disease.

(g) The operator shall ensure that the operations manual contains information and procedures for handling health related incidents, particularly communicable diseases.

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;

(7) any additional requirements that are prescribed in the relevant Subparts of this Part or other applicable Parts;

(8) the operator shall, as part of its safety management system, assess the level of rescue and firefighting service (RFFS) protection available at any aerodrome intended to be specified in the operational flight plan in order to ensure that an acceptable level of protection is available for the aeroplane intended to be used.

(9) The operator shall establish a flight safety documents system, for the use and guidance of operational personnel, as part of its safety management system

(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) When contracting or purchasing any services or products as a part of its activities, the operator shall ensure all of the following:

(1) that the contracted or purchased services or products comply with the applicable requirements;

(2) that any aviation safety hazards associated with contracted or purchased services or products are considered by the operator's management system.

(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 the LYCAA 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.

SECTION 3 Additional Organisational Requirements ORO.GEN.310 Use of aircraft listed on an AOC for non-commercial operations and specialised operations

(a) Aircraft listed on an operator's AOC may remain on the AOC if it is operated in any of the following situations:

(1) by the AOC holder itself, for specialised operations in accordance with Part-SPO;

(2) by other operators, for non-commercial operations with motor-powered aircraft or for specialised operations performed in accordance with Part-NCC, Part-NCO or Part-SPO, provided that the aircraft is used for a continuous period not exceeding 30 days

(b) When the aircraft is used in accordance with point (a)(2), the AOC holder providing the aircraft and the operator using the aircraft shall establish a procedure:

(1) clearly identifying which operator is responsible for the operational control of each flight and to describe how the operational control is transferred between them;

(2) describing the handover procedure of the aircraft upon its return to the AOC holder.

That procedure shall be included in the operations manual of each operator or in a contract between the AOC holder and the operator using the aircraft in accordance with point (a)(2). The AOC holder shall establish a template of such contract. Point ORO.GEN.220 shall apply to the record-keeping of those contracts.

The AOC holder and the operator using the aircraft in accordance with point (a)(2) shall ensure that the procedure is communicated to the relevant personnel.

(c) The AOC holder shall submit to the Authority the procedure referred to in point (b) for prior approval. The AOC holder shall agree with the Authority on the means and on the frequency of providing it with information about transfers of operational control in accordance with point ORO.GEN.130(c).

(d) The continuing airworthiness of the aircraft used in accordance with point (a) shall be managed by the organisation responsible for the continuing airworthiness of the aircraft included in the AOC, in accordance with LYCARs Continuing Airworthiness.

(e) The AOC holder providing the aircraft in accordance with point (a) shall:

(1) indicate in its operations manual the registration marks of the provided aircraft and the type of operations conducted with those aircraft;

(2) remain informed at all times and keep record of each operator that holds the operational control of the aircraft at any given moment until the aircraft is returned to the AOC holder;

(3) ensure that its hazard identification, risk assessment and mitigation measures address all the operations conducted with those aircraft.

(f) For operations under Part-NCC and Part-SPO, the operator using the aircraft in accordance with point (a) shall ensure all of the following:

(1) that every flight conducted under its operational control is recorded in the aircraft technical log system;

(2) that no changes to the aircraft systems or configuration are made;

(3) that any defect or technical malfunction occurring while the aircraft is under its operational control is reported to the organization referred to in (d);

that the AOC holder receives a copy of any occurrence report related to the flights performed with the aircraft, completed in accordance with Libyan Civil Aviation Regulations Part-19

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 the Authority.

(b) The operator shall provide the following information to the Authority.:

(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 the Authority. have been verified by the applicant and found in compliance with the applicable requirements.

(c) Applicants shall demonstrate to the Authority that:

(1) they comply with all the requirements of the Civil Aviation Law, this Part-ORO, Part CAT and Part-SPA to this Regulation;

(2) all aircraft operated have a certificate of airworthiness (CofA) in accordance with Part 21 or are dry leased-in in accordance with ORO.AOC.110 (d); 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 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 the Authority.

(b) [RESERVED]

Wet lease-in

(c) The applicant for the approval of the wet lease-in of an aircraft of a foreign operator shall demonstrate to the Authority. that:

(1) the foreign operator holds a valid AOC issued in accordance with Annex 6 to the Convention on International Civil Aviation;

(2) the duration of the wet lease-in does not exceed seven months in any 12 consecutive month Period

(3) the safety standards of the foreign operator with regard to continuing airworthiness and air operations are equivalent to the applicable requirements established by LYCAR continuing airworthiness and this Regulation; and

(4) the aircraft has a standard CofA issued in accordance with Annex 8 to the Convention on International Civil Aviation.

Dry lease-in

(d) An applicant for the approval of the dry lease-in of an aircraft registered in a foreign country shall demonstrate to the Authority. that:

(1) an operational need has been identified that cannot be satisfied through leasing an aircraft registered in the state of Libya;

(2) the duration of the dry lease-in does not exceed 24 months in any 48 consecutive month period;

(3) compliance with the applicable requirements of continuing airworthiness as amended is ensured; and

(4) the aircraft is equipped in accordance with the Libyan regulations for Air Operations.

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 the Authority. 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 the authority.

ORO.AOC.115 Code-share agreements

(a) An operator certified in accordance with this Part shall enter into a code-share agreement with a foreign operator only after:
(1) having verified that the foreign operator complies with the applicable ICAO standards; and

(2) having provided the Authority. 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 foreign 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 foreign operator when the foreign operator is failing to maintain compliance with the applicable ICAO standards.

ORO.AOC.120 [reserved]

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

(a) An AOC holder may conduct non-commercial operations in accordance with Part-NCC or Part-NCO with aircraft listed in the operations specifications of its AOC or in its operations manual, provided that the AOC holder describes such operations in detail in the operations manual, including the following:

(1) An identification of the applicable requirements;

(2) description of any differences between operating procedures used when conducting CAT operations and non-commercial operations;

(3) a means of ensuring that all personnel involved in the operations are fully familiar with the associated procedures;

(b) An AOC holder shall comply with:

(1) Part-SPO when conducting maintenance check flights with complex motor-Powered aircraft;
(2) Part-NCO when conducting maintenance check flights with other than complex motor Powered aircraft.

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

(d) The AOC holder shall specify the type of flight, as listed in its operations manual, in the flight-related documents (operational flight plan, load sheet and other equivalent documents)

ORO.AOC.130 Flight data monitoring-aeroplanes

(a) The operator shall establish and maintain a flight data monitoring programme, which shall be integrated in its management system, for aeroplanes with a maximum certificated take-off mass of more than 20 000 kg.

(b) The flight data monitoring programme 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 member training;

(3) ground operations; and

(4) continuing airworthiness or for the continuing airworthiness management contract in accordance with LYCARs continuing airworthiness as the case may be.

(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 the Authority with all relevant information prior to commencing operations, using the form contained in Appendix I to this Part;

(b) notify to the Authority 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 the Authority 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 Part; and

(e) notify the Authority 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 LYCARs continuing airworthiness Part 21 or shall be leased-in in accordance with (c).

(c) A commercial specialised operator shall obtain prior approval of the Authority and comply with the following conditions, if:

(1) For wet leasing-in an aircraft of a foreign operator that:

(i) The safety standards of a foreign operator with regard to continuing airworthiness and air operations are equivalent to the applicable requirements established by LYCARs continuing airworthiness and this Regulation;

(ii) The aircraft of a foreign operator has a standard CofA issued in accordance with Annex 8 to the Convention on International Civil Aviation;

(iii) The duration of the wet lease-in does not exceed seven months in any 12 consecutive month period;

(2) For dry leasing-in an aircraft registered in a foreign country that:

(i) An operational need that cannot be satisfied through leasing an aircraft registered in the state of Libya has been identified;

(ii) The duration of the dry lease-in does not exceed seven months in any 12 consecutive month period;

(iii) That the safety standards of the third-country aircraft with regard to continuing airworthiness are equivalent to the applicable requirements established by LYCARs continuing airworthiness;

(iv) The aircraft is equipped in accordance with Part SPO.

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

(a) A commercial specialised operator shall apply for and obtain an authorisation from the Authority 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 Authority, 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 the Authority:

(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 the Authority 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 the Authority, taking into account the applicable requirements of the Civil Aviation Law and Regulations.

ORO.SPO.115 Changes

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

(b) The application for approval of a change shall be submitted before any such change takes place, in order to enable the Authority to determine continued compliance with the Civil Aviation Law and Regulations and to amend, if necessary, the authorisation. The operator shall provide the Authority with any relevant documentation.

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

(d) The operator shall operate under the conditions prescribed by the Authority 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 the Civil Aviation Law and Regulations, taking into account the provisions related to the handling of findings as specified under ORO.GEN.150;

(2) the Authority being granted access to the operator as defined in ORO.GEN.140 to determine continued compliance with the relevant requirements of the Civil Aviation Law and Regulations; and

(3) the authorisation not being surrendered or revoked.

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

SUBPART MLR MANUALS, LOGS AND RECORDS

ORO.MLR.100 Operations manual - general

(a) The operator shall establish an operation manual (OM) that:

(1) contains all necessary instructions, information and procedures for all aircraft operated and for operations personnel to perform their duties;

(2) contains limitations applicable to flight time, flight duty periods and rest periods for crew members;

(3) is compliant with the approved flight manual for each aircraft operated and

(4) is amended as necessary. .

(b) The content of the OM shall reflect the requirements set out in this Part, Part-CAT, Part-SPA, Part-NCC and 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 the Authority 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.

(g1) 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) and (g1), 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 the Authority.

(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.

(l) The operator shall ensure that aircraft flight manuals are updated to reflect all changes mandated by the state of registry."

ORO.MLR.101 Operations manual - structure for commercial air transport

Except for operations with single engined propeller-driven aeroplanes with a MOPSC of 5 or single engined noncomplex helicopters with a MOPSC of 5, taking off and landing at the same aerodrome or operating site, under VFR by day, 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) For aircraft registered in Libya or operated by a Libyan operator a minimum equipment list (MEL) shall be established taking into account all of the following:

(1) the document must provide for the operation of the aircraft, under specified conditions, with particular instruments, items of equipment or functions inoperative at the commencement of the flight;

(2) the document must be prepared for each individual aircraft, taking account of the operator's relevant operational and maintenance conditions; and

(3) The MEL must be based on the relevant master minimum equipment list (MMEL) as defined in the applicable operational suitability data. If an MMEL has not been established as part of the operational suitability data, the MEL may be based on the relevant MMEL accepted by the LYCAA or State of Registry as applicable.

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

(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 the Authority, 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) the Authority 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 the Authority, 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 point (a);

(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

(a) 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.

(b) The pilot-in-command shall be responsible for the journey log book or the general declaration. Information of the aircraft, its crew and each journey shall be retained for each flight, or series of flights, in the 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 certificate of competency	As long as the crew member is exercising the privileges of the licence or cabin crew certificate of competency 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 Flight crew compartment security - aeroplanes

(a) In an aeroplane which is equipped with a secure flight crew compartment door, that 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 that are engaged in the commercial transportation of passengers, shall be equipped with an approved secure 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, where such airplanes fall within any of the following categories:

(1) aeroplanes with an MCTOM that exceeds 54 500 kg;

(2) aeroplanes with an MCTOM that exceeds 45 500 kg and have an MOPSC of more than 19; or

(3) aeroplanes with an MOPSC of more than 60.

(c) In all aeroplanes which are equipped with a flight crew compartment door in accordance with point (b):

(1) that door shall be closed prior to engine start for take-off and shall be locked when required by security procedures or by the pilot-in-command until engine shut down after landing, except when deemed to be necessary for authorised persons to access or egress in compliance with Civil Aviation Security Quality Control Regulations; 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 that request to enter and to detect suspicious behaviour or potential threat.

ORO.SEC.105 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 operation;

(b) SECTION 2 specifying additional requirements applicable to commercial air transport operations, with the exception of 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 the Authority, with:

(1) single-engined propeller-driven aeroplanes having an MCTOM of 5 700 kg or less and a MOPSC of 5; or

(2) 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.

(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 LYCARs on Aircrew Licensing 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 Part-FCL to LYCARs on Aircrew Licensing, 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) One pilot amongst the flight crew, qualified as pilot-in-command in accordance with Part-FCL to LYCARs on Aircrew Licensing, shall be designated by the operator as pilot-in-command or, for commercial air transport operations, as commander.

(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 the Authority, 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 Libyan regulations.

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 Part FCL to LYCARs on Aircrew Licensing 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 mandatory part of the applicable operational suitability data 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 Part-FCL to LYCARs on Aircrew Licensing.

(b) When establishing the training programmes and syllabi, the operator shall include the relevant elements defined in the mandatory part of the operational suitability data established in accordance with applicable operational suitability data.

(c) In the case of CAT operations, training and checking programmes, including syllabi and use of individual flight simulation training devices (FSTDs), shall be approved by the Authority.

(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 Additional requirements for commercial air transport operations

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 Part-FCL to LYCARs on Aircrew Licensing 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 Part-FCL to LYCARs on Aircrew Licensing.

(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 regulations.

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 which10 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 Part-FCL to LYCARs on Aircrew Licensing.

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 that training shall be described in the operations manual;

(2) complete six take-offs and landings in an 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 mandatory part of the applicable operational suitability data. If those take-offs and landings have not been performed within 21 days, the operator shall provide refresher training

the content of which 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 mandatory part of the applicable operational suitability data.

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 an 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 the Authority 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 the Authority 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 the Authority:

(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 the Authority.

(c) The operator applying for an ATQP approval shall provide the Authority 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 Part-FCL to LYCARs on Aircrew Licensing, 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 the Authority, 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 any of the following conditions are met:

(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.

(3) when operating on a single-engined aeroplane under IFR, he/she has a minimum of 700 hours of flight time on aeroplanes, including 400 hours as pilot-in-command. Those hours shall include 100 hours under IFR. The 400 hours as pilot-in-command may be substituted by hours operating as copilot 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) For the operation of aircraft with an MOPSC of more than 19, at least one cabin crew member shall be assigned when carrying one or more passenger(s)

(b) For the purpose of complying with (a), the minimum number of cabin crew shall be the greatest number amongst 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 members 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.

(d) By way of derogation from (a), non-commercial operations with aircraft with an MOPSC of more than 19 may be performed without an operating cabin crew member, subject to the prior approval by the Authority.

To obtain the approval, the operator shall ensure that all of the following conditions are fulfilled:

(1) there are maximum of 19 passengers on board;

(2) the operator has developed procedures for that operation

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 LYCARs-Part-MED to LYCARs Aircrew Licensing, 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 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 certificate of competency issued in accordance with Part-CC to this Regulation:

(1) shall be provided with an initial training course as specified in CC.TRA.220 of that Part; 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 relevant elements defined in the mandatory part of the applicable operational suitability data.

(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 relevant elements defined in the mandatory part of the applicable operational suitability data.

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;

(x) awareness of the types of dangerous goods which may and may not be carried in a passenger cabin.

(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) two familiarisation 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 the Authority.

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

(a) Whenever passengers are on board an aircraft, the minimum number of cabin crew members required in accordance with ORO.CC.100 shall be present in the aircraft and ready to act.

(b) By way of derogation from (a), the minimum number of cabin crew members may be reduced in either of the following cases:

(1) during normal ground operations not involving refuelling or defuelling when the aircraft is at its parking station;

(2) in unforeseen circumstances if the number of passengers carried on the flight is reduced. In this case a report shall be submitted to the Authority after completion of the flight.

(3) for the purpose of providing in-flight rest during the cruise phase, either in accordance with point ORO.FTL.205(e) or as a fatigue mitigation implemented by the operator.

(c) For the purposes of points (b)(1) and (b)(2), the operator's procedures of the operations manual shall ensure that:

(1) an equivalent level of safety is achieved with the reduced number of cabin crew members

in particular for evacuation of passengers;

(2) despite the reduced number of cabin crew members a senior cabin crew member is present in accordance with 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 by one cabin crew member per each pair of floor level emergency exits.

(d) For the purposes of (b)(3), the operator shall:

(1) conduct a risk assessment to determine the number of cabin crew members who are to be present and ready to act at all times during cruise;

(2) identify measures to mitigate the effects of having a lower number of cabin crew members being present and ready to act during cruise;

(3) establish in the operations manual specific procedures, including for the in-flight rest of the senior cabin crew member, that ensure at all times appropriate passenger handling and efficient management of any abnormal or emergency situations;

(4) specify, in the flight time specification scheme in accordance with point ORO.FTL.125, the conditions under which in-flight rest may be provided to the cabin crew members.

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 cabin crew competency certificate in accordance with Part-CC;

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

(c) comply with the other applicable requirements of this Subpart and 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 the Authority 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 the Authority, 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 elements defined in the mandatory part of the applicable operational suitability data 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) undertaken familiarisation 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 an emergency procedure.

(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 the Authority 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) two familiarisation sectors on the aircraft type or class.

ORO.TC.145 [Reserved]

When an operator uses a flight navigator as part of the flight crew they shall be suitably qualified in all operations, where navigation necessary for the safe conduct of the flight cannot be adequately accomplished by the pilots from the pilot station.

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 and its crew members 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:

(1) 'acclimatised' means a state in which a crew member's circadian biological clock is synchronised to the time zone where the crew member is. A crew member is considered to be acclimatised to a 2-hour wide time zone surrounding the local time at the point of departure. When the local time at the place where a duty commences differs by more than 2 hours from the local time at the place where the next duty starts, the crew member, for the calculation of the maximum daily flight duty period, is considered to be acclimatised in accordance with the values in the Table 1.

Table 1:

Time Difference (H) Between Reference Time And Local Time Where The Crew Member Starts The Next Duty	Time Elapsed Since Reporting At Reference Time				
	< 48	48 - 71:59	72 - 95:59	96 - 119:59	≥ 120
< 4	B	D	D	D	D
≥ 4 and ≤ 6	B	X	D	D	D
> 6 and ≤9	B	X	X	D	D
> 9 and ≤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 next duty, and

'X' means that a crew member is in an unknown state of acclimatisation.

(2) 'reference time' means the local time at the reporting point situated in a 2-hour wide time zone band around the local time where a crew member is acclimatised;

(3) '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 the possibility to sleep, with enough capacity to accommodate all crew members present at the same time and with access to food and drink;

(4) 'suitable accommodation' means, for the purpose of standby, split duty and rest, a separate room for each crew member located in a quiet environment and equipped with a bed, which is sufficiently ventilated, has a device for regulating temperature and light intensity, and access to food and drink;

(5) '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 inflight rest, and to be replaced by another appropriately qualified flight crew member;

(6) 'break' means a period of time within an flight duty period, shorter than a rest period, counting as duty and during which a crew member is free of all tasks;

(7) 'delayed reporting' means the postponement of a scheduled FDP by the operator before a crew member has left the place of rest;

(8) 'disruptive schedule' means a crew member's roster which disrupts the sleep opportunity during the optimal sleep time window by comprising an FDP or a combination of FDPs which encroach, start or finish during any portion of the day or of the night where a crew member is acclimatised; A schedule may be disruptive due to early starts, late finishes or night duties.

(a) 'early type' of disruptive schedule means:

(i) 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

(ii) 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:

(i) 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

(ii) 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.

(9) '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;

(10) 'duty' means any task that flight or cabin crew members are required by the operator to perform, including, for example, flight duty, administrative work, training, positioning and standby when it is likely to induce fatigue;

(11) 'duty period' means a period which starts when a flight or cabin crew member is required by an operator to report for or to commence a duty and ends when that person is free from all duties.;

(12) 'Fatigue Risk Management System (FRMS)'. A data-driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge as well as operational experience that aims to ensure relevant personnel are performing at adequate levels of alertness.

(13) '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;

(14) 'flight time' means, for aeroplanes 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.

(15) '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;

(16) 'local day' means a 24-hour period commencing at 00:00 local time;

(17) 'local night' means a period of 8 hours falling between 22:00 and 08:00 local time;

(18) 'operating crew member' means a crew member carrying out duties in an aircraft during a sector;

(19) '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;

(20) 'rest facility' means a bunk or seat with leg and foot support suitable for crew members' sleeping on board an aircraft.

(21) 'reserve' means a period of time during which a crew member is required by the operator to be available to receive an assignment for an FDP, positioning or other duty notified at least 10 hours in advance.

(22) '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.

(23) '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.

(24) '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.

(25) 'sector' means the segment of an FDP between an aircraft first moving for the purpose of taking off until it comes to rest after landing on the designated parking position.

(26) '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.

(27) 'airport standby' means a standby performed at the airport;

(28) 'other standby' means a standby either at home or in a suitable accommodation;

(29) '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 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.

(1) that no crew member allow their task achievement/decision making to deteriorate to the extent that safety is endangered because of the effects of fatigue, taking into account, inter alia, fatigue accumulation, sleep deprivation, number of sectors flown, night duties or time zone changes;

(2) that a crew member does not perform allocated duties on board an aircraft when unfit due to fatigue and

(3) that prevention of fatigue is managed through a rostering system that addresses flight times, flight duty periods, duty and adapted rest periods. Limitations established within the rostering system must take account of all relevant factors contributing to fatigue such as, in particular, number of sectors flown, time-zone crossing, sleep deprivation, disruption of circadian cycles, night hours, positioning, cumulative duty time, for given periods of time, sharing of allocated tasks between crew members, and also the provision of augmented crews.

(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 this Subpart and other applicable legislation.

(b) Before being implemented, flight time specification schemes, including any related FRM where required, shall, for commercial air transport operators, be approved by the Authority.

(c) To demonstrate compliance with this Subpart, the operator shall apply the applicable certification specifications adopted by the Authority. Alternatively, if the operator wants to deviate from those certification specifications it shall provide the Authority 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 this Subpart are met.

(d) For the purpose of point ARO.OPS.235(d), 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 the Authority.

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:

Start of FDP at reference time	Sectors								
	1 - 2	3	4	5	6	7	8	9	10
06:00 - 13:29	13:00	12:20	12:00	11:30	11:00	10:30	10:00	09:30	09:00
13:30 - 13:59	12:45	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00
14:00 - 14:29	12:30	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00
14:30 - 14:59	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00	09:00
15:00 - 15:29	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00	09:00
15:30 - 15:59	11:45	11:15	10:45	10:15	09:45	09:15	09:00	09:00	09:00
16:00 - 16:29	11:30	11:00	10:30	10:00	09:30	09:00	09:00	09:00	09:00
16:30 - 16:59	11:15	10:45	10:15	09:45	09:15	09:00	09:00	09:00	09:00
17:00 - 04:59	11:00	10:30	10:00	09:30	09:00	09:00	09:00	09:00	09:00
05:00 - 05:14	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00	09:00
05:15 - 05:29	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00	09:00

(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	1	1	0	0	0	0

(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	1	1	1	1	0	0

(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 LYCAA 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 flight 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.

(a1) The total duty periods to which a crew member other than a flight 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 flight 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.

(b1) The total flight time of the sectors on which an individual crew member other than a flight crew member is assigned as an operating crew member shall not exceed:

(1) 120 hours of flight time in any 28 consecutive days and

(2) 1 200 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."

Certification Specifications and Guidance Material for Commercial Air Transport by Aeroplane - Scheduled and Charter Operations

CS-FTL.1

Book 1 Certification Specifications

Commercial Air Transport by Aeroplane - Scheduled and Charter Operations

CS FTL.1.100 Applicability

These Certification Specifications are applicable to commercial air transport by aeroplanes for scheduled and charter operations, excluding emergency medical service (EMS), air taxi and single pilot operations.

CS FTL.1.200 Home base

(a) The home base is a single airport location assigned with a high degree of permanence.

(b) In the case of a change of home base, the first recurrent extended recovery rest period prior to starting duty at the new home base is increased to 72 hours, including 3 local nights. Travelling time between the former home base and the new home base is positioning.

CS FTL.1.205 Flight duty period (FDP)

(a) Night duties under the provisions of ORO.FTL.205(b) and (d) comply with the following:

(1) When establishing the maximum FDP for consecutive night duties, the number of sectors is limited to 4 sectors per duty.

(2) The operator applies appropriate fatigue risk management to actively manage the fatiguing effect of night duties of more than 10 hours in relation to the surrounding duties and rest periods.

(b) Extension of FDP without in-flight rest

The extension of FDP without in-flight rest under the provisions of ORO.FTL.205(d)(5) is limited to the values specified in the table below. Night duties under the provisions of ORO.FTL.205(b) and (d) comply with the following:

Starting time of FDP	1-2 sectors (in hours)	3sectors (in hours)	4 sectors (in hours)	5 sectors (in hours)
0600-0614	Not allowed	Not allowed	Not allowed	Not allowed
0615-0629	13:15	12:45	12:15	11:45
0630-0644	13:30	13:00	12:30	12:00
0645-0659	13:45	13:15	12:45	12:15
0700-1329	14:00	13:30	13:00	12:30

1330-1359	13:45	13:15	12:45	Not allowed
1400-1429	13:30	13:00	12:30	Not allowed
1430-1459	13:15	12:45	12:15	Not allowed
1500-1529	13:00	12:30	12:00	Not allowed
1530-1559	12:45	Not allowed	Not allowed	Not allowed
1600-1629	12:30	Not allowed	Not allowed	Not allowed
1630-1659	12:15	Not allowed	Not allowed	Not allowed
1700-1729	12:00	Not allowed	Not allowed	Not allowed
1730-1759	11:45	Not allowed	Not allowed	Not allowed
1800-1829	11:30	Not allowed	Not allowed	Not allowed
1830-1859	11:15	Not allowed	Not allowed	Not allowed
1900-0359	Not allowed	Not allowed	Not allowed	Not allowed
0400-0414	Not allowed	Not allowed	Not allowed	Not allowed
0415-0429	Not allowed	Not allowed	Not allowed	Not allowed
0430-0444	Not allowed	Not allowed	Not allowed	Not allowed
0445-0459	Not allowed	Not allowed	Not allowed	Not allowed
0500-0514	Not allowed	Not allowed	Not allowed	Not allowed
0515-0529	Not allowed	Not allowed	Not allowed	Not allowed
0530-0544	Not allowed	Not allowed	Not allowed	Not allowed
0545-0559	Not allowed	Not allowed	Not allowed	Not allowed

(c) Extension of FDP due to in-flight rest

In-flight rest facilities in accordance with ORO.FTL.205(e)(iii) fulfil the following minimum standards:

- 'Class 1 rest facility' means a bunk or other surface that allows for a flat or near flat sleeping position. It reclines to at least 80° back angle to the vertical and is located separately from both the flight crew compartment and the passenger cabin in an area that allows the crew member to control light, and provides isolation from noise and disturbance;
- 'Class 2 rest facility' means a seat in an aircraft cabin that reclines at least 45° back angle to the vertical, has at least a pitch of 55 inches (137,5 cm), a seat width of at least 20 inches (50 cm) and provides leg and foot support. It is normally separated from passengers by at least a curtain to provide darkness and some sound mitigation, and is reasonably free from disturbance by passengers or crew members.

  Note: Alternatively an operator may use a seat in an aircraft cabin designated as First Class or Business Class without a curtain. Every effort shall be made to ensure that the seat is free from disturbance from other passengers and as far as practical, that the quality of rest is ensured.

- 'Class 3 rest facility' means a seat in an aircraft cabin or flight crew compartment that reclines at least 40° from the vertical, provides leg and foot support and is separated from passengers by at least a curtain to provide darkness and some sound mitigation, and is not adjacent to any seat occupied by passengers.

  (1) The extension of FDP with in-flight rest under the provisions of ORO.FTL.205(e) complies with the following:

  (i) the FDP is limited to 3 sectors; and

  (ii) the minimum in-flight rest period is a consecutive 90-minute period for each crew member and 2 consecutive hours for the flight crew members at control during landing.

  (2) The maximum daily FDP under the provisions of ORO.FTL.205 (e) may be extended due to inflight rest for flight crew:

  (i) with one additional flight crew member:

  (A) up to 14 hours with class 3 rest facilities;

  (B) up to 15 hours with class 2 rest facilities; or

  (C) up to 16 hours with class 1 rest facilities;

  (ii) with two additional flight crew members:

  (A) up to 15 hours with class 3 rest facilities;

  (B) up to 16 hours with class 2 rest facilities; or

  (C) up to 17 hours with class 1 rest facilities.

(3) The minimum in-flight rest for each cabin crew member is:

Maximum extended FDP	**Minimum in-flight rest (in hours)**		
	Class 1	Class 2	Class 3
up to 14:30 hrs	1:30	1:30	1:30
14:31 - 15:00 hrs	1:45	2:00	2:20
15:01 - 15:30 hrs	2:00	2:20	2:40
15:31 - 16:00 hrs	2:15	2:40	3:00
16:01 - 16:30 hrs	2:35	3:00	Not allowed
16:31 - 17:00 hrs	3:00	3:25	Not allowed
17:01 - 17:30 hrs	3:25	Not allowed	Not allowed
17:31 - 18:00 hrs	3:50	Not allowed	Not allowed

(4) The limits specified in (2) may be increased by 1 hour for FDPs that include 1 sector of more than 9 hours of continuous flight time and a maximum of 2 sectors.

(5) All time spent in the rest facility is counted as FDP.

(6) The minimum rest at destination is at least as long as the preceding duty period, or 14 hours, whichever is greater.

(7) A crew member does not start a positioning sector to become part of this operating crew on the same flight.

(d) Unforeseen circumstances in flight operations - delayed reporting

(1) The operator may delay the reporting time in the event of unforeseen circumstances, if procedures for delayed reporting are established in the operations manual. The operator keeps records of delayed reporting. Delayed reporting procedures establish a notification time allowing a crew member to remain in his/her suitable accommodation when the delayed reporting procedure is activated. In such a case, if the crew member is informed of the delayed reporting time, the FDP is calculated as follows:

(i) one notification of a delay leads to the calculation of the maximum FDP according to (iii) or (iv);

(ii) if the reporting time is further amended, the FDP starts counting 1 hour after the second notification or at the original delayed reporting time if this is earlier;(iii) when the delay is less than 4 hours, the maximum FDP is calculated based on the original reporting time and the FDP starts counting at the delayed reporting time;

(iii) when the delay is 4 hours or more, the maximum FDP is calculated based on the more limiting of the original or the delayed reporting time and the FDP starts counting at the delayed reporting time;

(iv) as an exception to (i) and (ii), when the operator informs the crew member of a delay of 10 hours or more in reporting time and the crew member is not further disturbed by the operator, such delay of 10 hours or more counts as a rest period.

CS FTL.1.220 Split duty

The increase of limits on flight duty, under the provisions of ORO.FTL.220, complies with the following:

(a) The break on the ground within the FDP has a minimum duration of 3 consecutive hours.

(b) The break excludes the time allowed for post and pre-flight duties and travelling.
The minimum total time for post and pre-flight duties and travelling is 30 minutes. The operator specifies the actual times in its operations manual.

(c) The maximum FDP specified in ORO.FTL.205(b) may be increased by up to 50 % of the break.

(d) Suitable accommodation is provided either for a break of 6 hours or more or for a break that encroaches the window of circadian low (WOCL).

(e) In all other cases:

(1) accommodation is provided; and

(2) any time of the actual break exceeding 6 hours or any time of the break that encroaches the WOCL does not count for the extension of the FDP.

(f) Split duty cannot be combined with in-flight rest.

CS FTL.1.225 Standby

The modification of limits on flight duty, duty and rest periods under the provisions of ORO.FTL.225 complies with the following:

The modification of limits on flight duty, duty and rest periods under the provisions of ORO.FTL.225 complies with the following:

(a) Airport standby

(1) If not leading to the assignment of an FDP, airport standby is followed by a rest period as specified in ORO.FTL.235.

(2) If an assigned FDP starts during airport standby, the following applies:

(i) the FDP counts from the start of the FDP. The maximum FDP is reduced by any time spent on standby in excess of 4 hours;

(ii) the maximum combined duration of airport standby and assigned FDP as specified in ORO.FTL.205(b) and (d) is 16 hours.

(b) Standby other than airport standby:

(1) the maximum duration of standby other than airport standby is 16 hours;

(2) the operator's standby procedures are designed to ensure that the combination of standby and FDP do not lead to more than 18 hours awake time;

(3) 25 % of time spent on standby other than airport standby counts as duty time for the purpose of ORO.FTL.210;

(4) standby is followed by a rest period in accordance with ORO.FTL.235;

(5) standby ceases when the crew member reports at the designated reporting point;

(6) if standby ceases within the first 6 hours, the maximum FDP counts from reporting;

(7) if standby ceases after the first 6 hours, the maximum FDP is reduced by the amount of standby time exceeding 6 hours;

(8) if the FDP is extended due to in-flight rest according to CS FTL.1.205(c), or to split duty according to CS FTL.1.220, the 6 hours of paragraph (6) and (7) are extended to 8 hours;

(9) if standby starts between 23:00 and 07:00, the time between 23:00 and 07:00 does not count towards the reduction of the FDP under (6), (7) and (8) until the crew member is contacted by the operator; and

(10) the response time between call and reporting time established by the operator allows the crew member to arrive from his/her place of rest to the designated reporting point within a reasonable time.

CS FTL.1.230 Reserve

The operator assigns duties to a crew member on reserve under the provisions of ORO.FTL.230 complying with the following:

(a) An assigned FDP counts from the reporting time.

(b) Reserve times do not count as duty period for the purpose of ORO.FTL.210 and ORO.FTL.235.

(c) The operator defines the maximum number of consecutive reserve days within the limits of ORO.FTL.235(d).

(d) To protect an 8-hour sleep opportunity, the operator rosters a period of 8 hours, taking into account fatigue management principles, for each reserve day during which a crew member on reserve is not contacted by the operator.

CS FTL.1.235 Rest periods

(a) Disruptive schedules

(1) If a transition from a late finish/night duty to an early start is planned at home base, the rest period between the 2 FDPs includes 1 local night.

(2) If a crew member performs 4 or more night duties, early starts or late finishes between 2 extended recovery rest periods as defined in ORO.FTL.235(d), the second extended recovery rest period is extended to 60 hours.

(b) Time zone differences

(1) For the purpose of ORO.FTL.235(e)(1), 'rotation' is a series of duties, including at least one flight duty, and rest period 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.

(2) The operator monitors rotations and combinations of rotations in terms of their effect on crew member fatigue, and adapts the rosters as necessary.

(3) Time zone differences are compensated by additional rest, as follows:

(i) At home base, if a rotation involves a 4 hour time difference or more, the minimum rest is as specified in the following table.

Minimum local nights of rest at home base to compensate for time zone differences

Maximum time difference (h) between reference time and local time where a crew member rests during a rotation	**Time elapsed (h) since reporting for the first FDP in a rotation involving at least 4 hour timedifference to the reference time**			
	< 48	48 - 71:59	72 - 95:59	≥96
≤ 6	2	2	3	3
≤ 9	2	3	3	4
≤ 12	2	3	4	5

(ii) Away from home base, if an FDP involves a 4-hour time difference or more, the minimum rest following that FDP is at least as long as the preceding duty period, or 14 hours, whichever is greater. By way of derogation from point (b)(3)(i) and only once between 2 recurrent extended recovery rest periods as specified in ORO.FTL.235(d), the minimum rest provided under this point (b)(3)(ii) may also apply to home base if the operator provides suitable accommodation to the crew member.

(4) In case of an Eastward-Westward or Westward-Eastward transition, at least 3 local nights of rest at home base are provided between alternating rotations.

(5) The monitoring of combinations of rotations is conducted under the operator's management system provisions.

(c) Reduced rest

(1) The minimum reduced rest periods under reduced rest arrangements are 12 hours at home base and 10 hours out of base.

(2) Reduced rest is used under fatigue risk management.

(3) The rest period following the reduced rest is extended by the difference between the minimum rest period specified in ORO.FTL.235(a) or (b) and the reduced rest.

(4) The FDP following the reduced rest is reduced by the difference between the minimum rest period specified in ORO.FTL.235(a) or (b) as applicable and the reduced rest.

(5) There is a maximum of 2 reduced rest periods between 2 recurrent extended recovery rest periods specified in accordance with ORO.FTL.235(d).

CS-FTL.1

Guidance Material

Commercial Air Transport by Aeroplane - Scheduled and Charter Operations

GM1 CS FTL.1.200 Home base

TRAVELLING TIME

Crew members should consider making arrangements for temporary accommodation closer to their home base if the travelling time from their residence to their home base usually exceeds 90 minutes.

GM1 CS FTL.1.205(a)(2) Flight duty period (FDP)

NIGHT DUTIES - APPROPRIATE FATIGUE RISK MANAGEMENT

(a) When rostering night duties of more than 10 hours (referred to below as 'long night duties'), it is critical for the crew member to obtain sufficient sleep before such duties when he/she is adapted to being awake during day time hours at the local time where he/she is acclimatised. To optimise alertness on long night duties, the likelihood of obtaining sleep as close as possible to the start of the FDP should be considered, when rostering rest periods before long night duties, by providing sufficient time to the crew member to adapt to being awake during the night. Rostering practices leading to extended wakefulness before reporting for such duties should be avoided. Fatigue risk management principles that could be applied to the rostering of long night duties may include:

(1) avoiding long night duties after extended recovery rest periods

(2) progressively delaying the rostered ending time of the FDPs preceding long night duties;

(3) starting a block of night duties with a shorter FDP; and

(4) avoiding the sequence of early starts and long night duties.

(b) Fatigue risk management principles may be applied to the rostering of long night duties by means of:

(1) considering operator or industry operational experience and data collected on similar operations;

(2) evidence-based scheduling practices; and

(3) bio-mathematical models.

GM1 CS FTL.1.205(c)(1)(ii) Flight Duty Period (FDP)

IN-FLIGHT REST

In-flight rest should be taken during the cruise phase of the flight.

GM2 CS FTL.1.205(c)(1)(ii) Flight Duty Period (FDP)

IN-FLIGHT REST

In-flight rest period should be allocated in order to optimise the alertness of those flight crew members at control during landing.

GM1 CS FTL.1.205(d) Flight Duty Period (FDP)

DELAYED REPORTING

Operator procedures for delayed reporting should:

(a) specify a contacting mode;

(b) establish minimum and maximum notification times; and

(c) avoid interference with sleeping patterns when possible.

GM1 CS FTL.1.220(b) Split duty

POST, PRE-FLIGHT DUTY AND TRAVELLING TIMES

The operator should specify post and pre-flight duty and travelling times taking into account aircraft type, type of operation and airport conditions.

GM1 CS FTL.1.225 Standby

MINIMUM REST AND STANDBY

(a) If airport or other standby initially assigned is reduced by the operator during standby that does not lead to an assignment to a flight duty period, the minimum rest requirements specified in ORO.FTL.235 should apply.

(b) If a minimum rest period as specified in ORO.FTL.235 is provided before reporting for the duty assigned during the standby, this time period should not count as standby duty.

(c) Standby other than airport standby counts (partly) as duty for the purpose of ORO.FTL.210 only. If a crew member receives an assignment during standby other than airport standby, the actual reporting time at the designated reporting point should be used for the purpose of ORO.FTL.235.

GM1 CS FTL.1.225(b) Standby

STANDBY OTHER THAN AIRPORT STANDBY NOTIFICATION

Operator procedures for the notification of assigned duties during standby other than airport standby should avoid interference with sleeping patterns if possible.

GM1 CS FTL.1.225(b)(2) Standby

AWAKE TIME

Scientific research shows that continuous awake in excess of 18 hours can reduce the alertness and should be avoided.

GM1 CS FTL.1.230 Reserve

RESERVE NOTIFICATION

Operator procedures for the notification of assigned duties during reserve should avoid interference with sleeping patterns if possible.

GM2 CS FTL.1.230 Reserve

NOTIFICATION IN ADVANCE

The minimum 'at least 10 hours' between the notification of an assignment for any duty and reporting for that duty during reserve may include the period of 8 hours during which a crew member on reserve is not contacted by the operator.

GM1 CS FTL.1.230(c) Reserve

RECURRENT EXTENDED RECOVERY REST

ORO.FTL.235(d) applies to a crew member on reserve.

GM1 CS FTL.1.235(b)(3) Rest periods

TIME ELAPSED SINCE REPORTING

The time elapsed since reporting for a rotation involving at least a 4-hour time difference to the reference time stops counting when the crew member returns to his/her home base for a rest period during which the operator is no longer responsible for the accommodation of the crew member.

GM2 CS FTL.1.235(b)(3) Additional rest to compensate for time zone differences

REST AFTER ROTATIONS WITH THREE OR MORE FLIGHT DUTY PERIODS

For a rotation with three or more FDPs, the greatest time zone difference from the original reference time should be used to determine the minimum number of local nights of rest to compensate for time zone differences. If such a rotation includes time zones crossings in both directions, the calculation is based on the highest number of time zones crossed in any one FDP during the rotation.

Certification Specifications and Guidance Material for Large Companies, Commercial Air Taxi/Sole Use Charter, Air Ambulance work, Pleasure Flying, Commercial Helicopter Operations and Non-commercial Operations, including Non-Commercial Specialised Operations with Complex Motor-Powered Aeroplanes.

(Applicable with effect from 1 June 2023)

CS-FTL.2

Foreword

The preparation and presentation of any Flight Time Limitation (FTL) scheme is both complex and time consuming. The need to strike a balance between the many and varied views of all those who have an interest and aero medical evidence, and at the same time not disadvantage the Libyan industry, dictates that the composition of a scheme must set a standard which reflects the common good. The views of all interested parties have been sought, and where practical and acceptable, incorporated into the scheme. The end result, this appendix, presents a consensus of broad opinion and defines a basic framework for the duty hours of flight crew and cabin crew.

The application of this appendix by operators to their particular set of circumstances remains the responsibility of that operator. Section B deals with the scheme, and the format employed follows a pattern which is designed to lead sensibly from section to section. Compilers of Company schemes may find it advantageous to mimic the example given in the Annexes in Section C. Such action will not prevent operators from seeking changes to the maxima and minima specified, subject to presentation of a suitable case.

It is accepted that all the provisions in Section B do not apply to every AOC holder or Non-commercial operations, including non-commercial specialised operations, with complex motor-powered aeroplanes and helicopters, and that those engaged in air taxi/sole-use charter, and pleasure flying require less complex schemes. At Annexes B and C in Section C, are examples of schemes which cover the needs of these three types of operation. Again, those preparing FTL schemes of this nature are invited to utilise the relevant Annex in the preparation of their individual submission. Any proposed difference will be considered on merit. Further Annexes, D and E, respectively provide an example of a scheme for operators of helicopters and offer advice to Rostering Staff on the preparation of a Roster, Annex F contains Aeroplane Variations and Annex G contains Helicopter Variations.

In summary, the contents of this document have been produced after wide consultation and scrutiny at many levels. The regulations contained herein set a work pattern for flight crew and cabin crew designed to prevent the onset of fatigue, and yet allow an operator to pursue legitimate business interests.

Section A Introduction

1 Requirements of LYCARs –Air Operations

1.1 LYCARs Air Operations), as amended, requires that the operator of an aircraft to which the Regulation applies shall have a scheme for the regulation of flight times of crew. The schemes for commercial air transport must be approved by the Authority and included in the Company Operations Manual, or when an Operations Manual is not required by the Regulation, incorporated in a separate document. The Operations Manual, or separate document, shall be readily available to every person employed by the operator as a member of an aircraft crew.

1.2 The requirements of the Regulation apply in relation to an aircraft registered in Libya which is either:

(a) engaged on a flight for the purpose of commercial air transport or

(b) operated by an air transport undertaking; provided that they shall not apply in relation to a flight made for the purpose of instruction in flying, given by or on behalf of a flying club or a flying school, or a person who is not an air transport undertaking.

1.3 In essence, LYCARs-Air Operations requires that a crew member shall not fly, and an operator shall not require him to fly, if either has reason to believe that he is suffering, or is likely to suffer while flying, from such fatigue as may endanger the safety of the aircraft or of its occupants.

1.4 A flight crew member is required to inform anyone who employs his services as a flight crew member of all flight times and flying duty periods undertaken, whether professionally or privately, except for flying in aircraft not exceeding 1,600 kg maximum weight and not flying for the purpose of commercial air transport or aerial work. Aerial work includes flying instruction for which the pilot is remunerated. It is also aerial work where valuable consideration is given specifically for flying instruction, even if the pilot receives no reward.

1.5 If an operator wishes to implement Fatigue Risk Management (FRM) it shall follow the criteria as per ORO.FTL.120 and associated Acceptable Means of Compliance.

2 General Principles Applied to Control of Flight, Duty and Rest Time

2.1 The prime objective of a flight time limitations scheme is to ensure that crew members are adequately rested at the beginning of each flying duty period, and whilst flying be sufficiently free from fatigue so that they can operate to a satisfactory level of efficiency and safety in all normal and abnormal situations. Aircraft operators are expected to appreciate the relationship between the frequency and pattern of scheduled flying duty periods and rest periods and time off, and give due consideration to the cumulative effects of working long hours interspersed with minimum rest.

2.2 Planned schedules must allow for flights to be completed within the maximum permitted flying duty period. The Authority, when assessing the planning of a schedule will take into account the time allowed for pre-flight duties, taxying, the flight and turn- round times. However, it is recognised that on occasion a planned flight will experience unforeseen delays. Under these conditions, the aircraft commander may, within prescribed conditions, extend an FDP.

2.3 Other factors to be considered when planning duty periods include:

(a) the allocation of work patterns which avoid such undesirable practices as alternating day/night duties, the positioning of crew so that a serious disruption of established sleep/work patterns occur, or scheduling rest periods of between 18 and 30 hours especially after long flights crossing many time zones;

(b) planning days off and notifying crew well in advance;

(c) consultation between operators and crew to agree basic roster concepts which ensure adequate

rest prior to flight but, within that constraint, takes account of the commercial requirements of the company.

NOTE: The Authority will conduct periodic and spot checks on operators' records and aircraft commanders' reports to determine if the planning of flight schedules and duty is compatible with the limitations provided for in the operator's scheme.

3 Responsibilities of Operators and Crew Members

3.1 It is the responsibility of the operator to prepare duty rosters sufficiently in advance to provide the opportunity for crew to plan adequate pre-duty rest. Operators must establish minimum periods of notification of duty for operating crew, or where this is not practicable due to the nature of the operation, must establish in advance minimum periods of notification of days off, during which a crew member will not be required for any duties. Training for Rostering Staff must include guidance on the effects of disturbing Circadian Rhythms, and sleep deprivation. Away from base, the operator must provide for crew members both the opportunity and facilities for adequate pre-flight rest, in suitable accommodation. When an operator employs a crew member on an irregular basis, then that employer must ensure that the crew member satisfies the provisions of the company approved FTL scheme. Furthermore, operators shall satisfy themselves that crew members who undertake other employment, if allowed by the operator, still have the opportunity to enjoy adequate pre-flight rest.

3.2 Responsibility for preventing the onset of fatigue cannot rest on the operator alone. Crew members shall ensure that they are not in breach of the Company approved FTL scheme. It is emphasised that crew members working on a freelance basis must maintain an individual record of their flying and duty hours which must be presented to an operator before undertaking a duty period. All crew members shall make optimum use of the opportunities and facilities for rest provided, and plan and use their rest periods properly. Before considering additional employment crew members must recognise that the responsibility for being sufficiently rested before undertaking a flying duty remains with the individual. Crew members are also reminded that persons are not entitled to act as a member of the crew of an aircraft registered in Libya if the individuals know or suspect that their physical or mental condition renders them temporarily unfit so to act.

4 Standard Provisions Applicable to an FTL Scheme

4.1 Subject to the maxima and minima specified in Section B of this document, it is incumbent on the operator to establish maximum flying duty periods and minimum rest periods appropriate to the nature of flight operations undertaken. The essentials are identified by use of the words `shall' or `must', desirable features are introduced by the words `should' or `may'. Comprehensive guidance and instructions shall be included in the Operations Manual for the benefit of all crew members and the staff concerned with the preparation and day to day management of rostering and scheduling.

4.2 Although operators must plan their schemes in accordance with the requirements, it is recognised that the standard provisions will not necessarily satisfy every type of operation. In these circumstances operators may apply for a change to the standard provisions. Approval will only be given where an operator can show that his proposal will ensure a better or equivalent level of protection against fatigue than the basic requirements. Approved changes must be brought to the attention of crew members by incorporation into the Operations Manual, or other suitable operating instructions.

4.3 It is emphasised that the existence of any industrial agreement cannot in any way absolve either the operator or the crew member from observing any of the conditions contained within an approved FTL scheme.

5 Operators' Schemes and Their Approval

5.1 The requirements stated above mean that an operator must submit for approval to the Authority a proposed scheme for the regulation of flight and duty times and provision of minimum rest periods. Examples of FTL schemes relevant to the business of Air Taxi/Sole Use Charter, Air Ambulance work, Pleasure Flying, and Helicopter operations are contained within Section C.

Section B The Scheme

Introduction

The provisions of this Section set limits on the allowable duty hours and minimum periods of rest for flight crew and cabin crew, employed by holders of a Libyan Air Operator's Certificate or undertaking Non-commercial operations, including non-commercial specialised operations, with complex motor-powered aeroplanes and helicopters. For the purpose of this document flight crew and cabin crew are as defined by LYCARs-Air Operations, as amended.

The Section contains provisions that are applicable to both flight crew and cabin crew of all aircraft; however, where the nature of the work involved requires the application of other rules then those differences are stated in separate paragraphs. Helicopter flying is covered in paragraph 23 and the rules concerned with the work pattern of cabin crew in paragraph 24. Paragraphs not applicable to helicopter crew or cabin crew are so annotated.

Definitions

Unless otherwise defined below, all words, phrases, definitions, and abbreviations, have identical meanings to those described in ORO.FTL, as amended.

1) 'Acclimatised'

When a crew member has spent 3 consecutive local nights on the ground within a time zone which is 2 hours wide, and is able to take uninterrupted nights sleep. The crew member will remain acclimatised thereafter until a duty period finishes at a place where local time differs by more than 2 hours from that at the point of departure.

2) 'Contactable'

A short period of time during the day, other than on a `day off', during which the company requires a crew member to be at an agreed location for the purpose of giving notification of a duty period which will commence not less than ten hours ahead. The contactable period will be between [*****] and [*****] local time and shall not exceed 2½ hours.

***** Times to be inserted by the company. If required, the 2½ hours can be split into 2 separate periods. Such arrangements must be agreed by the Authority.

3) 'Crew/Flight Crew/Cabin Crew'

As defined in LYCARs-Air Operations.

4) 'Days Off'

Periods available for leisure and relaxation free from all duties. A single day off shall include 2 local nights. Consecutive days off shall include a further local night for each additional consecutive day off. A rest period may be included as part of a day off.

5) 'Dispatch Crew'

fully qualified and current flight/cabin crew member authorised to carry out pre- flight duties as defined by an operator.

6) 'Duty'

Any continuous period during which a crew member is required to carry out any task associated with the business of an aircraft operator.

7) 'Early Start Duty'

duty is an Early Start Duty if it commences in the period 0500 to 0659 hours local time.

8) 'Flying Duty Period (FDP)'

Any time during which a person operates in an aircraft as a member of its crew. It starts when the crew member is required by an operator to report for a flight, and finishes at on-chocks or engines off, or rotors stopped, on the final sector.

9) 'Late Finish Duty'

duty is a Late Finish when the duty finishes in the period 0100 to 0159 hours local time.

10) 'Local Night'

period of 8 hours falling between 2200 and 0800 hours local time.

11) 'Night Duty'

duty is a Night Duty if any part of that duty falls within the period 0200 to 0459 hours local time.

12) 'Positioning'

The practice of transferring crew from place to place as passengers in surface or air transport at the behest of an operator.

13) 'Regular'

Regular, when applied to duties that are Late Finishes, Night or Early Starts, means a run of 4 or 5 consecutive duties, not broken by a period of 34 hours free from such duties, contained in a single 7 consecutive day period.

14) 'Reporting Time'

The time at which a crew member is required by an operator to report for any duty.

15) 'Rest Period'

period of time before starting a flying duty period which is designed to give crew members adequate opportunity to rest before a flight.

16) 'Rostered/Planned Duty'

duty period, or series of duty periods, with stipulated start and finish times, notified by the operator to crew in advance.

17) 'Rostering Period'

number of consecutive weeks, usually 4, but defined by the operator.

18) 'Scheduled Duty'

The allocation of a specific flight or flights or other duties to a crew member within the pre notified rostered/ planned series of duty periods.

19) 'Sector'

The time between an aircraft first moving under its own power until it next comes to rest after landing, on the designated parking position.

20) 'Split Duty'

flying duty period which consists of two or more sectors, separated by less than a minimum rest period.

21) 'Standby Duty'

period during which an operator places restraints on a crew member who would otherwise be off duty. However, it shall not include any time during which an operator requires a crew member to be contactable for the purpose of giving notification of a duty which is due to start 10 hours or more ahead.

22) 'Suitable Accommodation'

well furnished bedroom which is subject to minimum noise, is well ventilated, and has the facility to control the levels of light and temperature.

23) 'Travelling'

All time spent by a crew member transitting between the place of rest, and the place of reporting for duty.

24) 'Week'

A period of 7 consecutive days starting at any set time and on any set day as specified and stated by the operator.

NOTE: The terms Sole Use Charter, Pleasure Flying, and an Air Ambulance Flight are defined in Section C.

6 Calculation of a Flying Duty Period

6.1 The maximum FDP, in hours and fractions of hours, shall be in accordance with paragraph 13, Table A or B (2 or more flight crew, aeroplanes), Table C (single flight crew aeroplanes) or paragraph 23, Table D (helicopters). The times extracted from the tables may be extended by use of in-flight relief, split duty and commander's discretion, under the terms of paragraphs 15, 16 and 18. Where an aeroplane flight crew consists of two pilots only, any FDP involving a sector which is planned to exceed 7 hours must be calculated in accordance with the provisions of paragraph 14.

7 Additional Limits on Flying

7.1 Late Finishes/Early Starts

7.1.1 The conditions set in this paragraph only apply when a crew member is acclimatised.

7.2 Sleep deprivation, leading to the onset of fatigue, can arise if a crew member is required to report early for duty, or finishes a duty late, on a number of consecutive days. Therefore, not more than 3 consecutive duties that occur in any part of the period 0100 to 0659 hours local time can be undertaken, nor may there be more than 4 such duties in any 7 consecutive days. Any run of consecutive duties (Late Finishes or Nights or Early Starts) can only be broken by a period of not less than 34 consecutive hours free from such duties. This 34 consecutive hours may include a duty that is not an Early, Late or Night duty.

7.2.1 This paragraph is not applicable to helicopters.

However, crew members who are employed on a regular early morning duty for a maximum of 5 consecutive duties shall work to the following:

(a) The minimum rest period before the start of such a series of duties is 24 hours.

(b) The duty will not exceed 9 hours, irrespective of the sectors flown.

(c) At the finish of such a series of duties, crew members will have a minimum of 63 hours free from all duties.

7.3 Should a crew member be scheduled for duty that occurs during any part of the period 0200 to 0459 hours local time, for a minimum of 2 and a maximum of 3 consecutive nights, then crew members must be free from all duties by 2100 hours local time before covering the block of consecutive night duties, such that the crew members can take a rest period during a local night.

NOTE: Operators may replace the above paragraph with one of the following choices, either Options A and B OR Options B and C. The operator may roster crew members for either 2 or 3 consecutive nights, but must ensure that the duty preceding this series of duties finishes by 2359 hours local time (2 nights) or 2100 hours local time (3 nights) as appropriate.

If it is preferred to retain the present contents then attention must be paid to the notes attached to the Options listed (below). These notes list the actions to be followed in the event that duty is inadvertently extended beyond the cut-off times (i.e. 2100 or 2359 hours)

Option A

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 3 consecutive nights, then crew members will finish the duty preceding this series of duties by 2100 hours local time before commencing the block of consecutive night duties, such that the crew members can take a rest period during a local night. If the duty immediately prior to the 3 consecutive night duties extends beyond 2100 hours local time and the individual crew member is willing to continue with the planned roster, (i.e. 3 consecutive night duties) then provided that duty preceding this series of duties finishes no later than 2359 hours local time, the schedule may continue.

NOTE:
1 Under this Option, if the crew member chooses not to continue the planned roster (after finishing duty between 2100 and 2359 hours) then only the planned first and second night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

NOTE: 2 Under this Option, if the duty finishes after 2359 hours local time, then only the first of the 3 consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

Option B - 2 consecutive night duties

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 2 consecutive nights, then crew members will finish the duty preceding this series of duties by 2359 hours local time before commencing the block of 2 consecutive night duties, such that the crew members can take a rest period during a local night.

NOTE: Under this Option in the event of 2359 hours being exceeded, then only the first of the 2 planned consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

Option C - 3 consecutive night duties

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 3 consecutive nights, then crew members will finish the duty preceding this series of duties by 2100 hours local time before commencing the block of consecutive night duties, such that the crew members can take a rest period during a local night.

NOTES:

1) Under this Option in the event of 2100 hours being exceeded, then only the first of the 3 planned consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

2) In all cases the limits in paragraph 7.2 or 7.3 must not be exceeded (i.e. maximum of 3 consecutive nights and 4 in 7 consecutive days)

7.3.1This paragraph is not applicable to helicopters.

However, crew members who are employed on a regular night duty for a maximum of 5 consecutive nights shall work to the following:

a) The minimum rest period before the start of such a series of duties is 24 hours.

b) The duty will not exceed 8 hours, irrespective of the sectors flown.

C) At the finish of such a series of duties crew members will have a minimum of 54 hours free from all duties.

7.3.1.1 Options For Night Operations

If an operator elects to roster 4 or 5 consecutive night duties, then the criteria laid down in paragraph 7.3.1 (Section C Annex B paragraph 7.2.1 - Air Taxi) must be complied with and must form part of the approved FTL scheme. Operators are reminded that the normal days off requirements must be met (i.e. the 54 hours off between two blocks of 5 nights is only 1 proper day off). However, if operators find that this part of the Scheme is too restrictive then one of the following options may be employed but, if used, must be fully complied with:

(a) When crew are employed on duty for a total of 20 hours or less during 5 consecutive night duties, (i.e. maximum duty each night is 4 hours) the 54 hours free from all duties will meet the "Days Off" requirements for each 28 consecutive day period. Any positioning flights must be completed within the 20 hours duty.

(b) When crew are employed on duty for a total of more than 20 hours but not more than 40 hours during 5 consecutive night duties, the first 54 hours (between week 1 and week 2) may be counted as 2 "Days Off". For the 28 consecutive day period that starts on the first night of the first duty, crew must be given a minimum of a further 5 "Days Off" (average of a further 6 days). Any positioning flights must be completed within the 40 hours duty.

(c) When crew are employed on duty which requires full use of 40 hours duty during 5 consecutive night duties plus a maximum of 3 hours positioning (pre- and post- total) then:

i) allowable flying hours (month and year) will be reduced to the following:

1) a maximum of 75 hours in any 28 consecutive days with a maximum of 60 hours in 28 consecutive days averaged over three 28 day periods, and;

2) 600 hours in any 12 consecutive months.

ii) a minimum of 9 "Days Off" in any 28 consecutive days will be granted;

iii) any increase in duty over 40 hours during the block of 5 consecutive night duties is to be added to the subsequent 54 hours rest period which may not be reduced.

7.3.1.2 General Rules

To be applied when an operator utilises a), b) or c) of paragraph 7.3.1.1.

a) The exercise of "Commander's Discretion" is limited to 1 hour per night with a total of 2 hours allowed during any 5 consecutive night cycle. Any duty worked in excess of 40 hours by use of "Commander's Discretion" must also be added to the subsequent 54 hours rest which may not be reduced.

b) The absolute maximum duty permitted during a block of 5 consecutive night duties is 45 hours (40 hours, plus 3 hours positioning, plus 2 hours "Commander's Discretion", as per paragraphs 7.3.1.1 c) and 7.3.1.2 a) above).

c) Crew cannot be rostered for more than 8 hours per night, except when working to paragraph 7.3.1.1 c) above.

d) Split duties and extension of FDP by in-flight rest are not permitted.

e) "Commander's Discretion" to reduce rest is not permitted.

NOTE: For 5 consecutive earlies, the same rule as in 7.3.1.2 a) above applies (i.e. maximum 1 hour discretion per day and a total of 2 hours in the 5 day cycle).

8 Mixed Duties

8.1 When a crew member is required to report for duty in advance of the stipulated report time for a scheduled flight, to carry out a task at the behest of an employer, then the time spent on that task shall be part of the subsequent FDP.

8.2 Fixed and Rotary Wing Flying

When both fixed wing and rotary wing flying is carried out the more restrictive flight and duty time limitations shall apply.

8.3 Mixed Simulator and Aircraft Flying

This paragraph does not apply to cabin crew.

When a 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 crew member on a commercial air transport flight, all the time spent in the simulator is counted in full towards the subsequent FDP, and for helicopters towards the daily flying hour maxima. Simulator flying does not count as a sector, but the FDP allowable is calculated from the report time of the simulator detail.

8.4 Mixed Single Pilot/Two Pilot Operations

This paragraph does not apply to cabin crew.

In one duty period a pilot may fly as a single flight crew up to the point where the total flying and 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 2 flight crew aircraft. The pilot may then continue beyond the single flight crew FDP limit in a 2 flight crew operation up to the 2 flight crew FDP and flying hour maxima, but may only fly as a co-pilot.

9 Travelling Time

9.1 Travelling time, other than that time spent on positioning, shall not be counted as duty.

9.2 Travelling time, from home to departure aerodrome, if long distances are involved, is a factor influencing any subsequent onset of fatigue. If the journey time from home to normal departure airfield is usually in excess of 1½ hours, crew members should consider making arrangements for temporary accommodation nearer to base.

9.3 When crew members are required to travel from their home to an aerodrome other than the one from which they normally operate, any travelling time over and above the journey time from home to the usual operating aerodrome shall be classed as positioning. Notional times for any additional travelling shall be agreed between the operator and the Authority.

10 Delayed Reporting Time in a Single FDP

10.1 When a crew member is informed of a delay to the reporting time due to a changed schedule, before leaving the place of rest, the FDP shall be calculated as follows. When the delay is less than 4 hours, the maximum FDP allowed shall be based on the original report time and the FDP shall start at the actual report time. Where the delay is 4 hours or more, the maximum FDP shall be based on the more limiting time band of the planned and the actual report time and the FDP starts 4 hours after the original report time.

10.2 When an operator informs a crew member before leaving the place of rest of a delay in reporting time of 10 hours or more ahead, and that crew member is not further disturbed by the operator until a mutually agreed hour, then that elapsed time is classed as a rest period. If, upon the resumption of duty, further delays occur, then the appropriate criteria in this paragraph and paragraph 10.1 above shall be applied to the re-arranged reporting time.

11 Positioning

11.1 All time spent on positioning at the behest of an operator shall count as duty, but positioning does not count as a sector when calculating the FDP. In these circumstances the FDP commences not later than the time at which the crew member reports for the positioning journey, or positions in accordance with paragraph 9.3.

11.2 If, after a positioning journey, the crew member spends less than a minimum rest period at suitable accommodation provided by the operator, and then carries out an FDP, the positioning must be counted as a sector if a split duty is claimed when calculating the allowable FDP. If it is not, then a split duty FDP cannot be used.

11.3 On occasion, and when agreed by the Authority an operator may recover a crew member from an overseas airfield on a positioning flight on the eighth consecutive day of duty.

12 Standby Duty

12.1 The time of start, end and nature of the standby duty must be defined and notified to crew members. The time a standby duty starts determines the allowable FDP, except that when the actual FDP starts in a more limiting time band then that FDP limit will apply. However, when standby is undertaken at home, or in suitable accommodation provided by the operator, during the period 2200 to 0800 hours local time and a crew member is given 2 hours or less notice of a report time, the allowable FDP starts at the report time for the designated reporting place.

12.2 When a crew member is on standby duty on immediate readiness at an airport, then the allowable FDP is calculated using the start time of the standby duty.

12.3 If a crew member is called out from standby, the standby duty will cease when that individual reports at the designated reporting point.

12.4 The following limits apply:

Duty	Maximum Duration
Standby Duty (all cases)	12 hours
Standby followed by an FDP	As in Case A and B below

Case A

If a crew member is called out from standby to conduct an FDP before completing 6 hours standby duty then the total duty period allowed is the sum of the time spent on standby and the FDP allowable from paragraph 13, Tables A, B, C, or paragraph 23, Table D.

Case B

If a crew member is called out from standby to conduct an FDP after completing 6 or more hours standby duty, then the total duty period allowed is the sum of all the time spent on standby and the allowable FDP, reduced by the amount of standby worked in excess of 6 hours.

NOTES:

1 The method of adding time spent on standby to cumulative totals is stated in paragraph 22.

2 The reference to 'total duty period' applies **only** to the sum of the standby time achieved + the allowable FDP obtained from paragraph 13. On the day, for cumulative duty totals and for minimum rest purposes, the total duty achieved will be standby time achieved + FDP achieved + post flight duties + any positioning.

12.5 When any period of standby finishes, during which a call-out has not occurred, at least 12 hours rest must follow prior to the next duty period. Similarly, following the end of a contactable period or periods, at least 10 hours must elapse prior to the next duty period.

13 Maximum FDP - Aeroplanes

13.1 Standard reporting times prior to flight must be specified by an operator. Pre-flight duties are part of the FDP. A period of duty must be allowed for post-flight activities:

If this “period” for post FDP duties is routinely exceeded then the post FDP duty period stated in the scheme must be revised to better represent the actual time taken. The time spent between reporting for a flight and the completion of post-flight tasks determines the length of the subsequent rest period.

13.2 The utilisation of a non-standard reporting time, except by use of a dispatch crew, designed to take advantage of an increased FDP from a more favourable time band, must not be used.

13.3 Tables A and C apply when the FDP starts at a place where the crew member is acclimatised; Table B applies at other times.

Table A Two or more flight crew - Acclimatised

Local time of start	Sectors							
	1	2	3	4	5	6	7	8 or more
0600-0759	13	12¼	11½	10¾	10	9½	9	9
0800-1259	14	13¼	12½	11¾	11	10½	10	9½
1300-1759	13	12¼	11½	10¾	10	9½	9	9
1800-2159	12	11¼	10½	9¾	9	9	9	9
2200-0559	11	10¼	9½	9	9	9	9	9

Table B Two or more flight crew- Not Acclimatised

Length of preceding rest (hours)	Sectors						
	1	2	3	4	5	6	7 or more
Up to 18 or over 30	13	12¼	11½	10¾	10	9¼	9
Between 18 and 30	11½	11	10½	9¾	9	9	9

NOTE: The practice of inserting a short duty into a rest period of between 18 and 30 hours in order to produce a rest period of less than 18 hours, thereby taking advantage of the longer FDP contained in Table B, is not permitted.

Maximum FDP - Single Flight Crew

Table C

Local time of start	Sectors				
	Up to 4	5	6	7	8 or more
0600-0759	10	9¼	8½	8	8
0800-1259	11	10¼	9½	8¾	8
1300-1759	10	9¼	8½	8	8
1800-2159	9	8¼	8	8	8
2200-0559	8	8	8	8	8

13.4 Report times must not be reduced in order for crew members to achieve their required rest prior to an FDP.

14. Limits on Two Flight Crew Long Range Operations

This paragraph does not apply to helicopter crew or cabin crew.

14.1 When an aeroplane flight crew is only two pilots, the allowable FDP shall be calculated as follows. A sector scheduled for more than 7 hours is considered as a multi-sector flight, as below:

The appropriate table in paragraph 13 is then entered with the start time of the duty period and the `modified' number of sectors, to determine the allowable FDP.

14.2 When an additional, current, type rated pilot is a crew member, then these limits do not apply and the permissible FDP is determined by entering Table A or B in paragraph 13 with time of start and the actual sectors planned.

15. Extension of Flying Duty Period by In-flight Relief

15.1 When any additional crew member is carried to provide in-flight relief with the intent of extending an FDP, that individual shall hold qualifications which are equal or superior to those held by the crew member who is to be rested. To take advantage of this facility the division of duty and rest between crew members must be kept in balance. It is unnecessary for the relieving crew member to rest in between the times relief is provided for other crew members.

15.2 When in-flight relief is utilised there must be, for the crew members resting, a comfortable reclining seat, or

Scheduled Sector Times	**Acclimatised**		**Not Acclimatised**
		Sectors	
Sector Length over 7 hours but not more than 9 hours	2		4
Sector Length over 9 hours but not more than 11 hours	3		4
Sector Length over 11 hours	4		Not Applicable

bunk, separated and screened from the flight deck and passengers.

15.3 A total in-flight rest of less than three hours does not allow for the extension of an FDP, but where the total in-flight rest, which need not be consecutive, is three hours or more, then the permitted FDP may be extended as follows:

If rest is taken in a bunk	If rest is taken in a seat
A period equal to one half of the total rest taken, provided that the maximum FDP permissible shall be18 hours; 19 hours in the case of cabin crew.	A period equal to one third of the total rest taken, provided that the maximum FDP permissible shall be15 hours; 16 hours in the case of cabin crew.

16. Extension of Flying Duty Period by Split Duty

16.1 When an FDP consists of two or more sectors - of which one can be a positioning journey counted as a sector - but separated by less than a minimum rest period, then the FDP will be extended by the amounts indicated below:

Consecutive Hours Rest	Maximum Extension of the FDP
Less than 3	NIL
3 - 10	A period equal to half the consecutive hours rest taken

16.2 The rest period shall not include the time allowed for immediate post-flight duties and pre-flight duties, a minimum total of 30 minutes. The actual time allowed shall be specified by the operator. When the rest period is 6 hours or less it will suffice if a quiet and comfortable place, not open to the public, is available. If the rest period is more than 6 consecutive hours, then suitable accommodation must be provided.

16.3 When rest is taken in the aircraft on the ground, the minimum standards of noise, temperature, light and ventilation are to be specified in the Operations Manual. Such arrangements will only be permitted when the crew have adequate control of the temperature and ventilation within the aircraft, and passengers are not on board.

17. Rest Periods

17.1 The aircraft operator must notify all crew members in good time of a flying duty period so that sufficient and uninterrupted pre-flight rest can be obtained. When away from base the operator must provide the crew with the opportunity and the facilities for adequate pre-flight rest. The operator must provide suitable accommodation. When flights are carried out at such short notice that it is impracticable for an operator to arrange suitable accommodation, then this responsibility devolves to the aircraft commander.

17.2 The minimum rest period which must be taken before undertaking a flying duty period shall be:

a) at least as long as the preceding duty period, or

b) 12 hours, whichever is the greater.

17.2.1 When away from base, in the case when the rest period earned by a crew member is 12 hours, and suitable accommodation is provided by the company, then that rest period may be reduced by one hour. In such circumstances, if the travelling time between the aerodrome and the accommodation is more than 30 minutes each way then the rest period will be increased by the amount the total time spent travelling exceeds one hour. In both situations the room allocated to the crew member must be available for occupation for a minimum of 10 hours. This sub-paragraph does not apply to rest periods that exceed 12 hours.

17.2.2 Exceptionally, at home base, individual crew members may be asked to exercise their discretion to reduce rest by up to a maximum of one hour but only to a minimum of 12 hours for flight crew and 11 hours for cabin crew. If discretion is used, it is the responsibility of the operator and the crew member to inform the commander of the flight immediately following the rest period, that a reduced rest period has been taken.

17.3 If the preceding duty period, which includes any time spent on positioning, exceeded 18 hours, then the ensuing rest period must include a local night.

17.4 Following a sequence of reduced rest and an extended FDP the subsequent rest period cannot be reduced.

17.5 After being called out from a standby duty the length of the minimum rest period will be determined by the length of standby duty, plus any time spent on positioning, and any FDP completed.

17.6 Crew members who have difficulty in achieving adequate pre-flight rest shall inform their manager, and then will be given the opportunity to consult an aviation medical specialist.

18. Aircraft Commander's Discretion to Extend a Flying Duty Period

18.1 An aircraft commander may, at his discretion, and after taking note of the circumstances of other members of the crew, extend an FDP beyond that permitted in paragraph 13, Tables A, B, C, or paragraph 23, Table D, provided he is satisfied that the flight can be made safely. The extension shall be calculated according to what actually happens, not on what was planned to happen. An extension of 3 hours is the maximum permitted, except in cases of emergency (see Note 1).

18.2 The operator's scheme shall include guidance to aircraft commanders on the limits within which discretion may be exercised, and shall include specific limits to which a commander may extend the flying duty period. In a Flying Duty Period involving 2 or more sectors up to a maximum of 2 hours discretion may be exercised prior to the first and subsequent sectors. On a single sector flight and immediately prior to the last sector on a multi-sector flight, a commander may utilise the full amount of discretion authorised by the operator.

18.3 A commander may exercise discretion to extend an FDP following a reduced rest period, only exceptionally, and then only to the extent necessary to allow for unforeseen circumstances that become apparent during the last sector.

18.4 Whenever a commander extends an FDP, it shall be reported to his employer on a Discretion Report Form, either in the format of Appendix A or on a form acceptable to the Authority. If the extension is greater than 2 hours, or when exercised after any reduced rest period, then the operator shall submit the commander's written report, together with the operator's comments to the Authority, within 28 days of the aircraft's return to base.

NOTE:

1 In respect of an extension to a flying duty period, an emergency is a situation which in the judgement of the commander presents a serious risk to the health or safety of crew and passengers, or endangers the lives of others.

2 Discretion reports may be used by the Authority to assess the realism of particular schedules.

19. Aircraft Commander's Discretion to Reduce a Rest Period

19.1 An aircraft commander may, at his discretion, and after taking note of the circumstances of other members of the crew, reduce a rest period but only insofar as the room allocated to the crew member must be available for occupation for a minimum of 10 hours. The exercise of such discretion shall be considered exceptional and must not be used to reduce successive rest periods. If the preceding FDP was extended, the rest period may be reduced, provided that the subsequent allowable FDP is also reduced by the same amount.

In no circumstances may a commander exercise discretion to reduce a rest period below 10 hours at accommodation.

19.2 Whenever a commander reduces a rest period, it shall be reported to his employer on a Discretion Report Form, in the format of Appendix B, or on a form acceptable to the Authority. If the reduction is more than 1 hour, then the operator shall submit the commander's written report together with the operator's comments, to the Authority, within 28 days of the aircraft's return to base.

20. Days Off

This paragraph does not apply to helicopter crew

20.1 Wherever possible and if required by the crew member, days off should be taken in the home environment.

20.2 A single day off shall include 2 local nights, and shall be of at least 34 hours duration.

20.3 A planned rest period may be included as part of a day off.

20.4 Crew members shall:

a) not be on duty more than 7 consecutive days between days off, but may be positioned to the usual operating base on the eighth day, provided they are then allocated at least 2 consecutive days off, and

b) have 2 consecutive days off in any consecutive 14 days following the previous 2 consecutive days off, and

c) have a minimum of 7 days off in any consecutive 4 weeks, and

d) have an average of at least 8 days off in each consecutive 4 week period, averaged over 3 such periods.

21. Absolute Limits on Flying Hours

This paragraph does not apply to helicopter crew.

A person shall not act as a member of the flight crew of an aircraft if at the beginning of the flight the aggregate of all previous flight times:

a) during the period of 28 consecutive days expiring at the end of the day on which the flight begins exceeds 100 hours. (This means that on the 28th day a flight crew member may depart on a single sector flight, and may complete that sector, even though at the end of the flight the total flying hours completed in 28 days will exceed 100 hours. Consequently, the flight crew member cannot then continue to operate as a flight crew member on any subsequent sectors during that day); or

b) during the period of 12 months, expiring at the end of the previous month exceeds 900 hours.

22. Cumulative Duty Hours

22.1 The maximum duty hours for flight crew, excepting helicopters, shall not exceed:

55 hours in any 7 consecutive days, but may be increased to 60 hours, when a rostered duty covering a series of duty periods, once commenced, is subject to unforeseen delays;

95 hours in any 14 consecutive days; and 190

hours in any 28 consecutive days.

The maximum hours allowed to helicopter crew members are stated in sub-paragraph 23.5.

22.1.1 When away from base and where an individual crew member separates from the crew, or the crew as a whole splits up, then any use of discretion to reduce rest becomes a decision for an individual crew member. The decision to continue with the next flight and the submission of an associated discretion report is the responsibility of the relevant commander after the crew member, and operator if in a position to do so, has informed the commander that a reduced rest period has been taken.

22.2 When a crew member is not rostered for either standby or flying duties for 28 or more consecutive days then any duty hours worked need not be added to cumulative totals. However, when a crew member is anticipated

to return to either standby or flying duties the duty hours worked in the 28 days preceding that duty must be recorded. Before allocating a flying duty to a crew member the operator must be satisfied that that crew member is in compliance with the scheme.

22.3 Calculation of Cumulative Duty Hours (all aircraft)

Duty hours will be added to cumulative totals in accordance with the following:

a) to count in full:

i) Duty periods and flying duty periods, plus subsequent post-flight duties

ii) All standby duty, except that specified in b) i) and ii) below

iii) The time spent on positioning

b) to count as half the time on duty:

i) The standby duty, when the period of notice given to the crew member by the operator before reporting for duty, is treble or more than the specified minimum report time.

ii) The standby duty when undertaken at home, or in suitable accommodation provided by the company, takes place during the period 2200 to 0800 hours local time, and the crew member can take undisturbed rest and is not called out for duty.

23 Limits on Helicopter Flying

23.1Table D Maximum FDP - Helicopters

	SINGLE PILOT		TWO PILOTS	
Local time	Max. Length of Flying Duty Period (Hours)	Maximum Flying Time	Max. Length of Flying Duty Period (Hours)	Maximum Flying Time
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

23.2Additional Limits on Helicopter Flying

23.2.1 Repetitive Short Sectors

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

23.2.2 When carrying out the more demanding roles of helicopter flying, for example, winching and external load carrying, operators shall specify maximum periods of continuous operation. The limits set shall not exceed the maximum allowed in sub- paragraph 23.2.1, but depending on the nature and circumstances of a particular operation may need to be more restrictive.

23.2.3 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.

23.2.4 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 must include provisions for a break free of all duty of at least 30 minutes, not including a total of 30 minutes for immediate post flight duties and pre-flight duties. The break must be scheduled prior to exceeding a total of 6 hours flying.

23.3 **Helicopter Crew Days Off**

23.3.1 Wherever possible, and if required by the crew member, days off should be taken in the home environment. A single day off for helicopter crew shall include two local nights, and shall be of at least 36 hours duration. A planned rest period may be included as part of a day off.

23.3.2 Crew members shall:

a) not work more than 7 consecutive days, and

b) have 2 consecutive days off following a period of 7 consecutive days duty, and

c) have 2 consecutive days off in any consecutive 14 days, and have at least 3 days off in any consecutive 14 days, and

d) have a minimum of 7 days off in any consecutive 4 weeks, and

e) have an average of at least 8 days off in each consecutive 4 week period averaged over 3 such periods.

NOTE: A single day off can only be allocated when 6 or less consecutive days duty have been worked.

23.4 Absolute Limits on Flying Hours

The maximum flying hours for flight crew will be 90 in any 28 consecutive days, and 800 in any period of 12 months.

23.5 Cumulative Duty and Flying Hours (Helicopters)

Maximum duty hours for flight crew shall not exceed:

60 hours in any 7 consecutive days and 200

hours in any 28 consecutive days.

23.6 **The Maximum number of Flying Hours** which a pilot may be permitted to undertake are:

Single Day	Table D
Any 3 consecutive days	18 hours
Any 7 consecutive days	30 hours
Any 3 consecutive 28 day periods	240 hour

24. Rules Relating to Cabin Crew

24.1 The requirements detailed in this paragraph shall be applicable to all cabin crew employed as crew members and are not intended to apply only to those cabin crew carried to meet the provisions of LYCARs Air Operations.

24.2 The limitations applied to cabin crew are those applicable to flight crew members contained in paragraphs 6 to 23, but with the following differences:

a) A flying duty period can be 1 hour longer than that permitted for flight crew. The FDP and limits set on early starts for cabin crew shall be based on the time at which the flight crew report for their flying duty period, but that FDP will start at the report time of the cabin crew.

b) For cabin crew the minimum rest period which will be provided before undertaking a flying duty period shall be:

i) at least as long as the preceding duty period less 1 hour; or

ii) 11 hours;

whichever is the greater.

c) The combined sum of standby time and subsequent FDP shall be 1 hour longer than that permitted to flight crew.

d) The maximum duty hours for cabin crew will not exceed:

60 hours in any 7 consecutive days, but may be increased to 65 hours when a rostered duty covering a series of duty periods, once commenced, is subject to unforeseen delays.

105 hours in any 14 consecutive days.

210 hours in any 28 consecutive days.

e) The annual and 28 day limits on flying hours appertaining to flight crew do not apply.

f) The limits set for two pilot flight crew long range operations do not apply.

25. Records to be Maintained

25.1 Records for duty and rest periods of all flying staff must be kept. These records shall include:

For each crew member:

The beginning, end and duration of each duty or flying duty period, and function performed during the period. Duration of each rest period prior to a flying duty or standby duty period. Dates of days off. 7 consecutive day totals of duty.

The duty and rest periods recorded for cabin crew will be a percentage of those so employed. The percentage used will be (*), and the sample will be changed every (*) months.

For each flight crew member:

Daily and 7 consecutive day flying hours.

Records shall be preserved for at least 12 calendar months from the date of the last relevant entry.

25.2 Additionally, operators shall retain all aircraft commanders' discretion reports of extended flying duty periods, extended flying hours, and reduced rest periods for a period of at least six months after the event.

Appendix A

Commander's Discretion Report - Extension of Flying Duty Period/Flying Hours

Part A Operator Aircraft Type

Flight Number Commander Date

NOTE: If discretion exercised for part crew or individuals state name(s) and operating capacity below.

Part B Voyage Details

1 Crew acclimatised YES/NO

2 Length of preceding rest - 18 to 30 hrs/under

18 or over 30 Hrs Mins

3 Allowable FDP from Table A or B

4 Split duty: actual time off ..... time on ..... Credit .....

5 In-flight relief; rest taken ..... bunk/seat ..... Credit .....

6 Revised allowable FDP .....

Voyage Details

Schedule (Planned)				**Actual**		
	Place	UTC	Local		UTC	Local
Duty to start				Duty started		
Depart				Departed		
Arrive				Arrived		
Depart				Departed		

Arrive				Arrived		
Depart				Departed		
Arrive				Arrived		
Depart				Departed		
Arrive				Arrived		
Depart				Departed		
Arrive				Arrived		
FDP to end				FDP ended		
				Actual FDP		

Amount of Commander's Discretion Exercised - Hrs Mins

Maximum Flying Hours Permitted ..... in 28 days/1 year period. Hours Flown .....

Part C Commander's Report

Signed .....

Date .....

Operator's Remarks/Action Taken

Signed.....

Date.....

Appendix B

Commander's Discretion Report - Reduction of Rest

NOTE: All times to be recorded as date/time six-figure groups, expressed in both UTC and Local time.

Part A	Operator	Aircraft Type
	Flight Number	Commander
	Date	

NOTE: If discretion exercised for part crew or individuals state name(s) and operating capacity below.

Part B	Last duty started	UTC/Local
	Last duty ended	UTC/Local
	Rest earned	Hours
	Calculated earliest next available	UTC/Local
	Actual start of next FDP	UTC/Local
	Rest period reduced by	
Part C	Crew affected: **Commander's Report** Signed ..... Date ..... Operator's Remarks/Action Taken Signed ..... Date ..... Forwarded to Authority Filed	

Annex B Air Taxi/Sole Use Charter, Including Pleasure Flying and Air Ambulance Supplement

Introduction

The content of this Annex is designed for use by companies conducting the business of Air Taxi/Sole Use Charter. In the context of this document this type of operation is being carried out when the operator utilises an aircraft which contains 19 or less passenger seats, and

a) flights are confined to an area within which the local time does not vary by more than 2 hours, and
b) the application of in-flight relief to extend an FDP is not used.

For those operators who combine air taxi/sole-use charter business with either/or commercial pleasure flying and air ambulance work, supplements to the main body of the scheme are provided. These supplements are only intended for use by companies that combine two or more types of operation within one AOC. A special scheme for those operators whose AOC allows for the use of a single engined aircraft for the purpose of commercial air transport is the subject of a separate Part.
Compilers of company FTL schemes are invited to reproduce the specimen scheme in toto, selecting from the paragraphs annotated with a `‡' those which suit their particular type of operation, and adding the relevant figures in the spaces marked (*). Alternatively, selected sections of the specimen scheme can be used. Neithercourse of action prevents an operator from proposing an alternative to the standard provisions, provided an equivalent or better level of protection against fatigue is ensured. If any paragraphs annoted with a '‡' are not included in a scheme, it is implicit that the operator will not use the provisions of that particular paragraph
The following Key shows the maximum and minimum figures acceptable to the Authority.
Key

Definition 5.2	line 4	The operator to add the times, and the difference between them not to be more than 2½ hours
Definition 5.17		As required by the operator
Definition 5.24		Insert four figure group and day of week, as required
Paragraph 9.2	line 3	Not more than 1½
Paragraph 12.4	line 3	Not more than 12
Paragraph 13.1	line 1	In the range 30 to 60, depending on nature of operation
	line 2	Not less than 15
Paragraph 15.3	line 1	Not more than 18
Paragraph 16.1	line 5	Not more than 3
Paragraph 16.2	line 2	Not more than 2
	line 3	Not more than 3
Paragraph 18.1/2	Specify reporting point	The form can be that contained in this Part, or one used by the operator which is acceptable to the Authority
Paragraph 19.4 a)	line 1	Not more than 7
b)	line 1	Not less than 2
c)	line 1	Not less than 7
d)	line 1	Not less than 8
Paragraph 21.2 b) i)		Not less than 3 times the value given in para 13.1 line 1

PLEASURE FLYING SUPPLEMENT

Paragraph 1.1	line 1	Not more than 10
	line 1	Only 2 more than above
Paragraph 1.2	line 1	Not more than 7
	line 5	Not more than 3
	line 6	Not less than 30

Flight and Duty Time Limitations Scheme

1 Purpose

The purpose of this scheme is to interpret the requirements of the relevant articles of LYCARs, as they apply to the regulation of flight times and the avoidance of fatigue in crew members.

2 Aim

The aim of this document is to express the intent behind the published, relevant documents, thereby taking all reasonable precautions to ensure that crew members are adequately rested at the beginning of each flying duty period. To meet this aim, due note will be taken of length of duty cycles, periods of time off and cumulative duty hours.

3 Applicability

The scheme shall apply in relation to any duty carried out at the behest of the company by both flight crew and cabin crew. The scheme shall apply to all cabin crew carried as crew members.

4 Responsibilities

4.1 The Company

The company will publish rosters in advance so that operating crew can plan adequate pre-flight rest. Where crew members request specific days off, 7 days or more in advance, this will normally be granted. Should such allocated days off subsequently need to be worked, this will be entirely at the discretion of the crew member concerned. Rosters will provide details of flying duty periods, standby duty, and rest periods. The company will be satisfied that crew members employed on an irregular basis are not in breach of this FTL scheme before offering a flying duty.

4.2 Crew Members

Responsibility for the proper control of flight and duty time cannot rest wholly with the company. Crew members have a responsibility to make optimum use of the opportunities and facilities for rest provided. They are also responsible for planning and using their rest periods properly in order to minimize incurring fatigue. The Regulation places a further responsibility on crew members. Simply put, crew members shall not act as operating crew if they know, or suspect, that their physical or mental condition renders them unfit to operate.
Furthermore, they must not fly if they know that they are in breach of this FTL scheme. Crew members not in the regular employ of the company must provide details of their previous 28 day totals of flying hours/duty periods to the company before undertaking a flying duty.

5 Definitions

5.1 'Cabin Crew'

A person employed to facilitate the safety of passengers, whose duties are detailed by the company or the aircraft commander. Such persons will not act as a member of the flight crew.

5.2 **'Contactable'**

A short period of time, other than on a day off, unless mutually agreed, during which the company requires a crew member to be contactable for the purpose of giving notification of a duty period which will commence notless than ten hours ahead. The contactable period will be between (*****) and (*****) local time.

5.3 'Crew'

A member of the flight crew or cabin crew.

5.4 'Days Off'

Periods available for leisure and relaxation free from all duties. A single day off will include two local nights. Consecutive days off will include a further local night for each additional consecutive day off. A rest period maybe included as part of a day off.

5.5 'Duty'

Any continuous period during which a crew member is required to carry out any task associated with the business of the company.

5.6 'Early Start Duty'

A duty is an Early Start Duty if it commences in the period 0500 to 0659 hours local time.

5.7 'Flight Crew'

Those members of the crew of an aircraft who act as a pilot.

5.8 'Flying Duty Period (FDP)'

Any time during which a person operates in an aircraft as a member of its crew. It starts when the crewmemberis required by an operator to report for a flight, and finishes at on-chocks or engines off, at theend of the final sector.

5.9 'Late Finish Duty'

A duty is a Late Finish when the duty finishes in the period 0100 to 0159 hours local time.

5.10 'Local Night

'A period of 8 hours falling between 2200 and 0800 hours local time.

5.11 'Night Duty

'A duty is a Night Duty if any part of that duty falls within the period 0200 to 0459 hours local time.

5.12 'Positioning'

The practice of transferring crew from place to place as passengers in surface or air transport at the behest ofthe company.

5.13 'Regular'

Regular, when applied to duties that are Late Finishes, Night or Early Starts, means a run of 4 or 5 consecutive duties, not broken by a period of 34 hours free from such duties, contained in a single 7 consecutive day period

5.14 'Reporting Time'

The time at which a crew member is required by the company to report for any duty.

5.15 'Rest Period'

A period of time before starting a flying duty period which is designed to give crew members adequateopportunity to rest before a flight.

5.16 'Rostered/Planned Duty'

A duty period, or series of duty periods, with stipulated start and finish times, notified to crew in advance, by the company.

5.17 'Rostering Period'

(*****) consecutive weeks.

5.18 'Scheduled Duty'

The allocation of a specific flight or flights or other duties to a crew member within the pre-notifiedrostered/planned series of duty periods.

5.19 'Sector'

The time between an aircraft first moving under its own power until it next comes to rest after landing, on thedesignated parking position.

5.20 'Split Duty'

A flying duty period which consists of two or more sectors, separated by less than a minimum rest period.

5.21 'Standby Duty'

A period during which the company places restraints on a crew member who would otherwise be off duty.However, it shall not include any time during which a crew member is contactable for the purpose of giving notification of a duty which is due to start 10 hours or more ahead.

5.22 'Suitable Accommodation'

A well-furnished bedroom which is subject to minimum noise, is well ventilated, and has the facility to controlthe levels of light and temperature.

5.23 'Travelling'

All time spent by a crew member transitting between the place of rest, and the place of reporting for duty.

5.24 'Week'

A period of 7 consecutive days starting at (*****) local on a (*****).

6 Calculation of a Flying Duty Period

6.1 The maximum FDP, in hours and fractions of hours, will be in accordance with paragraph 13. The times extracted from the tables may be extended by use of in-flight relief, split duty, and commander's discretion, under the terms of paragraphs 15, 16 and 18. Where a flight crew consists of two pilots only, any FDP involving a sector which is planned to exceed 7 hours will be calculated as detailed in paragraph 14.

7 Additional Limits on Flying

7.1 Late Finishes/Early Starts

Sleep deprivation, leading to the onset of fatigue, can arise if a crew member is required to report early for duty, or finishes a duty late, on a number of consecutive days. Therefore, not more than 3 consecutive duties that occur in any part of the period 0100 to 0659 hours local time can be undertaken, nor may there be more than 4 such duties in any 7 consecutive days. Any run of consecutive duties (Late Finishes or Nights or Early Starts) can only be broken by a period of not less than 34 consecutive hours free from such duties. This 34 consecutive hours may include a duty that is not an Early,Late or Night duty.

7.2 Should any duties be scheduled to be carried out in any part of the period 0200 and 0459 hours local time, for a minimum of 2 and a maximum of 3 consecutive nights, then crew members will be free from all duties by 2100 hourslocal time before covering the block of consecutive night duties, such that the crew members can take a rest periodduring a local night.

NOTE: Operators may replace the above paragraph with one of the following choices, either Options A and B OR Options B and C. The operator may roster crew members for either 2 or3 consecutive nights, but must ensure that

the duty preceding this series of duties finishes by 2359 hours local time (2 nights) or 2100 hours local time (3 nights) as appropriate.

If it is preferred to retain the present contents then attention must be paid to the notes attached to the Options listed(below). These notes list the actions to be followed in the event that duty is inadvertently extended beyond the cut-off times (i.e. 2100 or 2359 hours).

Option A

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 3 consecutive nights, then crew members will finish the duty preceding this series of duties by 2100 hours local time before commencing the block of consecutive night duties, such that the crew members can take a rest period during a local night. If the duty immediately prior to the 3 consecutive night duties extends beyond 2100 hours local time and the individual crew member is willing to continue with the planned roster, (i.e. 3 consecutive night duties) then provided that duty preceding this series of duties finishes no later than 2359 hours local time, the schedule may continue.

NOTES:

1 Under this Option, if the crew member chooses not to continue the planned roster (after finishing duty between 2100 and 2359 hours local time) then only the planned first and second night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

2 Under this Option, if the duty finishes after 2359 hours local time, then only the first of the 3 consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

Option B - 2 consecutive night duties

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459

hours local time, for 2 consecutive nights, then crew members will finish the duty preceding this series of duties by 2359 hours local time before commencing the block of 2 consecutive night duties, such that the crew members can take a rest period during a local night.

NOTE: Under this Option in the event of 2359 hours being exceeded, then only the first of the 2 planned consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

Option C - 3 consecutive night duties

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 3 consecutive nights, then crew members will finish the duty preceding this series of duties by 2100 hours local time before commencing the block of consecutive night duties, such that the crew members can take a rest period during a local night.

NOTES: 1 Under this Option in the event of 2100 hours being exceeded, then only the first of the 3 planned consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

2 In all cases the limits in paragraph 7.2 or 7.3 must not be exceeded (i.e. maximum of 3 consecutive nights and 4 in 7 consecutive days).

7.3 Interrupted Rest

If, prior to the start of an FDP, a crew member's rest period is interrupted for operational reasons between 2300 and 0700 hours local time, the following shall apply:

If the disturbance happens earlier than 1 hour before the planned departure from the crew member's place of rest, the time elapsed between that disturbance and the departure time from the place of rest minus 1 hour, is to count as part of the subsequent FDP.

NOTE: The phrase `operational reasons' applies to such actions as contacting/being contacted by the customer, checking weather, liaison with ATC or any action pertaining to the planned flight.

8 Mixed Duties

8.1 When a crew member is required to report for duty in advance of the stipulated report time for a scheduled flight, to carry out a task at the behest of the company, then the time spent on that task shall be part of the subsequent FDP.

8.2 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 commercial air transport flight, all the time spent in the simulator is counted in full towards the subsequent FDP. Simulator flying does not count as a sector, but the FDP allowable is calculated from the report time of the simulator detail.

9 Travelling Time

9.1 Travelling time, other than that time spent on positioning, does not count as duty.

9.2 Travelling time, from home to departure aerodrome, if long distances are involved, is a factor influencing any subsequent onset of fatigue. If the journey time from home to normal departure airfield is usually in excess of (*****) hours, crew members should make arrangements for temporary accommodation nearer to base.

9.3 When crew members are required to travel from their home to an aerodrome other than the one from which they normally operate, any travelling time over and above the journey time from home to the usual operating aerodrome will count as positioning. The notional additional times when reporting to the following airfields are as stated:

(name of airport) minutes

(name of airport) minutes

10 Delayed Reporting Time in a Single FDP

10.1 When a crew member is informed of a delay to the reporting time due to a changed schedule, before leaving the place of rest, the FDP shall be calculated as follows. When the delay is less than 4 hours the maximum FDP allowed will be based on the original report time and the FDP will start at the actual report time. When the delay is 4 hours or more, the maximum FDP will be calculated using the more limiting of the planned and actual report times and the FDP will start 4 hours after the original report time.

10.2 When the company informs a crew member before leaving the place of rest of a delay in reporting time of 10 hours or more ahead, and that crew member is not further disturbed by the company until a mutually agreed hour, then that elapsed time is classed as a rest period. If, upon the resumption of duty, further delays occur then the appropriate criteria in this paragraph and paragraph 10.1 above will be applied to the re-arranged reporting time.

11 Positioning

11.1 All time spent on positioning at the behest of the company shall count as duty, but positioning does not count as a sector when calculating the FDP. In these circumstances the FDP commences not later than the time at which the crew member reports for the positioning journey, or positions in accordance with paragraph 9.3.

11.2 Positioning after completion of an FDP is counted as duty, and the subsequent rest period must account for the FDP plus the positioning journey.

11.3 If, after a positioning journey, the crew member spends less than a minimum rest period at suitable accommodation provided by the company, and then carries out an FDP, the positioning will be counted as a sector if the allowable FDP is being extended by use of a split duty.

12 Standby Duty

12.1 The time of start, end and nature of the standby duty will be defined and notified to crew members. The time a standby duty starts determines the allowable FDP, except that when the actual FDP starts in a more limiting time band, then that FDP limit will apply. However, when a standby duty is undertaken at home or in suitable accommodation provided by the company during the period 2200 to 0800 hours local time, and a crew member is given 2 hours or less notice of a report time, then the allowable FDP starts at the report time at the designated reporting place.

12.2 When a crew member is on standby duty on immediate readiness at an airport, the allowable FDP is calculated using the start time of the standby duty.

12.3 If a crew member is called out from standby, the standby duty will cease when the crew member reports at the designated reporting point.

12.3.1 The following limits apply:

Duty	**Maximum Duration**
Standby Duty (all cases)	12 hours
Standby followed by an FDP	As in Case A and B below

Case A If a crew member is called out from standby to conduct an FDP before completing 6 hours standby duty then the total duty period allowed is the sum of the time spent on standby and the FDP obtained from paragraph 13.

Case B If a crew member is called out from standby to conduct an FDP after completing 6 or more hours standby duty, then the total duty period allowed is the sum of all the time spent on standby and the FDP obtained from paragraph 13, reduced by the amount of standby worked in excess of 6 hours.

NOTE: The reference to 'total duty period' applies **only** to the sum of the standby time achieved + the allowable FDP obtained from paragraph 13. On the day, for cumulative duty totals and for minimum rest purposes, the total duty achieved will be standby time achieved + FDP achieved+ post flight duties + any positioning.

12.4 When any period of standby finishes, during which a call-out has not occurred, at least 12 hours rest must follow prior to the next duty period. Similarly, following the end of a contactable period or periods, at least 10 hours must elapse prior to the next duty period.

13 Maximum FDP - Helicopters

13.1 The standard reporting time prior to flight is (*****). Pre-flight duties are part of the FDP; (*****) minutes duty must be allowed for post-flight activities. The time spent between reporting for a flight and the completion of post-flighttasks determines the length of the subsequent rest period. If this "period" forpost FDP duties is routinely exceededthen the post FDP duty period stated in the scheme must be revised to better represent the actual time taken.

13.2 A non-standard reporting time designed to take advantage of an increased FDP from a more favourable time band,must not be used.

13.3 Maximum FDP – Helicopters

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

13.4 Report times must not be reduced in order for crew members to achieve their required rest prior to an FDP.

14 Additional Limits on Helicopter Flying

14.1 Repetitive Short Sectors
Crew flying repetitive short sectors, for example pleasure flying, offshore short sector shuttles, at an average rate of10 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.

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

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

‡ 14.4 **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 excessivephysical 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.

15 Extension of Flying Duty Period by Split Duty

15.1 The calculation of a permitted FDP does not rely on the number of sectors flown, but to increase an FDP as allowed for in this paragraph then at least one sector must be flown before any extension is permitted. The extensions allowed are set out below:

Consecutive Hours Rest	Maximum Extension of the FDP
Less than 2	NIL
2 - 3 (see Note)	1 hour
3 - 10	A period equal to half the consecutive hours rest taken.

NOTE: Consecutive hours of rest between 2 and 3 hours will only be used once in any single FDP.

15.2 The rest period shall not include the minimum total of (*) minutes allowed for immediate post flight and pre-flight duties. When the rest period is 6 hours or less it will suffice if a quiet and comfortable place, not open to the public, is available. Rest cannot be taken in the helicopter. If the rest period is more than 6 consecutive hours, then suitable accommodation will be provided

16 **Rest Periods**

16.1 Crew members will be notified in good time of a flying duty period so that sufficient and uninterrupted pre-flight rest can be obtained. When away from base opportunities and facilities for adequate pre-flight rest will be provided by the company in suitable accommodation. When flights are carried out at such short notice that it is impracticable for the company to arrange suitable accommodation, then this responsibility devolves to the aircraft commander.

16.2 The minimum rest period which must be taken before undertaking a flying duty period shall be:

a) at least as long as the preceding duty period, or

b) 12 hours, whichever is the greater.

16.2.1 When away from base, in the case when the rest period earned by a crew member is 12 hours, and suitable accommodation is provided by the company, then that rest period may be reduced by one hour. In such circumstances, if the travelling time between the aerodrome and the accommodation is more than 30 minutes each way then the rest period will be increased by the amount the total time spent travelling exceeds one hour. In both situations the room allocated to the crew member must be available for occupation for a minimum of 10 hours. This sub-paragraph does not apply to rest periods that exceed 12 hours.

16.2.2 Exceptionally, at home base, individual crew members may be asked to exercise their discretion to reduce rest by up to a maximum of one hour but only to a minimum of 12 hours for flight crew and 11 hours for cabin crew. If discretion is used, it is the responsibility of the operator and the crew member to inform the commander of the flight immediately following the rest period, that a reduced rest period has been taken.

16.3 If the preceding duty period, which includes any time spent on positioning, exceeded 18 hours, then the ensuing rest period must include a local night.

16.4 After being called out from a standby duty the length of the minimum rest period will be determined by the length of standby duty, plus any time spent on positioning, and any FDP completed.

16.5 Crew members who inform the company that they are having difficulty in achieving adequate pre-flight rest will be given the opportunity to consult an aviation medical specialist.

17 Aircraft Commander's Discretion to Extend a Flying Duty Period

17.1 An aircraft commander may, at his discretion, and after taking note of the circumstances of other members of the crew, if carried, extend an FDP beyond that permitted in paragraph 13, provided he is satisfied that the flight can be made safely. The extension shall be calculated according to what actually happens, not on what was planned to happen. An extension of 3 hours is the maximum permitted, except in cases of emergency (see Note).

17.2 A commander is authorised to exercise his discretion in the following circumstances and to the limits set. In a Flying Duty Period involving 2 or more sectors, up to a maximum of 2 hours discretion may be exercised prior to the first and subsequent sectors. On a single sector flight and immediately prior to the last sector on a multisector flight, a commander may use the maximum amount of discretion permitted.

17.3 A commander may exercise discretion to extend an FDP following a reduced rest period, only exceptionally, and then only to the extent necessary to allow for unforeseen circumstances that become apparent during the last sector.

NOTE: In respect of an extension to a flying duty period, an emergency is a situation which in the judgement of the commander presents a serious risk to the health or safety of crew and passengers, or endangers the lives of others.

18 **Aircraft Commander's Discretion to Reduce a Rest Period**

18.1 An aircraft commander may, at his discretion, and after taking note of the circumstances of other members of the crew, reduce a rest period, but only insofar as the room allocated to the crew member must be available for occupation for a minimum of (*****) hours. The exercise of such discretion will be exceptional and must not be used to reduce successive rest periods. If the preceding FDP was extended, the rest period may be reduced, provided that the subsequent allowable FDP is also reduced by the same amount. In no circumstancs may a commander exercise discretion to reduce a rest period below 10 hours at accommodation.

18.1.1 When away from base and where an individual crew member separates from the crew, or the crew as a whole splits up, then any use of discretion to reduce rest becomes a decision for an individual crew member. The decision to continue with the next flight and the submission of an associated discretion report is the responsibility of the relevant commander after the crew member, and operator if in a position to do so, has informed the commander that a reduced rest period has been taken.

19 Reporting Exercise of Discretion

19.1 Whenever a commander extends an FDP it shall be reported to (*) on a Discretion Report Form, in the format of (*). If the extension is greater than 2 hours, or discretion is exercised after any reduced rest period, then the company will submit the commander's written report, together with company comments, to the Authority, within 14 days of the event.

19.2 Whenever a commander reduces a rest period, it shall be reported to (*) on a Discretion Report Form, in the format of (*). If the reduction is more than 1 hour, then the company will submit the commander's written report together with comments by the company to the AUTHORITY, within 14 days of the event.

20 Days Off

20.1 Wherever possible, and if required by the crew member, days off will be taken in the home environment. A single day off for helicopter crew shall include two local nights, and shall be of at least 36 hours duration. A planned rest period may be included as part of a day off.

20.2 Crew members will:

a) not work more than 7 consecutive days, and

b) have 2 consecutive days off following a period of 7 consecutive days duty, and

c) have 2 consecutive days off in any consecutive 14 days, and have at least 3 days off in any consecutive 14 days, and

d) have a minimum of 7 days off in any consecutive 4 weeks, and

e) have an average of at least 8 days off in each consecutive 4 week period, averaged over 3 such periods.

NOTE: A single day off may only follow up to a maximum of 6 consecutive days duty.

21 Absolute Limits on Flying Hours

21.1 The maximum flying hours for flight crew will be 90 hours in 28 consecutive days, and 800 hours in any period of 12 months.

22 Cumulative Duty and Flying Hours

22.1 Maximum duty hours for flight crew shall not exceed: 60 hours in any 7 consecutive days and200hours in any 28 consecutive days

22.2 The maximum number of flying hours which a pilot may be permitted to undertake are:

Single Day	Table in paragraph 13
Any 3 consecutive days	18 hours
Any 7 consecutive days	30 hours
Any 3 consecutive 28 day periods	240 hours

22.3 Calculation of Cumulative Duty Hours Duty hours will be added to cumulative totals in accordance with the following:

a) to count in full:

i)Duty periods and flying duty periods, plus subsequent post-flight duties

ii) All standby duty, except that specified in b) i) and ii) below

iii) The time spent on positioning

b) to count as half the time on duty:

i) The standby duty, when the period of notice given to the crew member by the company before reporting for duty is (*****)

ii) The standby duty when undertaken at home, or in suitable accommodation provided by the company, takes place during the period 2200 to 0800 hours local time, and the crew member can take undisturbed rest and is not called out for duty.

23 Rules Relating to Cabin Crew

23.1 The requirements detailed in this paragraph are applicable to all cabin crew employed as crew members, and are not intended to apply only to those cabin crew carried to meet the provisions of the Regulation 002/2016.

23.2 The limitations applied to cabin crew are those applicable to flight crew members contained in paragraphs 6 to 23, but with the following differences:

a) A flying duty period is 1 hour longer than that permitted for flight crew. The FDP and limits set on early starts for cabin crew will be based on the time at which the flight crew report for their flying duty period, but that FDP will start at the report time of the cabin crew.

b) For cabin crew the minimum rest period which will be provided before undertaking a flying duty period shall be:

i) at least as long as the preceding duty period less 1 hour; or

ii) 11 hours;

whichever is the greater.

c) The combined sum of standby time and subsequent FDP will be 1 hour longer than that permitted to flight crew.

d) The maximum duty hours for cabin crew will not exceed:60 hours in any 7 consecutive days, but can be increased to 65 hours under similar circumstances applicable to flight crew105 hours in any 14 consecutive days 210 hours in any 28 consecutive days.

e) The annual and 28 day limits on flying hours appertaining to flight crew do not apply.

24 Records to be Maintained

24.1 Records for duty and rest periods of all flying staff shall include: For each crew member:

The beginning, end and duration of each duty or flying duty period, and function performed during the period. Duration of each rest period prior to a flying duty or standby duty period. Dates of days off. 7 consecutive day totals of duty.

The duty and rest periods recorded for cabin crew will be a percentage of those so employed. The percentage used will be (*****), and the sample will be changed every (*****) months.

For each flight crew member:

Daily and 7 consecutive day flying hours.

Records shall be preserved for at least 12 calendar months from the date of the last relevant entry.

24.2 Additionally, copies of all aircraft commanders' discretion reports of extended flying duty periods and reduced rest periods will be retained for a period of at least 6 months after the event.

Pleasure Flying Supplement - Helicopters

1 The following will apply whenever the pilot is solely engaged in Commercial Pleasure flying duties in a single FDP.

1.1 Flying Duty Period

A single FDP will not exceed 10 hours, except that this may be extended to 11 hours for the sole purpose of positioning the aircraft from/to the operator's base.

1.2 Flying Hours A pilot will not spend more than 6 hours at the controls in any one flying duty period. When positioning the pilot may spend an additional 1 hour at the controls for the sole purpose of positioning the aircraft.

The maximum period which a pilot may spend continuously at the controls without a break is 3 hours. During the FDP the pilot shall have breaks of 30 minutes duration according to the following table:

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

1.3 Rest Period At the completion of an FDP solely concerned with commercial pleasure flying, and if applicable the return of the aircraft to the operator's base, the flight crew will have a rest period of at least 12 hours.

Air Ambulance Supplement - Helicopter

1 Dedicated Air Ambulance When carrying out an Air Ambulance flight, the allowable FDP extracted from paragraph (* insert as appropriate) in the company's approved FTL scheme may be increased by up to a maximum of 4 hours, subject to all the following conditions being met:

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

b) 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.

c) The crew must have had the full entitlement of rest relating to the preceding duty prior to starting an Air Ambulance flying duty

d) Single Pilot Crew If, exceptionally, the FDP is scheduled to be extended beyond the 4 hours permitted by this supplement then an additional qualified commander must be part of the crew, at least until the helicopter 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 the Authority.

e) 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 the Authority.

f) Following an Air Ambulance FDP the appropriate full rest period must be taken. g) At least 48 hours must elapse between the end of one extended Air Ambulance FDP and the start of another Air Ambulance FDP. h) A pilot can only fly 3 Air Ambulance extended FDPs in any 28 consecutive days.

i) The relevant duty records must show where an FDP was conducted in accordance with this supplement.

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

2 Combined Commercial air transport/Air Ambulance

On the day, if an operator wishes to use a helicopter and crew for a combination of Commercial air transport and Air Ambulance work then the FDP specified must be that obtained from paragraph (* insert as appropriate). Extension of the allowable FDP by the use of split duty and Commander's discretion, as stated in paragraphs (*insert as appropriate) of the main scheme, is allowed. The extension permitted for dedicated Air Ambulance (in paragraph 1 above), does not apply in this case.

Appendix * Commander's Discretion Report

Part A Operator Aircraft Type

Flight Number Commander

Date

NOTE: If discretion exercised for part crew or individuals state name(s) and operating capacity below

.

Commander*/First Officer*/Cabin Attendant* (Delete as necessary)

Part A - Extension of Flying Duty Period/Flying Hours

Voyage Details

Schedule (Planned)			**Actual**		
Place	UTC	Local		UTC	Local
Duty to start			Duty started		
Depart			Departed		
Arrive			Arrived		
Depart			Departed		
Arrive			Arrived		
Depart			Departed		
Arrive			Arrived		
Depart			Departed		
Arrive			Arrived		
Depart			Departed		
Arrive			Arrived		
FDP to end			FDP ended		
Scheduled FDP			Actual FDP	Hrs	Mins

Split duty: Actual Time Off ..... On ..... Credit FDP Hrs Mins

Max. Allowable FDP Hrs Mins

Amount of Commander's Discretion Exercised FDP Hrs Mins

Maximum Flying Hours Permitted ..... in 28 days/1 year period. Hours Flown .....

Part B - Reduction of Rest

Last duty started UTC/Local .....

Last duty ended UTC/Local .....

Rest earned (Hours)

Calculated earliest next available UTC/Local .....

Actual start of next FDP UTC/Local .....

Rest period reduced by .....

NOTE: All times to be recorded as date/time six-figure groups, expressed in both UTC and Local Time.

Commander's Signature ..... Date .....

Part C - Commander's Report

Signed. ..... Date .....

Operator's Remarks/Action Taken

Signed. ..... Date .....

Forwarded to Authority Filed

Signed .....

Date…….

Operator's Remarks/Action Taken

Signed.....

Date.....

Forwarded to

Authority Filed

Appendix *

Commander's Discretion Report - Reduction of rest

NOTE: All times to be recorded as date/time six-figure groups, expressed in both UTC and Local time.

NOTE: If discretion exercised for part crew or individuals state name(s) and operating capacity below.

P	Last duty	UTC/L
	Last duty	UTC/L
	Rest	H
	Calculated earliest next available	UTC/L
	Actual start of next	UTC/L
	Rest period reduced	
	Crew	
P	**Commander's**	

Signed .....

Date .....

Operator's Remarks/Action Taken

Signed .....

Date .....

Forwarded to Authority

Filed

Annex B Air Taxi/Sole Use Charter, Including Pleasure Flying and Air Ambulance Supplement

Introduction

The content of this Annex is designed for use by companies conducting the business of Air Taxi/Sole Use Charter. In the context of this document this type of operation is being carried out when the operator utilises an aircraft which contains 19 or less passenger seats, and

flights are confined to an area within which the local time does not vary by more than 2 hours, and

the application of in-flight relief to extend an FDP is not used.

For those operators who combine air taxi/sole-use charter business with either/or commercial pleasure flying and air ambulance work, supplements to the main body of the scheme are provided. These supplements are only intended for use by companies that combine two or more types of operation within one AOC. A special scheme for those operators whose AOC allows for the use of a single engined aircraft for the purpose of commercial air transport is the subject of a separate Annex.

Compilers of company FTL schemes are invited to reproduce the specimen scheme in toto, selecting from the paragraphs annotated with a `' those which suit their particular type of operation, and adding the relevant figures in the spaces marked (*****). Alternatively, selected sections of the specimen scheme can be used. Neither course of action prevents an operator from proposing an alternative to the standard provisions, provided an equivalent or better level of protection against fatigue is ensured. If any paragraphs annoted with a " are not included in a scheme, it is implicit that the operator will not use the provisions of that particular paragraph.

The following Key shows the maximum and minimum figures acceptable to the Authority.

Key

Definition 5.2	line 4	The operator to add the times, and the difference between them not to be more than 2½ hours
Definition 5.17		As required by the operator
Definition 5.24		Insert four figure group and day of week, as required
Paragraph 9.2	line 3	Not more than 1½
Paragraph 12.4	line 3	Not more than 12
Paragraph 13.1		
	line 1	In the range 30 to 60, depending on nature of operation
	line 2	Not less than 15
Paragraph 15.3	line 1	Not more than 18
Paragraph 16.1	line 5	Not more than 3
Paragraph 16.2		
		Not more than 2
	line 2	Not more than 3
	line 3	
Paragraph 2	18.1/ Specify reporting point	The form can be that contained in this Annex, or one used by the operator which is acceptable to the AUTHORITY
Paragraph 19.4 a)	line 1	Not more than 7
b) line 1		Not less than 2
line 1		Not less than 7
line 1		Not less than 8

Paragraph 21.2 b) i)		Not less than 3 times the value given in para 13.1 line 1
PLEASURE FLYING SUPPLEMENT		
Paragraph 1.1	line 1	Not more than 10
line 1		Only 2 more than above Not more than 7
Paragraph 1.2	line 1	
		Not more than 3
line 5 line 6		Not less than 30

Flight and Duty Time Limitations Scheme

Purpose

The purpose of this scheme is to interpret the requirements of the relevant articles of Regulation 002/ 2016, as they apply to the regulation of flight times and the avoidance of fatigue in crew members.

Aim

The aim of this document is to express the intent behind the published relevant documents, thereby taking all reasonable precautions to ensure that crew members are adequately rested at the beginning of each flying duty period. To meet this aim, due note will be taken of length of duty cycles, periods of time off and cumulative duty hours.

Applicability

The scheme shall apply in relation to any duty carried out at the behest of the company by both flight deck crew and cabin crew. The scheme shall apply to all cabin crew carried as crew members.

Responsibilities

The Company

The company will publish rosters in advance so that operating crew can plan adequate pre-flight rest. Where crew members request specific days off, 7 days or more in advance, this will normally be granted. Should such allocated days off subsequently need to be worked, this will be entirely at the discretion of the crew member concerned. Rosters will provide details of flying duty periods, standby duty, and rest periods. The company will be satisfied that crew members employed on an irregular basis are not in breach of this FTL scheme before offering a flying duty.

Crew Members

Responsibility for the proper control of flight and duty time cannot rest wholly with the company. Crew members have a responsibility to make optimum use of the opportunities and facilities for rest provided. They are also responsible for planning and using their rest periods properly in order to minimise incurring fatigue. The Regulation places a further responsibility on crew members. Simply put, crew members shall not act as operating crew if they know, or suspect, that their physical or mental condition renders them unfit to operate. Furthermore, they must not fly if they know that they are in breach of this FTL scheme. Crew members not in the regular employ of the company must provide details of their previous 28 day totals of flying hours/duty periods to the company before undertaking a flying duty.

Definitions

'Cabin Crew'

A person employed to facilitate the safety of passengers, whose duties are detailed by the company or the aircraft commander. Such persons will not act as a member of the flight crew.

'Contactable'

A short period of time, other than on a day off, unless mutually agreed, during which the company requires a crew member to be contactable for the purpose of giving notification of a duty period which will commence not less than ten hours ahead. The contactable period will be between (*****) and (*****) local time.

'Crew'

A member of the flight crew or cabin crew.

'Days Off'

Periods available for leisure and relaxation free from all duties. A single day off will include two local nights. Consecutive days off will include a further local night for each additional consecutive day off. A rest period may be included as part of a day off.

'Duty'

Any continuous period during which a crew member is required to carry out any task associated with the business of the company.

'Early Start Duty'

A duty is an Early Start Duty if it commences in the period 0500 to 0659 hours local time.

'Flight Crew'

Those members of the crew of an aircraft who act as a pilot.

'Flying Duty Period (FDP)'

Any time during which a person operates in an aircraft as a member of its crew. It starts when the crew member is required by an operator to report for a flight, and finishes at on-chocks or engines off, at the end of the final sector.

'Late Finish Duty'

A duty is a Late Finish when the duty finishes in the period 0100 to 0159 hours local time.

'Local Night

'A period of 8 hours falling between 2200 and 0800 hours local time.

'Night Duty

'A duty is a Night Duty if any part of that duty falls within the period 0200 to 0459 hours local time.

'Positioning'

The practice of transferring crew from place to place as passengers in surface or air transport at the behest of the company.

'Regular'

Regular, when applied to duties that are Late Finishes, Night or Early Starts, means a run of 4 or 5 consecutive duties, not broken by a period of 34 hours free from such duties, contained in a single 7 consecutive day period

'Reporting Time'

The time at which a crew member is required by the company to report for any duty.

'Rest Period'

A period of time before starting a flying duty period which is designed to give crew members adequate opportunity to rest before a flight.

'Rostered/Planned Duty'

A duty period, or series of duty periods, with stipulated start and finish times, notified to crew in advance, by the company.

'Rostering Period'

(*****) consecutive weeks.

'Scheduled Duty'

The allocation of a specific flight or flights or other duties to a crew member within the pre-notified rostered/planned series of duty periods.

'Sector'

The time between an aircraft first moving under its own power until it next comes to rest after landing, on the designated parking position.

'Split Duty'

A flying duty period which consists of two or more sectors, separated by less than a minimum rest period.

'Standby Duty'

A period during which the company places restraints on a crew member who would otherwise be off duty. However, it shall not include any time during which a crew member is contactable for the purpose of giving notification of a duty which is due to start 10 hours or more ahead.

'Suitable Accommodation'

A well furnished bedroom which is subject to minimum noise, is well ventilated, and has the facility to control the levels of light and temperature.

'Travelling'

All time spent by a crew member transitting between the place of rest, and the place of reporting for duty.

'Week'

A period of 7 consecutive days starting at (*****) local on a (*****).

Calculation of a Flying Duty Period

The maximum rostered FDP, in hours and fractions of hours, shall be in accordance with paragraph 13. Rostering limits in the tables may be extended by split duty under the terms of paragraph 14. On the day, the aircraft commander may at his discretion, and after taking note of the circumstances of other members of the operating crew, if carried, about their fitness, further extend the FDP actually worked as outlined in paragraph 16.

Additional Limits on Flying

Late Finishes/Early Starts

Sleep deprivation, leading to the onset of fatigue, can arise if a crew member is required to report early for duty on a number of consecutive days. Therefore, not more than 3 consecutive duties that occur in any part of the period 0100 to 0659 hours local time will be undertaken, nor may there be more than 4 such duties in any 7 consecutive days. Any run of consecutive duties (Late Finishes or Nights or Early Starts) can only be broken by a period of not less than 34 consecutive hours free from such duties. This 34 consecutive hours may include a duty that is not an Early, Late or Night duty.

7.1.1 However, crew members who are employed on a regular early morning duty for a maximum of 5 consecutive duties will work to the following:

The minimum rest period before the start of such a series of duties will be 24 hours.

The duty will not exceed 9 hours, irrespective of the sectors flown.

At the finish of such a series of duties, crew members will have a minimum of 63 hours free of all duties.

Should any duties be scheduled to be carried out in any part of the period between 0200 and 0459 hours local time, for a minimum of 2 and a maximum of 3 consecutive nights, then crew members must be free from all duties by 2100 hours local time before covering the block of consecutive night duties, such that crew members can take a rest period during a local night.

NOTE: Operators may replace the above paragraph with one of the following choices, either Options A and B OR Options B and C. The operator may roster crew members for either 2 or 3 consecutive nights, but must ensure that the duty preceding this series of duties finishes by 2359 hours local time (2 nights) or 2100 hours local time (3 nights) as appropriate.

If it is preferred to retain the present contents then attention must be paid to the notes attached to the Options listed (below). These notes list the actions to be followed in the event that duty is inadvertently extended beyond the cut-off times (i.e. 2100 or 2359 hours).

Option A

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 3 consecutive nights, then crew members will finish the duty preceding this series of duties by 2100 hours local time before commencing the block of consecutive night duties, such that the crew members can take a rest period during a local night. If the duty immediately prior to the 3 consecutive night duties extends beyond 2100 hours local time and the individual crew member is willing to continue with the planned roster, (i.e. 3 consecutive night duties) then provided that duty preceding this series of duties finishes no later than 2359 hours local time, the schedule may continue.

NOTES: 1 Under this Option, if the crew member chooses not to continue the planned roster (after finishing duty between 2100 and 2359 hours local time) then only the planned first and second night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.2 Under this Option, if the duty finishes after 2359 hours local time, then only the first of the 3 consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

Option B - 2 consecutive night duties

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 2 consecutive nights, then crew members will finish the duty preceding this series of duties by 2359 hours local time before commencing the block of 2 consecutive night duties, such that the crew members can take a rest period during a local night.

NOTE: Under this Option in the event of 2359 hours being exceeded, then only the first of the 2 planned consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

Option C - 3 consecutive night duties

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 3 consecutive nights, then crew members will finish the duty preceding this series of duties by 2100 hours local time before commencing the block of consecutive night duties, such that the crew members can take a rest period during a local night.

NOTES: 1 Under this Option in the event of 2100 hours being exceeded, then only the first of the 3 planned consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.2 In all cases the limits in paragraph 7.2 or 7.3 must not be exceeded (i.e. maximum of 3 consecutive nights and 4 in 7 consecutive days).

7.2.1 However, crew members who are employed on a regular night duty for a maximum of 5 consecutive nights will work to the following:

The minimum rest period before the start of such a series of duties will be 24 hours.

The duty will not exceed 8 hours, irrespective of the sectors flown.

At the finish of such a series of duties crew members will have a minimum of 54 hours free of all duties.

7.2.1.1 Options For Night Operations

If an operator elects to roster up to 5 consecutive night duties, then the criteria laid down in paragraph 7.2.1 must be complied with and must form part of the approved FTL scheme. Operators are reminded that the normal days off requirements must be met (i.e. the 54 hours off between two blocks of 5 nights is only 1 proper day off). However, if operators find that this part of the Scheme is too restrictive then one of the following options may be employed but, if used, must be fully complied with:

When crew are employed on duty for a total of 20 hours or less during 5 consecutive night duties, (i.e. maximum duty each night is 4 hours) the 54 hours free from all duties will meet the "Days Off" requirements for each 28 consecutive day period. Any positioning flights must be completed within the 20 hours duty

When crew are employed on duty for a total of more than 20 hours but not more than 40 hours during 5 consecutive night duties, the first 54 hours (between week 1 and week 2) may be counted as 2 "Days Off". For the 28 consecutive day period that starts on the first night of the first duty, crew must be given a minimum of a further 5 "Days Off" (average of a further 6 days). Any positioning flights must be completed within the 40 hours duty.

When crew are employed on duty which requires full use of 40 hours duty during 5 consecutive night duties plus a maximum of 3 hours positioning (pre- and post- total) then:

allowable flying hours (month and year) will be reduced to the following:

1) a maximum of 75 hours in any 28 consecutive days with a maximum of 60 hours in 28 consecutive days averaged over three 28 day periods, and;

2) 600 hours in any 12 consecutive months.

a minimum of 9 "Days Off" in any 28 consecutive days will be granted;

any increase in duty over 40 hours during the block of 5 consecutive night duties is to be added to the subsequent 54 hours rest period which may not be reduced.

NOTE: Where crew do less than a 7 consecutive day period of such duties, then normal Table A limits and the limits in paragraphs 7.2 and 7.3 apply.

7.2.1.2 General Rules

To be applied when an operator utilises a), b) or c) of paragraph 7.2.1.1.

The exercise of "Commander's Discretion" is limited to 1 hour per night with a total of 2 hours allowed during any 5 consecutive night cycle. Any duty worked in excess of 40 hours by use of "Commander's Discretion" must also be added to the subsequent 54 hours rest which may not be reduced.

The absolute maximum duty permitted during a block of 5 consecutive night duties is 45 hours (40 hours, plus 3 hours positioning, plus 2 hours "Commander's Discretion", as per paragraphs 7.2.1.1 c) and 7.2.1.2 a) above).

Crew cannot be rostered for more than 8 hours per night, except when working to paragraph 7.2.1.1 c) above.

Split duties and extension of FDP by in-flight rest are not permitted.

"Commander's Discretion" to reduce rest is not permitted.

NOTE: For 5 consecutive earlies, the same rule as in 7.2.1.2 a) above applies (i.e. maximum 1 hour discretion per day and a total of 2 hours in the 5 day cycle).

7.3 Interrupted Rest

If, prior to the start of an FDP, a crew member's rest period is interrupted for operational reasons between 2300 and 0700 hours local time, the following shall apply:

If the disturbance happens earlier than 1 hour before the planned departure from the crew member's place of rest, the time elapsed between that disturbance and the departure time from the place of rest minus 1 hour, is to count as part of the subsequent FDP

NOTE: The phrase `operational reasons' applies to such actions as contacting the customer, checking weather, liaison with ATC or any action pertaining to the planned flight.

Mixed Duties

When a crew member is required to report for duty in advance of the stipulated report time for a scheduled flight, to carry out a task at the behest of the company, then the time spent on that task shall be part of the subsequent FDP.

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.

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.

Travelling Time

Travelling time, other than that spent on positioning, shall not be counted as duty.

Travelling time, from home to departure aerodrome, if long distances are involved, is a factor influencing any subsequent onset of fatigue. If the journey time from home to normal departure airfield is usually in excess of (*****) hours, crew members should make arrangements for temporary accommodation nearer to base.

When crew members are required to travel from their home to an aerodrome other than the one from which they normally operate, any travelling time over and above the time taken for the journey from home to the usual operating aerodrome shall be classed as positioning. Such additional travelling time will be agreed between the crew member and the company.

Delayed Reporting Time in a Single FDP

When a crew member is informed of a delay to the reporting time before leaving the place of rest, the FDP shall be calculated as follows. When the delay is less than 4 hours the maximum FDP allowed will be based on the original report time and the FDP will start at the actual report time. When the delay is 4 hours or more then the more limiting time band associated with the planned and actual reporting time will be used and the FDP will start 4 hours after the original report time.

When the company informs a crew member before leaving the place of rest of a delay in reporting time of 10 hours or more ahead, and that crew member is not further disturbed by the company until

a mutually agreed time, then that period is classed as a rest. If, upon the resumption of duty, further delays occur then the appropriate criteria in this paragraph and paragraph 10.1 above will be applied to the re-arranged reporting time.

Positioning

All the time spent on positioning at the behest of the company will count as duty, but positioning does not count as a sector when calculating the FDP. In these circumstances the FDP commences at the time the crew member reports for the positioning journey, or positions in accordance with sub-paragraph 9.3. The subsequent rest period must account for the FDP plus positioning journey.

If, after a positioning journey, the crew member spends less than a minimum rest period at suitable accommodation provided by the company and then carries out an FDP, the positioning will be counted

as a sector if a split duty is claimed when calculating the allowable FDP. If it is not, then a split duty FDP will not be used.

Standby Duty

The time of start, end and nature of the standby duty will be defined and notified to crew members. The time a standby duty starts determines the allowable FDP, except that when the actual FDP starts in a more limiting time band, then that FDP limit will apply.

When a crew member is on standby duty on immediate readiness at an airport, then the allowable FDP is calculated using the start time of the standby duty.

If a crew member is called out from standby, the standby duty will cease when the crew member reports at the designated reporting point.

The following limits apply:

Duty	Maximum Duration
Standby Duty (all cases)	(*) hours
Standby followed by an FDP	As in Case A and B below

Case A

If a crew member is called out from standby to conduct an FDP before completing 6 hours standby duty then the total duty period is the sum of the time spent on standby and the FDP allowable from paragraph 13.

Case B

If a crew member is called out from standby to conduct an FDP after completing 6 or more hours standby duty, then the total duty period is the sum of all the time spent on standby and the allowable FDP from paragraph 13, reduced by the amount of standby worked in excess of 6 hours.

NOTE: The reference to 'total duty period' applies only to the sum of the standby time achieved + the allowable FDP obtained from paragraph 13. On the day, for cumulative duty totals and for minimum rest purposes, the total duty achieved will be standby time achieved + FDP achieved + post flight duties + any positioning.

Maximum FDP

Standard reporting times prior to flight will be (*****) minutes. Pre-flight duties are part of the FDP. A minimum of (*****) minutes duty will be allowed for post-flight activities. The time spent between reporting for a flight and the completion of post-flight tasks determines the length of the subsequent rest period. If this "period" for post FDP duties is routinely exceeded then the post FDP duty period stated in the scheme must be revised to better represent the actual time taken.

A non-standard reporting time designed to take advantage of an increased FDP from a more favourable time band, will not be used.

When any period of standby finishes, during which a call-out has not occurred, at least 12 hours rest must follow prior to the next duty period. Similarly, following the end of a contactable period or periods, at least 10 hours must elapse prior to the next duty period.

Table A Two Flight Crew

Local time of start	Sectors							
	1	2	3	4	5	6	7	8 or more
0600-0659	13	12¼	11½	10¾	10	9½	9	9
0700-1259	14	13¼	12½	11¾	11	10½	10	9½
1300-1759	13	12¼	11½	10¾	10	9½	9	9
1800-2159	12	11¼	10½	9¾	9	9	9	9
2200-0559	11	10¼	9½	9	9	9	9	9

Table B Single Flight Crew

Local time of start	Sectors				
	Up to 4	5	6	7	8 or more
0600-0659	10	9¼	8½	8	8
0700-1259	11	10¼	9½	8¾	8
1300-1759	10	9¼	8½	8	8
1800-2159	9	8¼	8	8	8
2200-0559	8	8	8	8	8

14 Extension of Flying Duty Period by Split Duty

14.1 When an FDP consists of two or more sectors - one of which can be a positioning journey counted as a sector - but separated by less than a minimum rest period, then the FDP may be extended by the amounts indicated below.

Consecutive Hours Rest	Maximum Extension of the FDP
Less than 3	NIL
3 - 10	A period equal to half the consecutive hours rest taken

The rest period shall not include the time allowed for immediate post flight and pre- flight duties, a minimum total of 30 minutes. When the rest period is 6 hours or less it will suffice if a quiet and comfortable place, not open to the public, is available. Rest may be taken in the aircraft on the ground only when the crew has adequate control

of the temperature and ventilation within the aircraft, and the passengers are not on board. If the rest period is more than 6 consecutive hours, then suitable accommodation will be provided.

Rest Periods

The company will notify all crew members in good time of a flying duty period so that sufficient and uninterrupted pre-flight rest can be obtained. When away from base the company will provide the crew with the opportunity and the facilities for adequate pre- flight rest. The company will provide suitable accommodation. When flights are carried out at such short notice that it is impracticable for the company to arrange suitable accommodation, then this responsibility devolves to the aircraft commander.

The minimum rest period which will be provided before undertaking a flying duty period shall be:

at least as long as the preceding duty period, or

12 hours whichever is the greater.

When away from base, in the case when the rest period earned by a crew member is 12 hours, and suitable accommodation is provided by the company, then that rest period will be reduced by one hour. In such circumstances, if the travelling time between the aerodrome and the accommodation is more than 30 minutes each way then the rest period will be increased by the amount the total time spent travelling exceeds one hour. In both situations the accommodation allocated to the crew member must be available for occupation for a minimum of 10 hours. This sub- paragraph does not apply to rest periods that exceed 12 hours.

If a duty period, which includes any time spent on positioning, exceeds (*****) hours, then the ensuing rest period will include a local night.

After being called out from a standby duty the length of the minimum rest period will be determined by the length of standby duty, plus any time spent on positioning, and any FDP completed.

Crew members who are having difficulty in achieving adequate pre-flight rest must inform the company, who will arrange for the individual to be given the opportunity to consult an aviation medical specialist.

Aircraft Commander's Discretion to Extend a Flying Duty Period

An aircraft commander may, at his discretion, and after taking note of the circumstances of other members of the crew, if carried, extend an FDP beyond that permitted in paragraph 13, provided he is satisfied that the flight can be made safely. The extension shall be calculated according to what actually happens, not on what was planned to happen. An extension of (*****) hours is the maximum permitted, except in cases of emergency (see Note).

A commander may exercise his discretion to extend an FDP involving 2 or more sectors up to a maximum of (*****) hours prior to the first and subsequent sectors, but this may be up to (*****) hours prior to the start of a single sector flight, or immediately prior to the last sector on a multi-sector flight.

A commander may exercise discretion to extend an FDP following a reduced rest period, only exceptionally, and then only to the extent necessary to allow for unforeseen circumstances that become apparent during the last sector.

NOTE: In respect of an extension of a flying duty period, an emergency is a situation which in the judgement of the commander presents a serious risk to the health or safety of crew and passengers, or endangers the lives of others.

Aircraft Commander's Discretion to Reduce a Rest Period

An aircraft commander may, at his discretion, and after taking note of the circumstances of other members of the crew, if carried, reduce a rest period, but only insofar as the accommodation allocated to the crew member must be available for occupation for a minimum of 10 hours. The exercise of such discretion, must be considered exceptional and must not be used to reduce successive rest periods. If the preceding FDP was extended, the rest period may be reduced, provided that the subsequent allowable FDP is also reduced by the same amount. In no circumstances may a commander exercise discretion to reduce a rest period below 10 hours at accommodation.

When away from base and where an individual crew member separates from the crew, or the crew as a whole splits up, then any use of discretion to reduce rest becomes a decision for an individual crew member. The decision to continue with the next flight and the submission of an associated discretion report is the responsibility of the relevant commander after the crew member, and operator if in a position to do so, has informed the commander that a reduced rest period has been taken.

Reporting Exercise of Discretion

Whenever a commander extends an FDP it shall be reported to (*****) on a Discretion Report Form, in the format of (*****). If the extension is greater than 2 hours or discretion is exercised after any reduced rest period, then the company will submit the commander's written report, together with the company's comments, to the Authority, within 14 days of the aircraft's return to base.

Whenever a commander reduces a rest period, it shall be reported to (*****) on a Discretion Report Form, in the format of (*****). If the reduction is more than 1 hour, then the company will submit the commander's written report together with the comments by the company, to the Authority, within 14 days of the aircraft's return to base.

Days Off

Wherever possible, and if required by the crew member, days off will be taken in the home environment.

A single day off will include 2 local nights, and will last at least 34 hours.

A planned rest period may be included as part of a day off.

Crew members will:

not be on duty more than (*****) consecutive days between days off, and

have (*****) consecutive days off in any consecutive 14 days following the previous 2 consecutive days off, and

have a minimum of (*****) days off in any consecutive 4 weeks, and

have an average of at least (*****) days off in each consecutive 4 week period, averaged over 3 such

periods.

Absolute Limits on Flying Hours

A person shall not act as a member of the flight crew of an aircraft if at the beginning of the flight the aggregate of all previous flight times:

during the period of 28 consecutive days expiring at the end of the day on which the flight begins exceeds 100 hours. (This means that on the 28th day a flight crew member may depart on a single sector flight, and may complete that sector, even though at the end of the flight the total flying hours

completed in 28 days will exceed 100 hours. Consequently, the flight crew member cannot then continue to operate as a flight crew member on any subsequent sectors during that day); or

during the period of 12 months, expiring at the end of the previous month exceeds 900 hours.

Cumulative Duty Hours

The maximum duty hours for flight crew, shall not exceed: 55 hours in any 7 consecutive days 95 hours in any

14 consecutive days and 190 hours in any 28 consecutive days.

When a crew member is not rostered for either standby or flying duties for 28 or more consecutive days then any duty hours worked are not added to cumulative totals. However, when a crew member is anticipated to return to either standby or flying duties then the duty hours worked in the 28 days preceding that duty must be recorded. Those hours worked will be used to ensure that the crew member complies with the requirements of this scheme.

Calculation of Cumulative Duty Hours

a) To count in full:

i) Duty periods and flying duty periods, plus subsequent post-flight duties

ii) All standby duty, except that specified in b) i) and ii) below

iii) The time spent on positioning.

b) To count as half the time on duty:

The standby duty, when the period of notice given to the crew member before reporting for duty is (*****) hours.

The standby duty when undertaken at home, or in suitable accommodation provided by the company, takes place during the period 2200 to 0800 hours local time, and the crew member can take undisturbed rest and is not called out for duty.

Rules Relating To Cabin Crew

These requirements are applicable to all cabin crew employed as crew members.

The limitations which shall be applied to cabin crew are those applicable to flight crew members contained in paragraphs 6 to 21, but with the following differences:

A flying duty period will be 1 hour longer than that permitted for flight crew. The FDP for cabin crew

will be based on the time at which the flight crew report for their flying duty period, but that FDP will start

at the report time of the cabin crew.

For cabin crew the minimum rest period which will be provided before undertaking a flying duty period shall be:

at least as long as the preceding duty period less 1 hour; or

11 hours; whichever is the greater.

The sum of the time spent on any standby, and any time on positioning plus subsequent FDP will be 1 hour longer than that permitted to flight crew.

The maximum duty hours for cabin crew will not exceed: 60 hours in any 7 consecutive days 105 hours in any 14 consecutive days 210 hours in any 28 consecutive days

The annual and 28 day absolute limits on flying hours appertaining to flight crew do not apply.

23 Records to be Maintained

Records for the duty and rest periods of all flying staff must be kept. These records will include:

For each crew member:

The beginning, end and duration of each duty or flying duty period, and function performed during that period. Duration of each rest period prior to a flying duty or standby duty period. Dates of days off. 7 consecutive day totals of duty.

For each flight crew member:

Daily and 7 consecutive day flying hours

Records shall be preserved for at least 12 calendar months from the date of the last relevant entry.

Additionally, aircraft commander's discretion reports of extended flying duty periods and reduced rest periods will be retained for a period of at least six months after the event.

Pleasure Flying/Air Ambulance Work

As the company's business includes pleasure flying and air ambulance work in addition to air taxi/sole use charter work two supplements to the main body of the scheme are contained in the pages following. The conditions applying to each addition are stated and must be followed by crew in the employ of the company.

On those occasions when a crew member is employed in the same duty period on flights to which the limits in the main body of this scheme and the pleasure flying addition apply, then the hours flown and the duty period worked will be the more restrictive of the two.

Commercial Pleasure Flying

When an aircraft takes-off from and lands at the same aerodrome without making an intermediate landing, but does not account for any positioning flight to or from that aerodrome.

Air Ambulance

When the sole reason for the flight is to carry an ill or injured person to a recognised medical facility, or the carriage of a human organ necessary for a transplant operation.

Pleasure Flying Supplement

The following will apply whenever the pilot is **solely** engaged in Commercial Pleasure flying duties in a single FDP.

Flying Duty Period

single FDP will not exceed (*****) hours, except that this may be extended to (*****) hours for the sole purpose of positioning the aircraft from/to the operator's base.

Flying Hours

pilot will not spend more than (*****) hours at the controls in any one flying duty period. When positioning the pilot may spend an additional 2 hours at the controls for the sole purpose of positioning the aircraft.

The maximum period which a pilot may spend continuously at the controls without a break is (*****) hours.

During the FDP the pilot shall have breaks of (*****) minutes duration according to the following table:

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

Rest Period

At the completion of an FDP solely concerned with commercial pleasure flying, and if applicable the return of the aircraft to the operator's base, the flight crew will have a rest period of at least 12 hours.

Air Ambulance Supplement - Fixed Wing

Dedicated Air Ambulance

When carrying out an Air Ambulance flight, the allowable FDP extracted from paragraph (***** insert as appropriate) in the company's approved FTL scheme may be increased by up to a maximum of 4 hours, subject to all the following conditions being met:

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

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.

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

Single Pilot Crew

If, exceptionally, the FDP is scheduled to be extended beyond the maximum of the 4 hours permitted by this supplement 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 the Authority.

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 the Authority.

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

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.

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

The relevant duty records must show where an FDP was conducted in accordance with this supplement.

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

Combined Commercial air transport/Air Ambulance

On the day, if an operator wishes to use an aircraft and crew for a combination of Commercial air transport and Air Ambulance work then the FDP specified must be that obtained from paragraph (***** insert as appropriate). Extension of the allowable FDP by the use of split duty and Commander's discretion, as stated in paragraphs 14 and 16 of the main scheme, is allowed. The extension permitted for dedicated air ambulance (in paragraph 1 above), does not apply in this case.

Air Ambulance - Heavy Crew

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 third Captain qualified crew member must be on board.

A stretcher or comfortable reclining seat must be available for the resting crew member.

Maximum duty will be 18 hours or as per Table A plus 6 hours whichever is the lesser.

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.

An additional 'day off' (minimum 34 hours which includes 2 local nights) must be taken on completion of the full rest entitlement.

All 'heavy crew' duty days carried out must be notified to the Authority.

Revised Cumulative Duty Hours Limitations

Only 2 'heavy crew' duty days will be permitted in any 28 consecutive days.

In any 28 day period containing a 'heavy crew' duty day:

A minimum of 10 days off will be achieved.

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.

Appendix * Commander's Discretion Report

Operator Aircraft Type

Flight Number Commander

Date

NOTE: If discretion exercised for part crew or individuals state name and operating capacity below.

Commander*****/First Officer*****/Cabin Attendant***** (Delete as necessary) **Part**

A - Extension of Flying Duty Period/Flying Hours

Voyage Details

Schedule				**A**		
	F		L			L
Duty to				Duty		
D				Depa		
A				Ar		
D				Depa		
A				Ar		
D				Depa		
A				Ar		
D				Depa		
A				Ar		
D				Depa		
A				Ar		
FDP to				FDP		
Scheduled				Actual		
Split	Actual Time Off ..... On			Credit		
Max. Allowable						

Amount of Commander's Discretion Exercised FDP Hrs Mins

Maximum Flying Hours Permitted ..... in 28 days/1 year period. Hours Flown .....

Part B - Reduction of Rest

Last duty started	UTC/Local .....
Last duty ended	UTC/Local .....
Rest earned (Hours)	
Calculated earliest next available	UTC/Local .....
Actual start of next FDP	UTC/Local .....
Rest period reduced by	.....

NOTE: All times to be recorded as date/time six-figure groups, expressed in both UTC and Local Time.

Commander's Signature ..... Date .....

Part C - Commander's Report

Signed. .....

Date .....

Operator's Remarks/Action Taken

Signed. .....

Date .....

Forwarded to Authority

Filed

Appendix * Flying and Duty Record Form

Month ..... Name .....

			Duty	Flying	Sec /	Split	Duty	Day

Annex C Pleasure Flying and Aerial Photography

Introduction

This Annex presents a simple Flight Time Limitation scheme, designed for use by a company holding an AOC which only permits the use of single engined aircraft for the purpose of commercial air transport. In practice, this involves pleasure flying and aerial photography. When an operator carries out both air taxi/sole use charter flight and pleasure flights this Annex is inapplicable, and the pleasure flying supplement attached to the air taxi/ sole use charter scheme should be used.

For the purposes of this document pleasure flying and aerial photography is being conducted when the aircraft takes-off from and lands at the same aerodrome, but does not take into account any positioning flight to or from that aerodrome.

An operator has the flexibility to include figures in the spaces marked (*****), for the type of operation being conducted, but the maxima and minima acceptable to the Authority are set out in the Key following.

Key

Definition 5.6		Insert four figure group and day of week
Paragraph 6.1	line 1	Not more than 10

	line 2	Only 2 more than above
Paragraph 6.2	line 1	Not more than 7
Paragraph 6.3		Not more than 3
Paragraph 6.6	line 7	Not less than 7
	line 10	Not less than 8
Paragraph 7.1	line 1	Not more than 190

Flight and Duty Time Limitations Scheme

Purpose

The purpose of this scheme is to interpret the requirements of the relevant articles of Regulation 002/2016 as they apply to the regulation of flight times and the avoidance of fatigue in crew members.

Aim

The aim of this document is to express the intent behind the published relevant documents, thereby taking all reasonable precautions to ensure that crew members are adequately rested at the beginning of each flying duty period. To meet this aim, due note will be taken of length of duty cycles, periods of time off and cumulative duty hours.

Applicability

The scheme shall apply in relation to any duty carried out by a pilot at the behest of the company.

Responsibilities

The Company

The company will apply the content of this scheme in the scheduling of flights, and the allocation of rest periods. Due to the nature of the company's business the publication of a weekly or monthly roster is not a practical proposition, but the company will endeavour to provide a specific day/days off on request. The company will be satisfied that crew members employed on an irregular basis are not in breach of this FTL scheme before offering a flying duty.

Crew Members

Responsibility for the proper control of flight and duty time cannot rest wholly with the company. Crew members have a responsibility to make optimum use of the opportunities and facilities for rest provided. They are also responsible for planning and using their rest periods properly in order to minimise incurring fatigue. Crew members should not act as operating crew if they know, or suspect, that their physical or mental condition renders them unfit to operate, or if they know they will infringe the company's FTL scheme. Crew members not in the regular employ of the company must provide details of their previous 28 day totals of flying hours/duty periods to the company before undertaking a flying duty.

Definitions

'Days Off'

Periods available for leisure and relaxation free from all duties. A single day off shall include two local nights. Consecutive days off shall include a further local night for each additional consecutive day off. A rest period may be included as part of a day off.

'Duty'

Any continuous period during which a crew member is required to carry out any task associated with the business of the company.

'Flying Duty Period (FDP)'

Any time during which a person operates in an aircraft as a member of its crew. It starts when the crew member is required by the company to report for a flight, normally 30 minutes prior to planned take-off time, and finishes at on-chocks on the last flight of the day.

'Local Night'

period of 8 hours falling between 2200 and 0800 hours local time.

'Rest Period'

period of time before starting a flying duty period which is designed to give crew members adequate opportunity to rest before a flight.

'Week'

period of 7 consecutive days starting at (*****) local on a (*****).

Limitations

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

A pilot shall not spend more than (*****) 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.

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

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
FDP over 8 hours	Breaks totalling at least 2 hours

Rest Periods

The minimum rest period before undertaking a flying duty shall be at least 12 hours.

Days Off

The company will, wherever possible, give 7 days notice of a day off. When this is not possible a pilot will be given the opportunity to request a particular day/days off. The company will comply with this request, wherever possible. Having been allocated a day off a subsequent duty required by the company for that day will only be worked with the agreement of the individual concerned.

Usually, a pilot will not be rostered to fly more than 7 consecutive days, between days off, and will have a minimum of (*****) days off in any 4 consecutive weeks. If, for any reason, a pilot is requested to work for 8 or 9 consecutive days then 4 consecutive days off will follow.

pilot shall have an average of at least (*****) days off in each consecutive 4 week period, averaged over 3 such periods.

Cumulative Duty and Flying Hours

Maximum Cumulative Duty Hours

pilot may be on duty for a maximum of (*****) hours in any 28 consecutive days. All types of duty shall be counted in full.

Maximum Monthly Flying Hours

pilot will not fly more than 100 hours in any 28 consecutive days.

Maximum Annual Flying Hours

person shall not act as a flight crew member if the aggregate of flight times, in the period of 12 months expiring at the end of the previous month, exceeds 900 hours.

Records to be Maintained

The company will maintain records showing the duty and rest periods of all flying staff, both permanent and temporary, on the form overleaf. These records shall include:

For each pilot -

Start, finish and duration of each duty and flying duty period, and function performed during the duty, and

Duration of each rest period prior to a flying duty Dates of days off

Weekly totals of duty

Daily and 7 consecutive day flying hours.

Records shall be preserved for at least 12 calendar months from the date of the last relevant entry.

Appendix * Flying and Duty Record Form

Month ..... Name .....

			Duty	Flying	Sect	Split	Day

Annex D Helicopters

Introduction

The content of this Annex is designed for use by those companies holding an AOC which operate helicopters only. Those organisations that have a fleet of fixed and rotary wing aircraft and are using this Section to assist in the compilation of an FTL scheme should refer to Annex B.

The scheme has been compiled on the assumption that:

Operations are confined within an area where local time varies by not more than one hour.

Use of in-flight relief to obtain an extension to the allowable FDP is not exercised.

The main body of the scheme is complemented by additions that allow for commercial pleasure flying and air ambulance work. In the context of this Annex the following applies:

Commercial Pleasure Flying

When the helicopter takes-off from and lands at the same aerodrome or approved pleasure flying site, without making an intermediate landing, but does not take into account any positioning flight to or from that aerodrome or pleasure flying site.

Air Ambulance

When the sole reason for the flight is to carry an ill or injured person to a recognised medical facility, or the carriage of a human organ necessary for the conduct of a transplant operation.It is accepted that a few operators

have helicopters based on oil rigs and provide emergency cover. The application of limits placed on allowable FDPs in such circumstances is detailed and complex, and not of interest to the wider audience. Therefore, although what is understood by these terms is detailed below, the construction of such schemes will be arranged between the operator and the Authority.

Offshore Based and Remote Site Operations

Those operations in support of the oil/gas industry, where the helicopter and crew are based on a rig or at a remote operating site.

Emergency Flight

A flight 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.

It is recognised that all the paragraphs contained within the scheme are not applicable to the operations of all companies: such paragraphs annotated with a `‡' symbol can be omitted, where appropriate. However if omitted, it is implicit that the operator will not use the provisions of that particular paragraph. Furthermore, operators are given the opportunity to insert their own values where the symbol (*****) appears. The figures added must not exceed those quoted in the following key.

Key

Definition 5.2		Times inserted, which must not cover more than 2½ hours
Definition 5.17		As required by the operator
Definition 5.24		Insert four figure UTC or local time and day
Paragraph 9.2	line 4	Not more than 1½
Paragraph 13.1	line 1	Not less than 30 or 45 minutes as appropriate
		Not less than 15
Paragraph 14.2	line 2	Not less than 30
Paragraph 15.2	line 1	Not less than 30
Paragraph 19.1/2		Add nominated person, add relevant letter, as appropriate
Paragraph 22.3 b) i)	line 2	Not less than 3 times the value given in Paragraph 13.1 line 1

Flight and Duty Time Limitations Scheme

Purpose

The purpose of this scheme is to interpret the requirements of the relevant articles of LYCARs, as they apply to the regulation of flight times and the avoidance of fatigue in crew members.

Aim

The aim of this document is to express the intent behind the published, relevant documents, thereby taking all reasonable precautions to ensure that crew members are adequately rested at the beginning of each flying duty period. To meet this aim, due note will be taken of length of duty cycles, periods of time off and cumulative duty hours.

Applicability

The scheme shall apply in relation to any duty carried out at the behest of the company by both flight crew and cabin crew. The scheme shall apply to all cabin crew carried as crew members.

Responsibilities

The Company

The company will publish rosters in advance so that operating crew can plan adequate pre-flight rest. Crew members will normally be given at least 7 days notice of days off.

‡ Before the start of the new roster year, the start and finish dates of each roster period, plus the expected publication date, will be issued to crew members.

The company will be satisfied that crew members employed on an irregular basis are not in breach of this FTL scheme before offering a flying duty to the individual.

Crew Members

Responsibility for the proper control of flight and duty time does not rest wholly with the company. Crew members have the responsibility to make optimum use of the opportunities and facilities for rest provided. They are also responsible for planning and using their rest periods properly. The Regulation places a further responsibility on crew members. Simply put, crew members shall not act as operating crew if they know, or suspect, that their physical or mental condition renders them unfit to operate. Furthermore, they must not fly if they know that they are or are likely to be in breach of this scheme.

Crew members not in the regular employ of the company must provide details of their previous 28 day totals of duty periods/flying hours before undertaking a flying duty on behalf of the company.

Definitions

Unless otherwise defined below all words, phrases, definitions and abbreviations, have identical meanings to those described in LYCARs Part-DIF as amended.

'Cabin Crew'

person employed to facilitate the safety of passengers, whose duties are detailed by the company or the aircraft commander. Such persons will not act as a member of the flight crew.

'Contactable'

short period of time other than on a day off, unless mutually agreed, during which the company requires a crew member to be contactable for the purpose of giving notification of a duty period which will commence not less than ten hours ahead. The contactable period will be between (*****) and (*****) local time.

'Crew'

member of the flight crew or cabin crew.

'Days Off'

Periods available for leisure and relaxation free from all duties. A single day off shall include 2 local nights. Consecutive days off shall include a further local night for each additional consecutive day off. A rest period may be included as part of a day off.

'Duty'

Any continuous period during which a crew member is required to carry out any task associated with the business of the company.

'Early Start Duty'

duty is an Early Start Duty if it commences in the period 0500 to 0659 hours local time.

'Flight Crew'

Those members of the crew of an aircraft who act as a pilot.

'Flying Duty Period (FDP)'

Any time during which a person operates in a helicopter as a member of its crew. It starts when the crew member is required by the company to report for a flight, and finishes at rotors stopped on the final sector.

'Late Finish Duty'

duty is a Late Finish when the duty finishes in the period 0100 to 0159 hours local time.

'Local Night'

period of 8 hours falling between 2200 hours and 0800 hours local time.

'Night Duty'

duty is a Night Duty if any part of that duty falls within the period 0200 to 0459 hours local time.

'Positioning'

The practice of transferring crew from place to place as passengers in surface or air transport at the behest of the company.

'Regular'

Regular, when applied to duties that are Late Finishes, Night or Early Starts, means a run of 4 or 5 consecutive duties, not broken by a period of 34 hours free from such duties, contained in a single 7 consecutive day period.

'Reporting Time'

The time at which a crew member is required by the company to report for any duty.

'Rest Period'

period of time before starting a flying duty period which is designed to give crew members adequate opportunity to rest before a flight.

'Rostered/Planned Duty'

duty period, or series of duty periods, with stipulated start and finish times, notified by the company to crew in advance.

'Rostering Period'

(*****) consecutive weeks.

'Scheduled Duty'

The allocation of a specific flight or flights or other duties to a crew member within the pre-notified rostered/planned series of duty periods.

'Sector'

The time between a helicopter first moving under its own power until it next comes to rest after landing, on the designated parking position.

'Split Duty'

flying duty period which consists of two or more sectors, separated by less than a minimum rest period.

'Standby Duty'

period during which the company places restraints on a crew member who would otherwise be off duty. However, it shall not include any time during which the crew member is contactable for the purpose of giving notification of a duty which is due to start 10 hours or more ahead.

'Suitable Accommodation'

well furnished bedroom which is subject to minimum noise, is well ventilated, and has the facility to control the levels of light and temperature.

'Travelling'

All time spent by a crew member transitting between the place of rest, and the place of reporting for duty.

'Week'

period of 7 consecutive days starting at (*****) on (*****).

Calculation of a Flying Duty Period

The maximum FDP shall be in accordance with paragraph 13. The times extracted from the table may be extended by use of split duty and commander's discretion, under the terms of paragraphs 15 and 17.

Additional Limits on Flying

Late Finishes/Early Starts

Sleep deprivation, leading to the onset of fatigue, can arise if a crew member is required to report early for duty, or finishes a duty late, on a number of consecutive days. Therefore, not more than 3 consecutive duties that occur in any part of the period 0100 to 0659 hours local time can be undertaken, nor may there be more than 4 such duties in any 7 consecutive days. Any run of consecutive duties (Late Finishes or Nights or Early Starts) can only be broken by a period of not less than 34 consecutive hours free from such duties. This 34 consecutive hours may include a duty that is not an Early, Late or Night duty.

Should any duties be scheduled to be carried out in any part of the period 0200 and 0459 hours local time, for a minimum of 2 and a maximum of 3 consecutive nights, then crew members will be free from all duties by 2100 hours local time before covering the block of consecutive night duties, such that the crew members can take a rest period during a local night.

NOTE: Operators may replace the above paragraph with one of the following choices, either Options A and B OR Options B and C. The operator may roster crew members for either 2 or 3 consecutive nights, but must ensure that the duty preceding this series of duties finishes by 2359 hours local time (2 nights) or 2100 hours local time (3 nights) as appropriate.

If it is preferred to retain the present contents then attention must be paid to the notes attached to the Options listed (below). These notes list the actions to be followed in the event that duty is inadvertently extended beyond the cut-off times (i.e. 2100 or 2359 hours).

Option A

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 3 consecutive nights, then crew members will finish the duty preceding this series of duties by 2100 hours local time before commencing the block of consecutive night duties, such that the crew members can take a rest period during a local night. If the duty immediately prior to the 3 consecutive night duties extends beyond 2100 hours local time and the individual crew member is willing to continue with the planned roster, (i.e. 3 consecutive night duties) then provided that duty preceding this series of duties finishes no later than 2359 hours local time, the schedule may continue.

NOTES: 1 Under this Option, if the crew member chooses not to continue the planned roster (after finishing duty between 2100 and 2359 hours local time) then only the planned first and second night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.2 Under this Option, if the duty finishes after 2359 hours local time, then only the first of the 3 consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

Option B - 2 consecutive night duties

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 2 consecutive nights, then crew members will finish the duty preceding this series of duties by 2359 hours local time before commencing the block of 2 consecutive night duties, such that the crew members can take a rest period during a local night.

NOTE: Under this Option in the event of 2359 hours local time being exceeded, then only the first of the 2 planned consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.

Option C - 3 consecutive night duties

Should any duties be scheduled to be carried out within any part of the period 0200 and 0459 hours local time, for 3 consecutive nights, then crew members will finish the duty preceding this series of duties by 2100 hours local time before commencing the block of consecutive night duties, such that the crew members can take a rest period during a local night.

NOTES: 1 Under this Option in the event of 2100 hours local time being exceeded, then only the first of the 3 planned consecutive night duties that impinge on any part of the period 0200 to 0459 hours local time may be undertaken.2 In all cases the limits in paragraph 7.2 or 7.3 must not be exceeded (i.e. maximum of 3 consecutive nights and 4 in 7 consecutive days).

7.3 Interrupted Rest

If, prior to the start of an FDP, a crew member's rest period is interrupted for operational reasons between 2300 and 0700 hours local time, the following shall apply:

If the disturbance happens earlier than 1 hour before the planned departure from the crew member's place of rest, the time elapsed between that disturbance and the departure time from the place of rest minus 1 hour, is to count as part of the subsequent FDP.

NOTE: The phrase `operational reasons' applies to such actions as contacting/being contacted by the customer, checking weather, liaison with ATC or any action pertaining to the planned flight.

Mixed Duties

8.1 When a crew member is required to report for duty in advance of the stipulated report time for a scheduled flight, to carry out a task at the behest of the company, then the time spent on that task shall be part of the subsequent FDP.

‡ 8.2 **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 commercial air 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.

‡ 8.3 **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 flying and 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 flight crew helicopter. The pilot may then continue beyond the single flight crew FDP limit in a two flight crew operation up to the two flight crew FDP and flying hour maxima, but may only fly as a co-pilot.

Travelling Time

Travelling time, other than that time spent on positioning, does not count as duty.

Travelling time, from home to departure aerodrome, if long distances are involved, is a factor influencing any subsequent onset of fatigue. If the journey time from home to normal departure airfield is usually in excess of (*****) hours, crew members should make arrangements for temporary accommodation nearer to base.

When crew members are required to travel from their home to an aerodrome other than the one from which they normally operate, any travelling time over and above the journey time from home to the usual operating aerodrome shall be classed as positioning. For the purposes of this sub-paragraph the additional travelling times to the following airfields are:

(name of airfield) mins

(name of airfield) mins

Delayed Reporting Time in a Single FDP

When a crew member is informed of a delay to the reporting time due to a changed schedule, before leaving the place of rest, the FDP shall be calculated as follows. When the delay is less than 4 hours, the maximum FDP allowed will be based on the original report time and the FDP will start at the actual report time. When the delay is 4 hours or more, the maximum FDP allowed will be based on the more limiting time band of the planned report time and the actual report time and the FDP will start 4 hours after the original report time.

When the company informs a crew member before leaving the place of rest of a delay in reporting time of 10 hours or more ahead, and that crew member is not further disturbed by the company until a mutually agreed time, then that period is classed as a rest. If, upon the resumption of duty, further delays occur then the appropriate criteria in this paragraph and paragraph 10.1 above will be applied to the re-arranged reporting time.

Positioning

Time spent on positioning, at the behest of the company, before carrying out an FDP, will count as duty. The FDP commences not later than the time at which the crew member reports for the positioning journey, or positions in accordance with sub- paragraph 9.3.

Positioning after completion of an FDP is counted as duty, and the subsequent rest period must account for the FDP plus the positioning journey.

If, after a positioning journey, the crew member spends less than a minimum rest period at suitable accommodation provided by the company, and then carries out an FDP, the positioning will be counted

as a sector if the allowable FDP is being extended by use of a split duty.

‡ 12 Standby Duty

12.1 The time of start, end and nature of the standby duty will be defined and notified to crew members. The time a standby duty starts determines the allowable FDP, except that when the actual FDP starts in a more limiting time band, then that FDP limit will apply. However, when standby is undertaken at home, or in suitable accommodation provided by the company, during the period 2200 to 0800 hours local time and a crew member is given 2 hours or less notice of a report time, the allowable FDP starts at the report time for the designated reporting place.

12.2 When a crew member is on standby duty on immediate readiness at the airport or helicopter operating site, then the allowable FDP is calculated using the start time of the standby duty.

12.3 If a crew member is called out from standby, the standby duty will cease at the notified start time of the FDP, that is to say when the crew member reports at the designated reporting point.

12.3.1 The following limits apply:

Duty	Maximum Duration
Standby Duty (all cases)	12 hours
Standby followed by an FDP	As in Case A and B below

Case A

If a crew member is called out from standby to conduct an FDP before completing 6 hours standby duty then the total duty period allowed is the sum of the time spent on standby and the FDP from paragraph 13.

Case B

If a crew member is called out from standby to conduct an FDP after completing 6 or more hours standby duty, then the total duty period allowed is the sum of all the time spent on standby and the FDP, reduced by the amount of standby worked in excess of 6 hours.

NOTES: 1 The method of adding time spent on standby to cumulative totals is defined in paragraph 22.3.2 The reference to 'total duty period' applies **only** to the sum of the standby time achieved + the allowable FDP obtained from paragraph 13. On the day, for cumulative duty totals and for minimum rest purposes, the total duty achieved will be standby time achieved + FDP achieved + post flight duties + any positioning.

12.4 When any period of standby finishes, during which a call-out has not occurred, at least 12 hours rest must follow prior to the next duty period. Similarly, following the end of a contactable period or periods, at least 10 hours must elapse prior to the next duty period.

Maximum FDP - Helicopters

The standard reporting time prior to flight is (*****). Pre-flight duties are part of the FDP; (*****) minutes duty must be allowed for post-flight activities. The time spent between reporting for a flight and the completion of post-flight tasks determines the length of the subsequent rest period. If this "period" for post FDP duties is routinely exceeded then the post FDP duty period stated in the scheme must be revised to better represent the actual time taken.

A non-standard reporting time designed to take advantage of an increased FDP from a more favourable time band, must not be used.

Maximum FDP - Helicopter

Local	SINGLE PILOT		TWO PILOTS	
	Length Flying DutyPeriod	Maximum Flying Hours	Length Flying DutyPeriod	Maximum Flying Hours
0600-0659				
0700-0759				
0800-1359				
1400-2159				
2200-0559				

13.4 Report times must not be reduced in order for crew members to achieve their required rest prior to an FDP.

Additional Limits on Helicopter Flying

Repetitive Short Sectors

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.

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

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

‡ 14.4 **Survival Suits**

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

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;

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.

Extension of Flying Duty Period by Split Duty

The calculation of a permitted FDP does not rely on the number of sectors flown, but to increase an FDP as allowed for in this paragraph then at least one sector must be flown before any extension is permitted. The extensions allowed are set out below:

Consecutive Hours Rest	Maximum Extension of the FDP
Less than 2	NIL
2 - 3 (see Note)	1 hour
3 - 10	A period equal to half the consecutive hours rest taken.

NOTE: Consecutive hours of rest between 2 and 3 hours will only be used once in any single FDP.

The rest period shall not include the minimum total of (*****) minutes allowed for immediate post flight and pre-flight duties. When the rest period is 6 hours or less it will suffice if a quiet and comfortable place, not open to the public, is available. Rest cannot be taken in the helicopter. If the rest period is more than 6 consecutive hours, then suitable accommodation will be provided.

Rest Periods

Crew members will be notified in good time of a flying duty period so that sufficient and uninterrupted pre-flight rest can be obtained. When away from base opportunities and facilities for adequate preflight rest will be provided by the company in suitable accommodation. When flights are carried out at such short notice that it is impracticable for the company to arrange suitable accommodation, then this responsibility devolves to the aircraft commander.

The minimum rest period which must be taken before undertaking a flying duty period shall be:

at least as long as the preceding duty period, or

12 hours, whichever is the greater.

When away from base, in the case when the rest period earned by a crew member is 12 hours, and suitable accommodation is provided by the company, then that rest period may be reduced by one hour. In such circumstances, if the travelling time between the aerodrome and the accommodation is more than 30 minutes each way then the rest period will be increased by the amount the total time spent travelling exceeds one hour. The room allocated to the crew member will be available for occupation for a minimum of 10 hours. This sub-paragraph does not apply to rest periods that exceed 12 hours.

Exceptionally, at home base, individual crew members may be asked to exercise their discretion to reduce rest by up to a maximum of one hour but only to a minimum of 12 hours for flight crew and 11 hours for cabin crew. If discretion is used, it is the responsibility of the operator and the crew member to inform the commander of the flight immediately following the rest period, that a reduced rest period has been taken.

If the preceding duty period, which includes any time spent on positioning, exceeded 18 hours, then the ensuing rest period must include a local night.

After being called out from a standby duty the length of the minimum rest period shall be determined by the length of standby duty, plus any time spent on positioning, and any FDP completed.

Crew members who inform the company that they are having difficulty in achieving adequate pre-flight rest will be given the opportunity to consult an aviation medical specialist.

Aircraft Commander's Discretion to Extend a Flying Duty Period

An aircraft commander may, at his discretion, and after taking note of the circumstances of other members of the crew, if carried, extend an FDP beyond that permitted in paragraph 13, provided he is satisfied that the flight can be made safely. The extension shall be calculated according to what actually happens, not on what was planned to happen. An extension of 3 hours is the maximum permitted, except in cases of emergency (see Note).

A commander is authorised to exercise his discretion in the following circumstances and to the limits set. In a Flying Duty Period involving 2 or more sectors, up to a maximum of 2 hours discretion may be exercised prior to the first and subsequent sectors. On a single sector flight and immediately prior to the last sector on a multi- sector flight, a commander may use the maximum amount of discretion permitted.

A commander may exercise discretion to extend an FDP following a reduced rest period, only exceptionally, and then only to the extent necessary to allow for unforeseen circumstances that become apparent during the last sector.

NOTE: In respect of an extension to a flying duty period, an emergency is a situation which in the judgement of the commander presents a serious risk to the health or safety of crew and passengers, or endangers the lives of others.

Aircraft Commander's Discretion to Reduce a Rest Period

An aircraft commander may, at his discretion, and after taking note of the circumstances of other members of the crew, if carried, reduce a rest period, but only insofar as the room allocated to the crew member must be available for occupation for a minimum of 10 hours. The exercise of such discretion must be considered exceptional and must not be used to reduce successive rest periods. If the preceding FDP was extended, the rest period may be reduced, provided that the subsequent allowable FDP is also reduced by the same amount. In no circumstances may a commander exercise discretion to reduce a rest period below 10 hours at accommodation.

When away from base and where an individual crew member separates from the crew, or the crew as a whole splits up, then any use of discretion to reduce rest becomes a decision for an individual crew member. The decision to continue with the next flight and the submission of an associated discretion report is the responsibility of the relevant commander after the crew member, and operator if in a position to do so, has informed the commander that a reduced rest period has been taken.

Reporting Exercise of Discretion

Whenever a commander extends an FDP it shall be reported to (*****) on a Discretion Report Form, in the format of (*****). If the extension is greater than 2 hours, or discretion is exercised after any reduced rest period, then the company will submit the commander's written report, together with company comments, to the Authority, within 14 days of the event.

Whenever a commander reduces a rest period, it shall be reported to (*****) on a Discretion Report Form, in the format of (*****). If the reduction is more than 1 hour, then the company will submit the commander's written report together with comments by the company to the AUTHORITY, within 14 days of the event.

Days Off

Wherever possible, and if required by the crew member, days off will be taken in the home environment. A single day off for helicopter crew shall include two local nights, and shall be of at least 36 hours duration. A planned rest period may be included as part of a day off.

Crew members will:

not work more than 7 consecutive days, and

have 2 consecutive days off following a period of 7 consecutive days duty, and

have 2 consecutive days off in any consecutive 14 days, and have at least 3 days off in any consecutive 14 days, and

have a minimum of 7 days off in any consecutive 4 weeks, and

have an average of at least 8 days off in each consecutive 4 week period, averaged over 3 such periods.

NOTE: A single day off may only follow up to a maximum of 6 consecutive days duty.

Absolute Limits on Flying Hours

The maximum flying hours for flight crew will be 90 hours in 28 consecutive days, and 800 hours in any period of 12 months.

Cumulative Duty and Flying Hours

Maximum duty hours for flight crew shall not exceed: 60 hours in any 7 consecutive days and200 hours in any 28 consecutive days

The maximum number of flying hours which a pilot may be permitted to undertake are:

Single Day	Table in paragraph 13
Any 3 consecutive days	18 hours
Any 7 consecutive days	30 hours
Any 3 consecutive 28 day periods	240 hours

Calculation of Cumulative Duty Hours

Duty hours shall be added to cumulative totals in accordance with the following: a) to count

in full:

i) Duty periods and flying duty periods, plus subsequent post-flight duties ii) All

standby duty, except that specified in b) i) and ii) below

iii) The time spent on positioning

b) To count as half the time on duty:

The standby duty, when the period of notice given to the crew member by the company before reporting for duty is (*****).

The standby duty when undertaken at home, or in suitable accommodation provided by the company, takes place during the period 2200 to 0800 hours local time, and the crew member can take undisturbed rest and is not called out for duty.

‡ 23 Rules Relating to Cabin Crew

23.1 The requirements detailed in this paragraph will apply to all cabin crew employed as crew members and are not intended to apply only to those cabin crew carried to meet the provisions of Regulation 002/2016.

23.2 The limitations applying to cabin crew are those applicable to flight crew members but with the following differences:

A flying duty period can be 1 hour longer than that permitted for flight crew. The FDP and limits set on early starts for cabin crew will be based on the time at which the flight crew report for their flying duty period, but that FDP will start at the report time of the cabin crew.

For cabin crew the minimum rest period which will be provided before undertaking a flying duty period shall be:

at least as long as the preceding duty period less than one hour; or

11 hours; whichever is the greater.

The combined sum of standby time and subsequent FDP can be 1 hour longer than that permitted to flight crew.

The maximum duty hours for cabin crew will not exceed: 60 hours in any 7 consecutive days105 hours in any 14 consecutive days 210 hours in any 28 consecutive days.

The annual and 28 day limits on flying hours appertaining to flight crew do not apply.

Records to be Maintained

Records for the duty and rest periods of all flying staff shall include: For each crew member:

The beginning, end and duration of each duty and flying duty period, and function performed during the period. Duration of each rest period prior to a flying duty or standby duty period. Dates of days off.
7 consecutive day totals of duty.

For each flight crew member:

Daily and 7 consecutive day flying hours.

Records shall be preserved for at least 12 calendar months from the date of the last relevant entry.

Additionally, copies of all aircraft commanders' discretion reports of extended flying duty periods and reduced rest periods will be retained for a period of at least six months after the event.

Pleasure Flying Supplement - Helicopters

The following will apply whenever the pilot is solely engaged in Commercial Pleasure flying duties in a single FDP.

Flying Duty Period

single FDP will not exceed 10 hours, except that this may be extended to 11 hours for the **sole purpose** of positioning the aircraft from/to the operator's base.

Flying Hours

pilot will not spend more than 6 hours at the controls in any one flying duty period. When positioning the pilot may spend an additional 1 hour at the controls for the sole purpose of positioning the aircraft.

The maximum period which a pilot may spend continuously at the controls without a break is 3 hours.

During the FDP the pilot shall have breaks of 30 minutes duration according to the following table:

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

Rest Period

At the completion of an FDP solely concerned with commercial pleasure flying, and if applicable the return of the aircraft to the operator's base, the flight crew will have a rest period of at least 12 hours.

Air Ambulance Supplement - Helicopter

Dedicated Air Ambulance

When carrying out an Air Ambulance flight, the allowable FDP extracted from paragraph (***** insert as appropriate) in the company's approved FTL scheme may be increased by up to a maximum of 4 hours, subject to all the following conditions being met:

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

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.

The crew must have had the full entitlement of rest relating to the preceding duty prior to starting an Air Ambulance flying duty.

Single Pilot Crew

If, exceptionally, the FDP is scheduled to be extended beyond the 4 hours permitted by this supplement then an additional qualified commander must be part of the crew, at least until the helicopter 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 the Authority.

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 the Authority.

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

At least 48 hours must elapse between the end of one extended Air Ambulance FDP and the start of another Air Ambulance FDP.

A pilot can only fly 3 Air Ambulance extended FDPs in any 28 consecutive days.

The relevant duty records must show where an FDP was conducted in accordance with this supplement.

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

Combined Commercial air transport/Air Ambulance

On the day, if an operator wishes to use a helicopter and crew for a combination of Commercial air transport and Air Ambulance work then the FDP specified must be that obtained from paragraph (* insert as appropriate). Extension of the allowable FDP by the use of split duty and Commander's discretion, as stated in paragraphs (*insert as appropriate) of the main scheme, is allowed. The extension permitted for dedicated Air Ambulance (in paragraph 1 above), does not apply in this case. **Appendix * Commander's Discretion Report**

Operator Aircraft Type

Flight Number Commander

Date

NOTE: If discretion exercised for part crew or individuals state name and operating capacity below.

Commander*****/First Officer*****/Cabin Attendant***** (Delete as necessary) **Part**

A - Extension of Flying Duty Period/Flying Hours

Voyage Details

Schedule (Planned)			**Actual**		
	Place	UTC Local		UTC	Local
Duty to start			Duty started		
Depart			Departed		
Arrive			Arrived		

Depart	Departed
Arrive	Arrived
Depart	Departed
Arrive	Arrived
Depart	Departed
Arrive	Arrived
Depart	Departed
Arrive	Arrived
FDP to end	FDP ended

Scheduled FDP Actual FDP Hrs Mins

Split duty: Actual Time Off ..... On ..... Credit FDP Hrs Mins

Max. Allowable FDP Hrs Mins

Amount of Commander's Discretion Exercised FDP Hrs Mins

Maximum Flying Hours Permitted ..... in 28 days/1 year period. Hours Flown ..... **Part B - Reduction of Rest**

Last duty started UTC/Local .....
Last duty ended UTC/Local .....
Rest earned (Hours)
Calculated earliest next available UTC/Local .....
Actual start of next FDP UTC/Local .....
Rest period reduced by .....

NOTE: All times to be recorded as date/time six-figure groups, expressed in both UTC and Local Time.

Commander's Signature ..... Date .....

Part C - Commander's Report

Signed. .....

Date .....

Operator's Remarks/Action Taken

Signed. .....

Date .....

Forwarded to Authority

Filed

Annex E The Preparation of a Roster

Introduction

The production of any roster is dependent upon the nature of the operator's business. At best, the example given for rostering staff in this Annex can only illustrate a broad approach to the instructions an operator may wish to issue to the appropriate staff.

The content of this Annex draws the attention of those employed in the preparation and day- to-day management of rosters to some basic principles, which when followed can lead to the even distribution of the workload within a company. The table in paragraph 11 is not designed to be a definitive statement of the time off that crew must have on return to base, but is presented as an example of what can be done to remove uncertainty in the minds of rostering officers and crew.

Guidance for Rostering Staff
Introduction

This section is designed to give guidance on the preparation of a roster and the day to day management of the published roster to staff employed in the Rostering Section.

The construction of a workable roster is a complex task. The Rostering Officer needs to consider many variables, before allocating crew to specific duties. The consideration of factors affecting human behaviour cannot be ignored. The finished product must strike a balance between the commercial needs of the company and the capacity of individual crew members to work effectively. It is of the utmost importance that rosters are seen by each crew member as distributing the amount of work to be done evenly amongst those involved.
The watchword is `fairness'.

On some occasions it will be impossible to produce a well balanced roster, and some will work harder than others. When this situation cannot be avoided, any unbalanced distribution of work should be redressed

where possible in the next roster. In general terms, staff should endeavour to allocate duties evenly over each 3 month period.

Reference Documents

The construction of a roster is governed by many rules and regulations that are contained within several publications. It is the responsibility of rostering staff to be familiar with the relevant content of the following documents:

ORO.FTL of LYCARs

This appendix, as amended

ICAO Document 9966, Edition 2

Company Flight Time Limitation Scheme as approved

Agreements on scheduling reached between the company and crew (if any)

Company Training Manual

Background information on the effects of long range operations and heavy short range schedules on individuals is given in the document AGARD-AG-270E, 2nd Edition, Chapter 6.

Roster Planning

As stated in the Introduction, the production of a workable and balanced roster requires consideration of much background knowledge and the constant application of the principle of fairness. The end result should satisfy the requirements of the company and individual crew members, but it is accepted that some personal inconvenience will be experienced by individuals from time-to-time. This must be borne if the company is to flourish and continue to provide employment.

The rostering officer must utilise the following principles when constructing a roster:

Work within the requirements of the company scheme.

Be fair in the allocation of duties; give an equitable distribution of workload and time off, paying particular attention to weekends.

Be consistent.

Provide individual crew members with a stable roster as far as practicable.

Day-to-Day Management

The best planned roster will be subject to disruption, brought about by circumstance that is impossible to predict. The unserviceability of an aircraft or the sudden imposition of flow control cannot be foreseen, but these factors and others can have a profound effect on a roster.

To control such disruptions requires that those involved are fully aware of the current state of the affected roster. This situation can only be achieved by a constant and accurate updating of rosters as the changes occur, and the certainty that all relevant factors are taken into account before adjustments are made to what was planned.

In this situation certain aspects of the FTL scheme assume a more important position than others.
Rostering Officers will need to consider the following:

Delayed reporting.

Availability of Commander's discretion (which must not be assumed).

Use of standby crew, taking into account length of standby duty and required FDP. d) Cumulative duty hours.

Wherever possible, the decision reached should cause minimum disruption to the planned roster, and still maintain a balanced workload amongst crew members - a difficult, demanding, yet rewarding task.

A Suggested Guide for Rostering Officers - Days Off

The table below provides an easy reference for days off at base, allocated to crew members on return from a flying duty or series of flying duties. If an individual crew member requests less days off than allowed for in the table this may be granted, provided the actual time off does not contravene the provisions of the FTL scheme.

Days Off Calculation Table

Return Sector Length	Duration of	Time Zones Crossed	Minimum base turn around MBTR	
			Flight	Cabin
Up to 7	Up to 48	Up to 3	min.rest	min.rest
Up to 7	-			
to 10	-			
to 10	- 216			
to 14	-			
to 14	- 216			
hours	-			
hours	- 216			

Summary

Without wishing to labour the point, when it is apparent that trips and time off, particularly weekends, are fairly distributed then individuals will have no cause for complaint, and the difficulties associated with the duties of a rostering officer will be minimised.

Annex F Aeroplane Variations

Introduction

With the increasing range of modern aircraft, for example the B777/A330, the Authority has concluded that within very carefully controlled circumstances and with a number of built-in compensating factors, it is possible to extend the FDP presently allowed for two-pilot crew. The compensating factors are designed to prevent the onset of fatigue by requiring progressively an increase in days off, reduction of overall duty hours and a limit on the number of extended FDPs permitted.

Where operators' FTL schemes contain a number of different standard Variations each of which contain suitable compensating factors, there must be no overlap when using the Variations concurrently. For example where a Florida One Variation requires 3 days off afterwards and then a Level 2 Variation is to be used which requires a single day off beforehand, a total of 4 days off must be achieved between the two Variations.

Companies are invited to apply to incorporate any of the following variations: Standard Variations Levels 1 and 2. Other variations may be considered based on an appropriate safety case.

Standard Variations, Extended Single Flight Duty Period

Introduction

The Variations are identified as Level 1 and 2, allowing for an increase in the planned FDP of 30 and 60 minutes respectively. They are intended to allow flights from Libya and return, or a two-sector flight from or to Libya, within a single extended FDP. Sector lengths over 7½ hours will continue to be factorised or will require an additional pilot as a flight crew member.

An operator wishing to utilise one of the Variations in this package can only employ one of the three that are available at any one time for each fleet of aircraft. In this context, where a mix of Boeing 777 and 787 aircraft is used and pilots are qualified on both, these two types are considered to comprise one fleet.

The selection of the level appropriate to a schedule must be nominated in advance by the operator and notified to all crew members. Where more than one schedule is affected, the more limiting will lead to the level chosen. For example, where one schedule requires an extension of 20 minutes and another 1 hour then Level 2 will be applicable to both schedules and all crew members involved.

LEVEL 1 - FDP Plus 30 minutes

Flight crew

The allowable FDP obtained from Table A may be extended by 30 minutes and a sector need not be considered as a multi-sector flight until the sector is scheduled for more than 7½ hours subject to the following conditions:

Flight crew members must be off duty by 2200 hours local on the day prior to the extended FDP so that either a rest period equivalent to the preceding duty period or a minimum of 12 hours rest is achieved, and discretion to reduce rest prior to or following such a flight may not be exercised

Flight crew members must be acclimatised.

Commander's normal discretion to extend an FDP is reduced to a maximum of 2½ hours with no more than 1½ hours being exercised prior to leaving the initial point of departure.

Where a commander exercises discretion which uses any portion of the time allowed after leaving the initial point of departure, then a report will be submitted to the Authority.

A maximum of 4 extended FDP flights may be undertaken in any consecutive 28 day period.

Maximum duty hours will be 185 hours in any 28 consecutive day period in which the use of this extension takes place.

Minimum number of days off for flight crew operating one or more of these flights will be 8 days in any period of 4 consecutive weeks in which the use of this extension takes place.

Despatch crew will not be used.

Extension of FDP by split duty is not permitted.

Cabin crew

a) Cabin crew will work to normal rules except that they must be acclimatised.

LEVEL 2 - FDP Plus 60 minutes

Flight crew

The allowable FDP obtained from Table A may be extended by 60 minutes and a sector need not be considered as a multi-sector flight until the sector is scheduled for more than 7½ hours subject to the following conditions:

2 local nights (minimum 34 hours) free from all duties must be achieved prior to an extended flight duty period.

Flight crew members must be acclimatised.

Commander's normal discretion to extend an FDP is reduced to a maximum of 2 hours with no more than 1 hour being exercised prior to leaving the initial point of departure.

Where a commander exercises discretion which uses any portion of the time allowed after leaving the initial point of departure, then a report will be submitted to the Authority.

One day off must be achieved following the extended FDP.

A maximum of 3 extended FDP flights may be undertaken in any consecutive 28 day period.

Maximum duty hours will be 180 hours in any 28 consecutive day period in which the use of this extension takes place.

Minimum number of days off for flight crew operating one or more of these flights will be 9 days in any period of 4 consecutive weeks in which the use of this extension takes place.

Despatch crew must not be used.

Extension of FDP by split duty is not permitted.

Cabin crew

Cabin crew may be planned for an extra 30 minutes on their normal allowable FDP.

Cabin crew members must be off duty by 2200 hours local on the day prior to the extended FDP so that either a rest period equivalent to the preceding duty period or a minimum of 11 hours rest is achieved, and discretion to reduce rest prior to or following such a flight may not be exercised.

Cabin crew members must be acclimatised.

A maximum of 4 extended FDP flights may be undertaken in any consecutive 28 day period.

One day off must be achieved following the extended FDP.

Maximum duty hours will be 205 hours in any 28 consecutive day period in which the use of this extension takes place.

Minimum number of days off for cabin crew operating one or more of these flights will be 8 days in any period of 4 consecutive weeks in which the use of this extension takes place.

Annex G Helicopter Variations

Companies are invited to apply to incorporate any of the following variations: Extended FDP Variation known as the Silverstone Variation and Four Early Starts

Silverstone Variation

The wording to be included in the company's scheme should be as follows:

"Extended FDP Variation

The Company has a Standard Variation to the Approved FTL Scheme which permits an extended FDP on the day for special events such as Silverstone. The Company will notify the Authority, at least 24 hours ahead, of their intention to make use of this Variation. Duty records are to be annotated whenever use is made of this Variation.

The Variation is as follows: (Enter relevant wording from the examples) "

Example of 12 Hour Variation

This Variation permits the Scheduled flying duty period for any pilot of any helicopter operated by the said company to be extended to 12 hours provided that:

such FDP lies wholly within the period 0600 to 2200 hours local times;

a rest break free from all duties of at least three consecutive hours shall be provided for the pilots within the said FDP; and

the normal rest period shall be given to the pilots before and after the extended FDP in accordance with the Approved FTL Scheme and it shall not be reduced by discretion.

This Variation is valid only on…..... in connection with flying tasks associated with(enter details).

Example of 13 Hour Variation

This Variation permits the Scheduled flying duty period for any pilot of any helicopter operated by the said company to be extended to 13 hours provided that:

such FDP lies wholly within the period 0700 to 2200 hours local times;

a rest break free from all duties of at least four consecutive hours shall be provided for the pilots within the said FDP;

pilots shall be free of all duties from 1700 hours on the day prior to this Variation;

the normal rest period shall be given to the pilots before and after the extended FDP in accordance with the Approved FTL Scheme and it shall not be reduced by discretion.

This Variation is valid only on..... in connection with flying tasks associated with..... (enter details).

Four Early Starts

A crew member may undertake four consecutive early starts subject to the following conditions:

The duty carried out immediately prior to four early starts may not commence before 0800 hours local.

The earliest commencement of any of these duties shall not be before 0500 hours local.

When reporting for duty at any time within the period 0500 to 0659 hours local, the maximum FDP shall not exceed 9 hours. The maximum flying time shall not exceed 6 hours.

A minimum of two days off shall follow any achieved period of four consecutive early starts.

DECLARATION
in accordance with LYCAR - air operations

Operator

Name:

Place in which the operator has its principal place of business or, if the operator has no principal place of business, 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 and applicability date of the change:

Information on aircraft, operation and continuing airworthiness management organisation(1):

Type(s) of aircraft, registration(s) and main base:

Aircraft MSN	Aircraft type	Aircraft registration(2)	Main base	Type(s) of operation(3)	Organisation responsible for the continuing airworthiness management(4)

Where applicable, details of approvals held (attach list of specific approvals, including specific approvals granted by a third country, to the declaration, if applicable).

Where applicable, details of specialised operations authorisation held (attach authorisations, if applicable).

Where applicable, list of alternative means of compliance with references to the associated AMCs they replace (attach AltMoC).

Statements

☐The operator complies, and will continue to comply, with the essential requirements set out in the relevant LYCARs

.

☐The management system documentation, including the operations manual, comply with the requirements of Part-ORO, Part-SPA, Part-NCC or Part-SPO of LYCAR Air Operations, and all flights will be carried out in accordance with the provisions of the operations manual as required by point ORO.GEN.110(b).

☐All aircraft operated hold a valid certificate of airworthiness in accordance with the applicable LYCARs or specific airworthiness requirements applicable to aircraft registered in a third country and subject to a lease agreement.
☐All flight crew members hold a licence in accordance with LYCAR – Air Crew as required by point ORO.FC.100(c) and cabin crew members, where applicable, are trained in accordance with Subpart CC
☐(If applicable) The operator has implemented and demonstrated conformance to a recognised industry standard. Reference of the standard: Certification body: Date of the last conformity audit:
☐The operator will notify to the Authority any changes in circumstances affecting its compliance with the essential requirements set out in the relevant LYCARs and with the requirements as declared to the Authority through this declaration and any changes to the information and lists of AltMoC included in and annexed to this declaration, as required by point ORO.GEN.120(a) .
☐The operator confirms that the information disclosed in this declaration is correct.
Date, name and signature of the accountable manager

(a) If there is not enough space to list the information in the space of the declaration, the information shall be listed in a separate annex. The annex shall be dated and signed.

(b) If the aircraft is also registered with an AOC holder, specify the AOC number of the AOC holder.

(c) "Type(s) of operation" refers to the type of operations conducted with this aircraft, e.g. non-commercial operations or specialised operations such as aerial photography flights, aerial advertising flights, news media flights, television and movie flights, parachute operations, sky diving, maintenance check flights.

(d) Information about the organisation responsible for the continuing airworthiness

PART CAT - COMMERCIAL AIR TRANSPORT OPERATIONS

E. Libyan Civil Aviation Regulation on Air operations is amended by the replacement of Part CAT Commercial Air Transport Operations - Part CAT as follows:

"PART-CAT COMMERCIAL AIR TRANSPORT OPERATIONS

[PART-CAT]

SUBPART A GENERAL REQUIREMENTS

SECTION 1 Motor-powered aircraft

CAT.GEN.MPA.100 Crew responsibilities

The crew member shall be responsible for the proper execution of his/her duties that are:

related to the safety of the aircraft and its occupants; and

specified in the instructions and procedures in the operations manual.

Crew members shall:

report to the commander any fault, failure, malfunction or defect which the crew member believes may affect the airworthiness or safe operation of the aircraft including emergency systems, if not already reported by another crew member;

report to the commander any incident that endangered, or could have endangered, the safety of the operation, if not already reported by another crew member;

comply with the relevant requirements of the operator's occurrence reporting schemes;

comply with all flight and duty time limitations (FTL) and rest requirements applicable to their activities;

when undertaking duties for more than one operator:

maintain his/her individual records regarding flight and duty times and rest periods as referred to in applicable FTL requirements; and

provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements.

The crew member shall not perform duties on an aircraft:

when under the influence of psychoactive substances or when unfit due to injury, fatigue, medication, sickness or other similar causes;

until a reasonable time period has elapsed after deep water diving or following blood donation;

if applicable medical requirements are not fulfilled;

if he/she is in any doubt of being able to accomplish his/her assigned duties; or

if he/she knows or suspects that he/she is suffering from fatigue or feels otherwise unfit such that his/her task achievement/decision making has deteriorated to the extent that the flight may be endangered.

CAT.GEN.MPA.105 Responsibilities of the commander

The commander, in addition to complying with CAT.GEN.MPA.100, shall:

be responsible for the safety of all crew members, passengers and cargo on board, as soon as the commander arrives on board the aircraft, until the commander leaves the aircraft at the end of the flight;

be responsible for the operation and safety of the aircraft:

for aeroplanes, from the moment the aeroplane is first ready to move for the purpose of taxiing prior to take-off, until the moment it finally comes to rest at the end of the flight and the engine(s) used as primary propulsion unit(s) is(are) shut down;

for helicopters, when the rotors are turning;

have authority to give all commands and take any appropriate actions for the purpose of securing the safety of the aircraft and of persons and/or property carried therein;

have authority to disembark any person, or any part of the cargo, that may represent a potential hazard to the safety of the aircraft or its occupants;

not allow a person to be carried in the aircraft who appears to be under the influence of alcohol or drugs to the extent that the safety of the aircraft or its occupants is likely to be endangered;

have the right to refuse transportation of inadmissible passengers, deportees or persons in custody if their carriage increases the risk to the safety of the aircraft or its occupants;

ensure that all passengers are briefed on the location of emergency exits and the location and use of relevant safety and emergency equipment;

ensure that all operational procedures and checklists are complied with in accordance with the operations manual;

not permit any crew member to perform any activity during critical phases of flight, except duties required for the safe operation of the aircraft;

ensure that:

flight recorders are not disabled or switched off during flight;

in the event of an occurrence other than an accident or a serious incident that shall be reported according to ORO.GEN.160(a), flight recorders' recordings are not intentionally erased; and

in the event of an accident or a serious incident, or if preservation of recordings of flight recorders is directed by the investigating authority:

flight recorders' recordings are not intentionally erased;

flight recorders are deactivated immediately after the flight is completed; and

precautionary measures to preserve the recordings of flight recorders are taken before leaving the flight crew compartment.;

decide on acceptance of the aircraft with unserviceabilities in accordance with the configuration deviation list (CDL) or the minimum equipment list (MEL);

ensure that the pre-flight inspection has been carried out in accordance with the requirements of LYCARs as amended;

be satisfied that relevant emergency equipment remains easily accessible for immediate use.

record, at the termination of the flight, utilisation data and all known or suspected defects of the aircraft in the aircraft technical log or journey log of the aircraft to ensure continued flight safety

Hazardous flight conditions encountered, other than those associated with meteorological conditions, shall be reported to the appropriate aeronautical station as soon as possible. The reports so rendered shall give such details as may be pertinent to the safety of other aircraft.

The commander, or the pilot to whom conduct of the flight has been delegated, shall, in an emergency situation that requires immediate decision and action, take any action he/she considers necessary in the interest of safety. In such cases he/she may deviate from rules, operational procedures and methods. In the event of any such deviation the commander is responsible for notifying the appropriate local authority without delay.

Whenever an aircraft in flight has manoeuvred in response to an airborne collision avoidance system (ACAS) resolution advisory (RA), the commander shall submit an ACAS report to the Authority.

Bird hazards and strikes:

Whenever a potential bird hazard is observed, the commander shall inform the air traffic service (ATS) unit as soon as flight crew workload allows.

Whenever an aircraft for which the commander is responsible suffers a bird strike that results in significant damage to the aircraft or the loss or malfunction of any essential service, the commander shall submit a written bird strike report after landing to the Authority.

The commander shall, as soon as possible, report to the appropriate air traffic services (ATS) unit any hazardous weather or flight conditions encountered that are likely to affect the safety of other aircraft.

CAT.GEN.MPA.110 Authority of the commander

The operator shall take all reasonable measures to ensure that all persons carried in the aircraft obey all lawful commands given by the commander for the purpose of securing the safety of the aircraft and of persons or property carried therein.

CAT.GEN.MPA.115 Personnel or crew members other than cabin crew in the passenger compartment

The operator shall ensure that personnel or crew members, other than operating cabin crew members, carrying out their duties in the passenger compartment of an aircraft:

are not confused by the passengers with operating cabin crew members;

do not occupy required cabin crew assigned stations;

do not impede operating cabin crew members in their duties.

CAT.GEN.MPA.120 Common language

The operator shall ensure that all crew members can communicate with each other in a common language.

CAT.GEN.MPA.124 Taxiing of aircraft

The operator shall establish procedures for taxiing of aircraft in order to ensure safe operation and in order to enhance runway safety.

CAT.GEN.MPA.125 Taxiing of aeroplanes

The operator shall ensure that an aeroplane is only taxied on the movement area of an aerodrome if the person at the controls:

is an appropriately qualified pilot; or

has been designated by the operator and:

is trained to taxi the aircraft;

is trained to use the radio telephone;

has received instruction in respect of aerodrome layout, routes, signs, marking, lights, air traffic control (ATC) signals and instructions, phraseology and procedures;

is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.

CAT.GEN.MPA.130 Rotor engagement - helicopters

A helicopter rotor shall only be turned under power for the purpose of flight with a qualified pilot at the controls.

CAT.GEN.MPA.135 Admission to the flight crew compartment

The operator shall ensure that no person, other than a flight crew member assigned to a flight, is admitted to, or carried in, the flight crew compartment unless that person is:

an operating crew member;

a representative of the Authority, if required to be there for the performance of his/her official duties; or

permitted by and carried in accordance with instructions contained in the operations manual.

The commander shall ensure that:

admission to the flight crew compartment does not cause distraction or interference with the operation of the flight; and

all persons carried in the flight crew compartment are made familiar with the relevant safety procedures.

The commander shall make the final decision regarding the admission to the flight crew compartment.

CAT.GEN.MPA.140 Portable electronic devices

The operator shall not permit any person to use a portable electronic device (PED) on board an aircraft that could adversely affect the performance of the aircraft's systems and equipment, and shall take all reasonable measures to prevent such use.

CAT.GEN.MPA.141 Use of electronic flight bags (EFBs)

Where an EFB is used on board an aircraft, the operator shall ensure that it does not adversely affect the performance of the aircraft systems or equipment, or the ability of the flight crew member to operate the aircraft.

The operator shall not use a type B EFB application unless it is approved in accordance with Subpart M of Part-SPA.

CAT.GEN.MPA.145 Information on emergency and survival equipment carried

The operator shall at all times have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board any of their aircraft.

CAT.GEN.MPA.150 Ditching - aeroplanes

The operator shall only operate an aeroplane with a passenger seating configuration of more than 30 on overwater flights at a distance from land suitable for making an emergency landing, greater than 120 minutes at cruising speed, or 400 NM, whichever is less, if the aeroplane complies with the ditching provisions prescribed in the applicable certification specification or specifications.

CAT.GEN.MPA.155 Carriage of weapons of war and munitions of war

The operator shall only transport weapons of war or munitions of war by air if an approval to do so has been granted by all States whose airspace is intended to be used for the flight.

Where an approval has been granted, the operator shall ensure that weapons of war and munitions of war are:

stowed in the aircraft in a place that is inaccessible to passengers during flight; and

in the case of firearms, unloaded.

The operator shall ensure that, before a flight begins, the commander is notified of the details and location on board the aircraft of any weapons of war and munitions of war intended to be carried.

CAT.GEN.MPA.160 Carriage of sporting weapons and ammunition

The operator shall take all reasonable measures to ensure that any sporting weapons intended to be carried by air are reported to the operator.

The operator accepting the carriage of sporting weapons shall ensure that they are:

stowed in the aircraft in a place that is inaccessible to passengers during flight; and

in the case of firearms or other weapons that can contain ammunition, unloaded.

Ammunition for sporting weapons may be carried in passengers' checked baggage, subject to certain limitations, in accordance with the technical instructions.

CAT.GEN.MPA.161 Carriage of sporting weapons and ammunition - alleviations

Notwithstanding CAT.GEN.MPA.160(b), for helicopters with a maximum certified take-off mass (MCTOM) of 3 175 kg or less operated by day and over routes navigated by reference to visual landmarks, a sporting weapon may be carried in a place that is accessible during flight, provided that the operator has established appropriate procedures and it is impracticable to stow it in an inaccessible stowage during flight.

CAT.GEN.MPA.165 Method of carriage of persons

The operator shall take all measures to ensure that no person is in any part of an aircraft in flight that is not designed for the accommodation of persons unless temporary access has been granted by the commander:

for the purpose of taking action necessary for the safety of the aircraft or of any person, animal or goods therein; or

to a part of the aircraft in which cargo or supplies are carried, being a part that is designed to enable a person to have access thereto while the aircraft is in flight.

CAT.GEN.MPA.170 Psychoactive Substances

The operator shall take all reasonable measures to ensure that no person enters or is in an aircraft when under the influence of psychoactive substances to the extent that the safety of the aircraft or its occupants is likely to be endangered.

The operator shall develop and implement a policy on the prevention and detection of misuse of psychoactive substances by flight and cabin crew members and by other safety-sensitive personnel under its direct control, in order to ensure that the safety of the aircraft or its occupants is not endangered.

Without prejudice to the applicable national legislation on data protection concerning testing of individuals, the operator shall develop and implement an objective, transparent and non-discriminatory procedure for the prevention and detection of cases of misuse of psychoactive substances by its flight and cabin crew and other safety-sensitive personnel.

In case of a confirmed positive test result, the operator shall inform the Authority and the authority responsible for the personnel concerned, such as a medical assessor of the licensing authority.

CAT.GEN.MPA.175 Endangering safety

The operator shall take all reasonable measures to ensure that no person recklessly or negligently acts or omits to act so as to:

endanger an aircraft or person therein; or

cause or permit an aircraft to endanger any person or property.

The operator shall ensure that flight crew has undergone a psychological assessment before commencing line flying in order to:

identify psychological attributes and suitability of the flight crew in respect of the work environment; and

reduce the likelihood of negative interference with the safe operation of the aircraft.

Considering the size, nature and complexity of the activity of an operator, an operator may replace the psychological assessment referred to in point (b) with an internal assessment of the psychological attributes and suitability of flight crew.

CAT.GEN.MPA.180 Documents, manuals and information to be carried

The following documents, manuals and information shall be carried on each flight, as originals or copies unless otherwise specified:

the aircraft flight manual (AFM), or equivalent document(s);

the original certificate of registration;

the original certificate of airworthiness (CofA);

the noise certificate, including an English translation, where one has been provided by the authority responsible for issuing the noise certificate;

a certified true copy of the air operator certificate (AOC), including an English translation when the AOC has been issued in another language;

the operations specifications relevant to the aircraft type, issued with the AOC, including an English translation when the operations specifications have been issued in another language;

the original aircraft radio licence, if applicable;

the third party liability insurance certificate(s);

the journey log, or equivalent, for the aircraft;

the aircraft technical log, in accordance with LYCARs-continuing airworthiness

details of the filed ATS flight plan, if applicable;

current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

procedures and visual signals information for use by intercepting and intercepted aircraft;

information concerning search and rescue services for the area of the intended flight, which shall be easily accessible in the flight crew compartment;

the current parts of the operations manual that are relevant to the duties of the crew members, which shall be easily accessible to the crew members;

the MEL;

appropriate notices to airmen (NOTAMs) and aeronautical information service (AIS) briefing documentation;

appropriate meteorological information;

cargo and/or passenger manifests, if applicable;

mass and balance documentation;

the operational flight plan, if applicable;

notification of special categories of passenger (SCPs) and special loads, if applicable; and

any other documentation that may be pertinent to the flight or is required by the States concerned with the flight.

Notwithstanding (a), for operations under visual flight rules (VFR) by day with other-than complex motorpowered aircraft taking off and landing at the same aerodrome or operating site within 24 hours, or remaining within a local area specified in the operations manual, the following documents and information may be retained at the aerodrome or operating site instead:

noise certificate;

aircraft radio licence;

journey log, or equivalent;

aircraft technical log;

NOTAMs and AIS briefing documentation;

meteorological information;

notification of SCPs and special loads, if applicable; and

mass and balance documentation.

Notwithstanding (a), in case of loss or theft of documents specified in (a)(2) to (a)(8), the operation may continue until the flight reaches its destination or a place where replacement documents can be provided.

CAT.GEN.MPA.185 Information to be retained on the ground

The operator shall ensure that at least for the duration of each flight or series of flights:

information relevant to the flight and appropriate for the type of operation is preserved on the ground;

the information is retained until it has been duplicated at the place at which it will be stored; or, if this is impracticable

the same information is carried in a fireproof container in the aircraft.

The information referred to in (a) includes:

a copy of the operational flight plan, where appropriate;

copies of the relevant part(s) of the aircraft technical log;

route-specific NOTAM documentation if specifically edited by the operator;

mass and balance documentation if required; and

special loads notification.

CAT.GEN.MPA.190 Provision of documentation and records

The commander shall, within a reasonable time of being requested to do so by a person authorised by an authority, provide to that person the documentation required to be carried on board.

CAT.GEN.MPA.195 Handling of flight recorder recordings: preservation, production, protection and use

Following an accident, a serious incident or an occurrence identified by the investigating authority, the operator of an aircraft shall preserve the original recorded data of the flight recorders for a period of 60 days or until otherwise directed by the investigating authority.

The operator shall conduct operational checks and evaluations of the recordings, to ensure the continued serviceability of the recorders which are required to be carried under this regulation.

The operator shall ensure that the recordings of flight parameters and data link communication messages required to be recorded on flight recorders are preserved. However, for the purpose of testing and

maintaining those flight recorders, up to one hour of the oldest recorded material at the time of testing may be erased.

The operator shall keep and maintain up-to-date documentation that presents the necessary information to convert raw flight data into flight parameters expressed in engineering units.

The operator shall make available any flight recorder recordings that have been preserved, if so determined by the Authority.

Without prejudice to the Libyan regulations on Accident and Incident Investigations:

Except for ensuring the flight recorder serviceability, audio recordings from a flight recorder shall not be disclosed or used unless all of the following conditions are fulfilled:

a procedure related to the handling of such audio recordings and of their transcript is in place;

all crew members and maintenance personnel concerned have given their prior consent;

such audio recordings are used only for maintaining or improving safety.

(1a) When inspecting flight recorder audio recordings to ensure flight recorder serviceability, the operator shall protect the privacy of those audio recordings and and make sure that they are not disclosed or used for purposes other than for ensuring flight recorder serviceability.

Flight parameters or data link messages recorded by a flight recorder shall not be used for purposes other than for the investigation of an accident or an incident which is subject to mandatory reporting, if unless such recordings meet any of the following conditions:

are used by the operator for airworthiness or maintenance purposes only; or

are de-identified; or

are disclosed under secure procedures.

Except for ensuring flight recorder serviceability, images of the flight crew compartment that are recorded by a flight recorder shall not be disclosed or used unless all of the following conditions are fulfilled:

a procedure related to the handling of such image recordings is in place;

all crew members and maintenance personnel concerned have given their prior consent;

such image recordings are used only for maintaining or improving safety.

(3a) When images of the flight crew compartment that are recorded by a flight recorder are inspected for ensuring the serviceability of the flight recorder, then:

those images shall not be disclosed or used for purposes other than for ensuring flight recorder serviceability;

if body parts of crew members are likely to be visible on the images, the operator shall ensure the privacy of those images.

CAT.GEN.MPA.200 Transport of dangerous goods

The transport of dangerous goods by air shall be conducted in accordance with Annex 18 to the Chicago Convention as last amended and amplified by the 'Technical instructions for the safe transport of dangerous goods by air' (ICAO Doc 9284-AN/905), including its supplements and any other addenda or corrigenda.

Dangerous goods shall only be transported by an operator approved in accordance with Part-SPA), Subpart G, except when:

they are not subject to the technical instructions in accordance with Part 1 of those instructions; or

they are carried by passengers or crew members, or are in baggage in accordance with Part 8 of the Technical Instructions.

An operator shall establish procedures to ensure that all reasonable measures are taken to prevent dangerous goods from being carried on board inadvertently.

The operator shall provide personnel with the necessary information enabling them to carry out their responsibilities, as required by the technical instructions.

The operator shall, in accordance with the technical instructions, report without delay to the Authority and the appropriate authority of the State of occurrence in the event of:

any dangerous goods accidents or incidents;

the discovery of undeclared or misdeclared dangerous goods in cargo or mail; or

the finding of dangerous goods carried by passengers or crew members, or in their baggage, when not in accordance with Part 8 of the technical instructions.

The operator shall ensure that passengers are provided with information about dangerous goods in accordance with the technical instructions.

The operator shall ensure that notices giving information about the transport of dangerous goods are provided at acceptance points for cargo as required by the technical instructions.

CAT.GEN.MPA.205 Aircraft tracking system - Aeroplanes

The operator shall establish and maintain, as part of the system for exercising operational control over the flights, an aircraft tracking system, which includes the flights eligible to (b) when performed with the following aeroplanes:

aeroplanes with an MCTOM of more than 27 000 kg, with an MOPSC of more than 19, and first issued with an individual CofA before 16 December 2018, which are equipped with a capability to provide a position additional to the secondary surveillance radar transponder

all aeroplanes with an MCTOM of more than 27 000 kg, with an MOPSC of more than 19, and first issued with an individual CofA on or after 16 December 2018; and

all aeroplanes with an MCTOM of more than 45 500 kg and first issued with an individual CofA on or after 16 December 2018.

Flights shall be tracked by the operator from take-off to landing, except when the planned route and the planned diversion routes are fully included in airspace blocks where:

ATS surveillance service is normally provided which is supported by ATC surveillance systems locating the aircraft at time intervals with adequate duration; and

the operator has provided to competent air navigation service providers necessary contact information.

Notwithstanding the provisions in (a) and (b), the Authority may, based on the results of an approved risk assessment process implemented by the operator, allow for variations to automated reporting intervals.
The process shall demonstrate how risks to the operation, resulting from such variations, can be managed and shall include at least the following:

capability of the operator's operational control systems and processes, including those for contacting ATS units;

overall capability of the aeroplane and its systems;

available means to determine the position of, and communicate with, the aeroplane;

frequency and duration of gaps in automated reporting;

human factors consequences resulting from changes to flight crew procedures; and

specific mitigation measures and contingency procedures

CAT.GEN.MPA.210 Location of an aircraft in distress - Aeroplanes

The following aeroplanes shall be equipped with robust and automatic means to accurately determine, following an accident where the aeroplane is severely damaged, the location of the point of end of flight:

all aeroplanes with an MCTOM of more than 27 000 kg, with an MOPSC of more than 19 and first issued with an individual CofA on or after 1 January 2023;

all aeroplanes with an MCTOM of more than 45 500 kg and first issued with an individual CofA on or after 1 January 2023.

CAT.GEN.MPA.215 Support Programme

The operator shall enable, facilitate and ensure access to a proactive and non-punitive support programme that will assist and support flight crew in recognising, coping with, and overcoming any problem which might negatively affect their ability to safely exercise the privileges of their licence. Such access shall be made available to all flight crew.

Without prejudice to applicable national legislation on the protection of individuals with regard to the processing of personal data and on the free movement of such data, the protection of the confidentiality of data shall be a precondition for an effective support programme as it encourages the use of such a programme and ensures its integrity.

SUBPART B OPERATING PROCEDURES

SECTION 1 Motor-powered aircraft

CAT.OP.MPA.100 Use of air traffic services

The operator shall ensure that:

air traffic services (ATS) appropriate to the airspace and the applicable rules of the air are used for all

flights whenever available;

in-flight operational instructions involving a change to the ATS flight plan, when practicable, are coordinated with the appropriate ATS unit before transmission to an aircraft.

Notwithstanding (a), the use of ATS is not required unless mandated by air space requirements for:

operations under VFR by day of other-than complex motor-powered aeroplanes;

helicopters with an MCTOM of 3 175 kg or less operated by day and over routes navigated by reference to visual landmarks; or

local helicopter operations, provided that search and rescue service arrangements can be maintained.

CAT.OP.MPA.105 Use of aerodromes and operating sites

The operator shall only use aerodromes and operating sites that are adequate for the type(s) of aircraft and operation(s) concerned.

The use of operating sites shall only apply to:

other-than complex motor-powered aeroplanes; and

helicopters.

CAT.OP.MPA.106 Use of isolated aerodromes - aeroplanes

Using an isolated aerodrome as destination aerodrome with aeroplanes requires the prior approval by the Authority.

An isolated aerodrome is one for which the alternate and final fuel reserve required to the nearest adequate destination alternate aerodrome is more than:

for aeroplanes with reciprocating engines, fuel to fly for 45 minutes plus 15 % of the flying time planned to be spent at cruising level or two hours, whichever is less; or

for aeroplanes with turbine engines, fuel to fly for two hours at normal cruise consumption above the destination aerodrome, including final reserve fuel.

CAT.OP.MPA.107 Adequate aerodrome

The operator shall consider an aerodrome as adequate if, at the expected time of use, the aerodrome is available and equipped with necessary ancillary services such as air traffic services (ATS), sufficient lighting, communications, weather reporting, navigation aids and emergency services.

CAT.OP.MPA.108 Variations to alternate aerodrome selection criteria

The Authority may, based on the results of a specific safety risk assessment conducted by the operator which demonstrates how an equivalent level of safety will be maintained, approve operational variations to alternate aerodrome selection criteria. The specific safety risk assessment shall include at least the:

capabilities of the operator;

overall capability of the aeroplane and its systems;

available aerodrome technologies, capabilities and infrastructure;

quality and reliability of meteorological information;

identified hazards and safety risks associated with each alternate aerodrome variation; and

(f) specific mitigation measures.

CAT.OP.MPA.110 Aerodrome operating minima

The operator shall establish aerodrome operating minima for each departure, destination or alternate aerodrome planned to be used. These minima shall not be lower than those established for such aerodromes by the State in which the aerodrome is located, except when specifically approved by that State. Any increment specified by the Authority shall be added to the minima.

The use of a head-up display (HUD), head-up guidance landing system (HUDLS) or enhanced vision system (EVS) may allow operations with lower visibilities than the established aerodrome operating minima if approved in accordance with SPA.LVO.

When establishing aerodrome operating minima, the operator shall take the following into account:

the type, performance and handling characteristics of the aircraft;

the composition, competence and experience of the flight crew;

the dimensions and characteristics of the runways/final approach and take-off areas (FATOs) that may be selected for use;

the adequacy and performance of the available visual and non-visual ground aids;

the equipment available on the aircraft for the purpose of navigation and/or control of the flight path during the take-off, the approach, the flare, the landing, rollout and the missed approach;

for the determination of obstacle clearance, the obstacles in the approach, missed approach and the climb-out areas necessary for the execution of contingency procedures;

the obstacle clearance altitude/height for the instrument approach procedures;

the means to determine and report meteorological conditions; and

the flight technique to be used during the final approach.

The operator shall specify the method of determining aerodrome operating minima in the operations manual.

The minima for a specific approach and landing procedure shall only be used if all the following conditions are met:

the ground equipment shown on the chart required for the intended procedure is operative;

the aircraft systems required for the type of approach are operative;

the required aircraft performance criteria are met; and

the crew is appropriately qualified.

CAT.OP.MPA.115 Approach flight technique - aeroplanes

All approaches shall be flown as stabilised approaches unless otherwise approved by the Authority for a particular approach to a particular runway.

Non-precision approaches

The continuous descent final approach (CDFA) technique shall be used for all non-precision approaches.

Notwithstanding (1), another approach flight technique may be used for a particular approach/runway combination if approved by the Authority. In such cases, the applicable minimum runway visual range (RVR):

shall be increased by 200 m for category A and B aeroplanes and by 400 m for category C and D aeroplanes; or

for aerodromes where there is a public interest to maintain current operations and the CDFA technique cannot be applied, shall be established and regularly reviewed by the Authority taking into account the operator's experience, training programme and flight crew qualification.

CAT.OP.MPA.120 [Reserved]

CAT.OP.MPA.125 Instrument departure and approach procedures

The operator shall ensure that instrument departure and approach procedures established by the State of the aerodrome are used.

Notwithstanding (a), the commander may accept an ATC clearance to deviate from a published departure or arrival route, provided obstacle clearance criteria are observed and full account is taken of the operating conditions. In any case, the final approach shall be flown visually or in accordance with the established instrument approach procedures.

Notwithstanding (a), the operator may use procedures other than those referred to in (a) provided they have been approved by the State in which the aerodrome is located and are specified in the operations manual.

CAT.OP.MPA.126 Performance-based navigation

The operator shall ensure that, when performance-based navigation (PBN) is required for the route or procedure to be flown:

the relevant PBN navigation specification is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; and

the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document referred above.

CAT.OP.MPA.130 Noise abatement procedures - aeroplanes

Except for VFR operations of other-than complex motor-powered aeroplanes, the operator shall establish appropriate operating departure and arrival/approach procedures for each aeroplane type taking into account the need to minimise the effect of aircraft noise.

The procedures shall:

ensure that safety has priority over noise abatement; and

be simple and safe to operate with no significant increase in crew workload during critical phases of flight.

CAT.OP.MPA.131 Noise abatement procedures - helicopters

The operator shall ensure that take-off and landing procedures take into account the need to minimise the effect of helicopter noise.

The procedures shall:

ensure that safety has priority over noise abatement; and

be simple and safe to operate with no significant increase in crew workload during critical phases of flight.

CAT.OP.MPA.135 Routes and areas of operation - general

The operator shall ensure that operations are only conducted along routes, or within areas, for which:

Space-based facillities, ground facilities and services, including meteorological services, adequate for the planned operation are provided;

the performance of the aircraft is adequate to comply with minimum flight altitude requirements;

the equipment of the aircraft meets the minimum requirements for the planned operation; and

appropriate maps and charts are available.

The operator shall ensure that operations are conducted in accordance with any restriction on the routes or the areas of operation specified by the Authority.

point (a)(1) shall not apply to operations under VFR by day of other-than complex motor-powered aircraft on flights that depart from and arrive at the same aerodrome or operating site.

The operator shall ensure that a flight will not be commenced unless it has been ascertained by every reasonable means available that the ground and/or water facilities available and directly required on such flight, for the safe operation of the aeroplane and the protection of the passengers, are adequate for the type of operation under which the flight is to be conducted and are adequately operated for this purpose.

The operator shall ensure that any inadequacy of facilities observed in the course of operations is reported to the authority responsible for them, without undue delay

CAT.OP.MPA.136 Routes and areas of operation - single-engined aeroplanes

Unless approved by the Authority in accordance with Part-SPA, Subpart L - SINGLE-ENGINED TURBINE AEROPLANE OPERATIONS AT NIGHT OR IN IMC (SET-IMC), the operator shall ensure that operations of single-engined aeroplanes are only conducted along routes, or within areas, where surfaces are available that permit a safe forced landing to be executed.

CAT.OP.MPA.137 Routes and areas of operation - helicopters

The operator shall ensure that:

for helicopters operated in performance class 3, surfaces are available that permit a safe forced landing to be executed, except when the helicopter has an approval to operate in accordance with CAT.POL.H.420;

for helicopters operated in performance class 3 and conducting 'coastal transit' operations, the operations manual contains procedures to ensure that the width of the coastal corridor, and the equipment carried, is consistent with the conditions prevailing at the time.

CAT.OP.MPA.140 Maximum distance from an adequate aerodrome for two-engined aeroplanes without an ETOPS approval

Unless approved by the Authority in accordance with Part-SPA, Subpart F, the operator shall not operate a two-engined aeroplane over a route that contains a point further from an adequate aerodrome, under standard conditions in still air, than the appropriate distance for the given type of aeroplane among the following:

for performance class A aeroplanes with a maximum operational passenger seating configuration (MOPSC) of 20 or more, the distance flown in 60 minutes at the one-engine-inoperative (OEI) cruising speed determined in accordance with point (b);

for performance class A aeroplanes with: -an MOPSC of 19 or less, the distance flown in 120 minutes or, subject to approval by the Authority, up to 180 minutes for turbojet aeroplanes, at the OEI cruising speed determined in accordance with point (b);

for performance class B or C aeroplanes whichever is less:

the distance flown in 120 minutes at the OEI cruise speed determined in accordance with (b); or (ii)

300 NM.

The operator shall determine a speed for the calculation of the maximum distance to an adequate aerodrome for each two-engined aeroplane type or variant operated, not exceeding VMO (maximum operating speed) based upon the true airspeed that the aeroplane can maintain with one engine inoperative.

The operator shall include the following data, specific to each type or variant, in the operations manual:

the determined OEI cruising speed; and

the determined maximum distance from an adequate aerodrome.

To obtain the approval referred to in (a)(2), the operator shall provide evidence that:

procedures have been established for flight planning and dispatch;

and specific maintenance instructions and procedures to ensure the intended levels of continued airworthiness and reliability of the aeroplane including its engines have been established and included in the operator's aircraft maintenance programme in accordance with applicable airworthiness Regulations including:

an engine oil consumption programme;

an engine condition monitoring programme

CAT.OP.MPA.145 Establishment of minimum flight altitudes

The operator shall establish for all route segments to be flown:

minimum flight altitudes that provide the required terrain clearance, taking into account the requirements of Subpart C; and

a method for the flight crew to determine those altitudes.

The method for establishing minimum flight altitudes shall be approved by the Authority.

Where the minimum flight altitudes established by the operator and a State overflown differ, the higher values shall apply.

CAT.OP.MPA.150 Fuel policy

The operator shall establish a fuel policy for the purpose of flight planning and in-flight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation. The fuel policy and any change to it require prior approval by the Authority.

The operator shall ensure that the planning of flights is based upon at least:

procedures contained in the operations manual and:

data provided by the aircraft manufacturer; or

current aircraft-specific data derived from a fuel consumption monitoring system; and

the operating conditions under which the flight is to be conducted including:

aircraft fuel consumption data;

anticipated masses;

expected meteorological conditions; and

air navigation services provider(s) procedures and restrictions.

The operator shall ensure that the pre-flight calculation of usable fuel required for a flight includes:

taxi fuel;

trip fuel;

reserve fuel consisting of:

contingency fuel;

alternate fuel, if a destination alternate aerodrome is required;

final reserve fuel; and

additional fuel, if required by the type of operation; and

extra fuel if required by the commander.

The operator shall ensure that in-flight replanning procedures for calculating usable fuel required when a flight has to proceed along a route or to a destination aerodrome other than originally planned includes:

trip fuel for the remainder of the flight; and

reserve fuel consisting of:

contingency fuel;

alternate fuel, if a destination alternate aerodrome is required;

final reserve fuel; and

additional fuel, if required by the type of operation; and

extra fuel if required by the commander.

CAT.OP.MPA.151 Fuel policy - alleviations

Notwithstanding CAT.OP.MPA.150(b) to (d), for operations of performance class B aeroplanes the operator shall ensure that the pre-flight calculation of usable fuel required for a flight includes:

taxi fuel, if significant;

trip fuel;

reserve fuel, consisting of:

contingency fuel that is not less than 5 % of the planned trip fuel or, in the event of in-flight replanning, 5 % of the trip fuel for the remainder of the flight; and

final reserve fuel to fly for an additional period of 45 minutes for reciprocating engines or 30 minutes for turbine engines;

alternate fuel to reach the destination alternate aerodrome via the destination, if a destination alternate aerodrome is required; and

extra fuel, if specified by the commander.

(a1) Notwithstanding CAT.OP.MPA.150(b) to (d), for operations taking off and landing at the same aerodrome or operating site with ELA2 aeroplanes under VFR by day the operator shall specify the minimum final reserve fuel in the OM. This minimum final reserve fuel shall not be less than the amount needed to fly for a period of 45 minutes.

Notwithstanding CAT.OP.MPA.150(b) to (d), for helicopters with an MCTOM of 3 175 kg or less, by day and over routes navigated by reference to visual landmarks or local helicopter operations, the fuel policy shall ensure that, on completion of the flight, or series of flights the final reserve fuel is not less than an amount sufficient for:

30 minutes flying time at normal cruising speed; or

20 minutes flying time at normal cruising speed when operating within an area providing continuous and suitable precautionary landing sites.

CAT.OP.MPA.152 Fuel policy - variations

The Authority may, based on the results of a specific safety risk assessment conducted by the operator which demonstrates how an equivalent level of safety will be maintained, approve variations to the pre-flight fuel calculation of taxi fuel, trip fuel, contingency fuel, destination alternate fuel, and additional fuel. The specific safety risk assessment shall include at least the following:

flight fuel calculations;

capabilities of the operator to include:

a data-driven method that includes a fuel consumption monitoring programme; and/or

the advanced use of alternate aerodromes;

specific mitigation measures.

CAT.OP.MPA.155 Carriage of special categories of passengers (SCPs)

Persons requiring special conditions, assistance and/or devices when carried on a flight shall be considered as SCPs including at least:

persons with reduced mobility (PRMs) who are understood to be any person whose mobility is reduced due to any physical disability, sensory or locomotory, permanent or temporary, intellectual disability or impairment, any other cause of disability, or age;

infants and unaccompanied children; and

deportees, inadmissible passengers or prisoners in custody.

SCPs shall be carried under conditions that ensure the safety of the aircraft and its occupants according to procedures established by the operator.

SCPs shall not be allocated, nor occupy, seats that permit direct access to emergency exits or where their presence could:

impede crew members in their duties;

obstruct access to emergency equipment; or

impede the emergency evacuation of the aircraft.

The commander shall be notified in advance when SCPs are to be carried on board.

CAT.OP.MPA.160 Stowage of baggage and cargo

The operator shall establish procedures to ensure that:

only hand baggage that can be adequately and securely stowed is taken into the passenger compartment; and

all baggage and cargo on board that might cause injury or damage, or obstruct aisles and exits if displaced, is stowed so as to prevent movement.

CAT.OP.MPA.165 Passenger seating

The operator shall establish procedures to ensure that passengers are seated where, in the event that an emergency evacuation is required, they are able to assist and not hinder evacuation of the aircraft.

CAT.OP.MPA.170 Passenger briefing

The operator shall ensure that passengers are:

given briefings and demonstrations relating to safety in a form that facilitates the application of the procedures applicable in the event of an emergency; and

provided with a safety briefing card on which picture-type instructions indicate the operation of safety and emergency equipment and emergency exits likely to be used by passengers.

CAT.OP.MPA.175 Flight preparation

An operational flight plan shall be completed for each intended flight based on considerations of aircraft performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes/operating sites concerned.

The flight shall not be commenced unless the commander is satisfied that:

all items concerning the airworthiness and registration of the aircraft, instrument and equipment, mass and centre of gravity (CG) location, baggage and cargo and aircraft operating limitations can be complied with;

the aircraft is not operated contrary to the provisions of the configuration deviation list (CDL);

the parts of the operations manual that are required for the conduct of the flight are available;

the documents, additional information and forms required to be available by CAT.GEN.MPA.180 are on board;

current maps, charts and associated documentation or equivalent data are available to cover the intended operation of the aircraft including any diversion that may reasonably be expected;

space-based facilities, ground facilities and services that are required for the planned flight are available and adequate;

the provisions specified in the operations manual in respect of fuel, oil, oxygen, minimum safe altitudes, aerodrome operating minima and availability of alternate aerodromes, where required, can be complied with for the planned flight;

(7a) any navigational database required for performance-based navigation is suitable and current; and

any additional operational limitation can be complied with.

Notwithstanding (a), an operational flight plan is not required for operations under VFR of:

other-than complex motor-powered aeroplane taking off and landing at the same aerodrome or operating site; or

helicopters with an MCTOM of 3 175 kg or less, by day and over routes navigated by reference to visual landmarks in a local area as specified in the operations manual.

CAT.OP.MPA.180 Selection of aerodromes - aeroplanes

Where it is not possible to use the departure aerodrome as a take-off alternate aerodrome due to meteorological or performance reasons, the operator shall select another adequate take-off alternate aerodrome that is no further from the departure aerodrome than:

for two-engined aeroplanes:

one hour flying time at an OEI cruising speed according to the AFM in still air standard conditions based on the actual take-off mass; or

the ETOPS diversion time approved in accordance with Part-SPA, Subpart F, subject to any MEL restriction, up to a maximum of two hours, at the OEI cruising speed according to the AFM in still air standard conditions based on the actual take-off mass;

for three and four-engined aeroplanes, two hours flying time at the OEI cruising speed according to the AFM in still air standard conditions based on the actual take-off mass.

For operations approved in accordance with Part-SPA Subpart L - SINGLE-ENGINED TURBINE AEROPLANE OPERATIONS AT NIGHT OR IN IMC (SET-IMC), 30 minutes flying time at normal cruising speed in still air conditions, based on the actual take-off mass.

In the case of multi-engined aeroplanes if the AFM does not contain an OEI cruising speed, the speed to be used for calculation shall be that which is achieved with the remaining engine(s) set at maximum continuous power.

The operator shall select at least one destination alternate aerodrome for each instrument flight rules (IFR) flight unless the destination aerodrome is an isolated aerodrome or:

the duration of the planned flight from take-off to landing or, in the event of in-flight replanning in accordance with CAT.OP.MPA.150(d), the remaining flying time to destination does not exceed six hours; and

two separate runways are available and usable at the destination aerodrome and the appropriate weather reports and/or forecasts for the destination aerodrome indicate that, for the period from one hour before until one hour after the expected time of arrival at the destination aerodrome, the ceiling will be at least 2 000 ft or circling height + 500 ft, whichever is greater, and the ground visibility will be at least 5 km.

The operator shall select two destination alternate aerodromes when:

the appropriate weather reports and/or forecasts for the destination aerodrome indicate that during a period commencing one hour before and ending one hour after the estimated time of arrival, the weather conditions will be below the applicable planning minima; or

no meteorological information is available.

The operator shall specify any required alternate aerodrome(s) in the operational flight plan.

CAT.OP.MPA.181 Selection of aerodromes and operating sites - helicopters

For flights under instrument meteorological conditions (IMC), the commander shall select a take-off alternate aerodrome within one hour flying time at normal cruising speed if it would not be possible to return to the site of departure due to meteorological reasons.

For IFR flights or when flying under VFR and navigating by means other than by reference to visual landmarks, the commander shall specify at least one destination alternate aerodrome in the operational flight plan unless:

for a flight to any other land destination, the duration of the flight and the meteorological conditions prevailing are such that, at the estimated time of arrival at the site of intended landing, an approach and landing is possible under visual meteorological conditions (VMC); or

the site of intended landing is isolated and no alternate is available; in this case, a point of no return (PNR) shall be determined.

The operator shall select two destination alternate aerodromes when:

the appropriate weather reports and/or forecasts for the destination aerodrome indicate that during a period commencing one hour before and ending one hour after the estimated time of arrival, the weather conditions will be below the applicable planning minima; or

no meteorological information is available for the destination aerodrome.

The operator shall specify any required alternate aerodrome(s) in the operational flight plan.

CAT.OP.MPA.182 Destination aerodromes - instrument approach operations

The operator shall ensure that sufficient means are available to navigate and land at the destination aerodrome or at any destination alternate aerodrome in the case of loss of capability for the intended approach and landing operation.

CAT.OP.MPA.185 Planning minima for IFR flights - aeroplanes

Planning minima for a take-off alternate aerodrome

The operator shall only select an aerodrome as a take-off alternate aerodrome when the appropriate weather reports and/or forecasts indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the aerodrome, the weather conditions will be at or above the applicable landing minima specified in accordance with CAT.OP.MPA.110. The ceiling shall be taken into account when the only approach operations available are non-precision approaches (NPA) and/or circling operations. Any limitation related to OEI operations shall be taken into account.

Planning minima for a destination aerodrome other than an isolated destination aerodrome The operator shall only select the destination aerodrome when:

the appropriate weather reports and/or forecasts indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the aerodrome, the weather conditions will be at or above the applicable planning minima as follows:

RVR/visibility (VIS) specified in accordance with CAT.OP.MPA.110; and

for an NPA or a circling operation, the ceiling at or above MDH;or

two destination alternate aerodromes are selected.

Planning minima for a destination alternate aerodrome, isolated aerodrome, fuel en-route alternate (fuel ERA) aerodrome, en-route alternate (ERA) aerodrome

The operator shall only select an aerodrome for one of these purposes when the appropriate weather reports and/or forecasts indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the aerodrome, the weather conditions will be at or above the planning minima in Table 1.

Table 1 Planning minima

Destination alternate aerodrome, isolated destination aerodrome, fuel ERA and ERA aerodrome

Type of approach	Planning minima

CAT II and III	CAT I RVR
CAT I	NPA RVR/VIS Ceiling shall be at or above MDH
NPA	NPA RVR/VIS + 1 000 m Ceiling shall be at or above MDH + 200 ft
Circling	Circling

CAT.OP.MPA.186 Planning minima for IFR flights - helicopters

Planning minima for take-off alternate aerodrome(s)

The operator shall only select an aerodrome or landing site as a take-off alternate aerodrome when the appropriate weather reports and/or forecasts indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the take-off alternate aerodrome, the weather conditions will be at or above the applicable landing minima specified in accordance with CAT.OP.MPA.110. The ceiling shall be taken into account when the only approach operations available are NPA operations.
Any limitation related to OEI operations shall be taken into account.

Planning minima for destination aerodrome and destination alternate aerodrome(s)

The operator shall only select the destination and/or destination alternate aerodrome(s) when the appropriate weather reports and/or forecasts indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the aerodrome or operating site, the weather conditions will be at or above the applicable planning minima as follows:

except as provided in CAT.OP.MPA.181(d), planning minima for a destination aerodrome shall be:

RVR/VIS specified in accordance with CAT.OP.MPA.110; and

for NPA operations, the ceiling at or above MDH;

planning minima for destination alternate aerodrome(s) are as shown in Table 1.

Table 1
Planning minima destination alternate aerodrome

Type of approach	Planning minima
CAT II and III	CAT I RVR
CAT I	CAT I + 200 ft/400 m visibility

NPA	NPA RVR/VIS + 400 m Ceiling shall be at or above MDH + 200 ft

CAT.OP.MPA.190 Submission of the ATS flight plan

If an ATS flight plan is not submitted because it is not required by the rules of the air, adequate information shall be deposited in order to permit alerting services to be activated if required.

When operating from a site where it is impossible to submit an ATS flight plan, the ATS flight plan shall be transmitted as soon as possible after take-off by the commander or the operator.

CAT.OP.MPA.195 Refuelling/defuelling with passengers embarking, on board or disembarking

An aircraft shall not be refuelled/defuelled with Avgas (aviation gasoline) or wide-cut type fuel or a mixture of these types of fuel, when passengers are embarking, on board or disembarking.

For all other types of fuel, necessary precautions shall be taken and the aircraft shall be properly manned by qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

CAT.OP.MPA.196 Refuelling/defuelling when oxygen is being replenished

A Helicopter shall not be defuelled at any time when oxygen is being replenished.

CAT.OP.MPA.200 Refuelling/defuelling with wide-cut fuel

Refuelling/defuelling with wide-cut fuel shall only be conducted if the operator has established appropriate procedures taking into account the high risk of using wide-cut fuel types.

CAT.OP.MPA.205 Push back and towing - aeroplanes

Push back and towing procedures specified by the operator shall be conducted in accordance with established aviation standards and procedures.

CAT.OP.MPA.210 Crew members at stations

Flight crew members

During take-off and landing each flight crew member required to be on duty in the flight crew compartment shall be at the assigned station.

During all other phases of flight each flight crew member required to be on duty in the flight crew compartment shall remain at the assigned station, unless absence is necessary for the performance

of duties in connection with the operation or for physiological needs, provided at least one suitably qualified pilot remains at the controls of the aircraft at all times.

During all phases of flight each flight crew member required to be on duty in the flight crew compartment shall remain alert. If a lack of alertness is encountered, appropriate countermeasures shall be used. If unexpected fatigue is experienced, a controlled rest procedure, organised by the commander, may be used if workload permits. Controlled rest taken in this way shall not be considered to be part of a rest period for purposes of calculating flight time limitations nor used to justify any extension of the duty period.

Cabin crew members

During critical phases of flight, each cabin crew member shall be seated at the assigned station and shall not perform any activities other than those required for the safe operation of the aircraft.

CAT.OP.MPA.215 Use of headset - aeroplanes

Each flight crew member required to be on duty in the flight crew compartment shall wear a headset with boom microphone or equivalent. The headset shall be used as the primary device for voice communications with ATS:

when on the ground:

when receiving the ATC departure clearance via voice communication; and

when engines are running;

when in flight:

below transition altitude; or

10 000 ft, whichever is higher;and

whenever deemed necessary by the commander.

In the conditions of (a), the boom microphone or equivalent shall be in a position that permits its use for two-way radio communications.

CAT.OP.MPA.216 Use of headset - helicopters

Each flight crew member required to be on duty in the flight crew compartment shall wear a headset with boom microphone, or equivalent, and use it as the primary device to communicate with ATS.

CAT.OP.MPA.220 Assisting means for emergency evacuation

The operator shall establish procedures to ensure that before taxiing, take-off and landing and when safe and practicable to do so, all means of assistance for emergency evacuation that deploy automatically are armed.

CAT.OP.MPA.225 Seats, safety belts and restraint systems

Crew members

During take-off and landing, and whenever decided by the commander in the interest of safety, each crew member shall be properly secured by all safety belts and restraint systems provided.

During other phases of the flight, each flight crew member in the flight crew compartment shall keep the assigned station safety belt fastened while at his/her station.

Passengers

Before take-off and landing, and during taxiing, and whenever deemed necessary in the interest of safety, the commander shall be satisfied that each passenger on board occupies a seat or berth with his/her safety belt or restraint system properly secured.

The operator shall make provisions for multiple occupancy of aircraft seats that is only allowed on specified seats. The commander shall be satisfied that multiple occupancy does not occur other than by one adult and one infant who is properly secured by a supplementary loop belt or other restraint device.

CAT.OP.MPA.230 Securing of passenger compartment and galley(s)

The operator shall establish procedures to ensure that before taxiing, take-off and landing all exits and escape paths are unobstructed.

The commander shall ensure that before take-off and landing, and whenever deemed necessary in the interest of safety, all equipment and baggage are properly secured.

CAT.OP.MPA.235 Life-jackets - helicopters

The operator shall establish procedures to ensure that, when operating a helicopter over water in performance class 3, account is taken of the duration of the flight and conditions to be encountered when deciding if lifejackets are to be worn by all occupants.

CAT.OP.MPA.240 Smoking on board

The commander shall not allow smoking on board:

whenever considered necessary in the interest of safety;

during refuelling and defuelling of the aircraft;

while the aircraft is on the surface unless the operator has determined procedures to mitigate the risks during ground operations;

outside designated smoking areas, in the aisle(s) and lavatory(ies);

in cargo compartments and/or other areas where cargo is carried that is not stored in flame-resistant containers or covered by flame-resistant canvas; and

in those areas of the passenger compartment where oxygen is being supplied.

CAT.OP.MPA.245 Meteorological conditions - all aircraft

On IFR flights the commander shall only:

commence take-off; or

continue beyond the point from which a revised ATS flight plan applies in the event of in-flight replanning,

when information is available indicating that the expected weather conditions, at the time of arrival, at the destination and/or required alternate aerodrome(s) are at or above the planning minima.

On IFR flights, the commander shall only continue towards the planned destination aerodrome when the latest information available indicates that, at the expected time of arrival, the weather conditions at the destination, or at least one destination alternate aerodrome, are at or above the applicable aerodrome operating minima.

On VFR flights, the commander shall only commence take-off when the appropriate weather reports and/or forecasts indicate that the meteorological conditions along the part of the route to be flown under VFR will, at the appropriate time, be at or above the VFR limits.

CAT.OP.MPA.246 Meteorological conditions - aeroplanes

In addition to CAT.OP.MPA.245, on IFR flights with aeroplanes, the commander shall only continue beyond:

the decision point when using the reduced contingency fuel (RCF) procedure; or

the pre-determined point when using the pre-determined point (PDP) procedure, when information is available indicating that the expected weather conditions, at the time of arrival, at the destination and/or required alternate aerodrome(s) are at or above the applicable aerodrome operating minima.

CAT.OP.MPA.247 Meteorological conditions – helicopters

In addition to CAT.OP.MPA.245:

On VFR flights overwater out of sight of land with helicopters, the commander shall only commence take-off when the appropriate weather reports and/or forecasts indicate that the cloud ceiling will be above 600 ft by day or 1 200 ft by night.

[Reserved]

Flight with helicopters to a helideck or elevated FATO shall only be operated when the mean wind speed at the helideck or elevated FATO is reported to be less than 60 kt.

CAT.OP.MPA.250 Ice and other contaminants - ground procedures

The operator shall establish procedures to be followed when ground de-icing and anti-icing and related inspections of the aircraft are necessary to allow the safe operation of the aircraft.

The commander shall only commence take-off if the aircraft is clear of any deposit that might adversely affect the performance or controllability of the aircraft, except as permitted under (a) and in accordance with the AFM.

CAT.OP.MPA.255 Ice and other contaminants - flight procedures

The operator shall establish procedures for flights in expected or actual icing conditions.

The commander shall only commence a flight or intentionally fly into expected or actual icing conditions if the aircraft is certified and equipped to cope with such conditions.

If icing exceeds the intensity of icing for which the aircraft is certified or if an aircraft not certified for flight in known icing conditions encounters icing, the commander shall exit the icing conditions without delay, by a change of level and/or route, if necessary by declaring an emergency to ATC.

CAT.OP.MPA.260 Fuel and oil supply

The commander shall only commence a flight or continue in the event of in-flight replanning when satisfied that the aircraft carries at least the planned amount of usable fuel and oil to complete the flight safely, taking into account the expected operating conditions.

CAT.OP.MPA.265 Take-off conditions

Before commencing take-off, the commander shall be satisfied that:

according to the information available to him/her, the weather at the aerodrome or operating site and the condition of the runway or FATO intended to be used would not prevent a safe take-off and departure; and

established aerodrome operating minima will be complied with.

CAT.OP.MPA.270 Minimum flight altitudes

The commander or the pilot to whom conduct of the flight has been delegated shall not fly below specified minimum altitudes except when:

necessary for take-off or landing; or

descending in accordance with procedures approved by the Authority.

CAT.OP.MPA.275 Simulated abnormal situations in flight

The operator shall ensure that when carrying passengers or cargo the following are not simulated:

abnormal or emergency situations that require the application of abnormal or emergency procedures; or

flight in IMC by artificial means.

CAT.OP.MPA.280 In-flight fuel management - aeroplanes

The operator shall establish a procedure to ensure that in-flight fuel checks and fuel management are carried out according to the following criteria.

In-flight fuel checks

The commander shall ensure that fuel checks are carried out in-flight at regular intervals. The usable remaining fuel shall be recorded and evaluated to:

compare actual consumption with planned consumption;

check that the usable remaining fuel is sufficient to complete the flight, in accordance with (b); and

determine the expected usable fuel remaining on arrival at the destination aerodrome.

The relevant fuel data shall be recorded.

In-flight fuel management

The pilot-in-command shall request delay information from ATC when unanticipated circumstances may result in landing at the destination aerodrome with less than the final reserve fuel plus any fuel required to proceed to an alternate aerodrome or the fuel required to operate to an isolated aerodrome.

If an in-flight fuel check shows that the expected usable fuel remaining on arrival at the destination aerodrome is less than:

the required alternate fuel plus final reserve fuel, the commander shall take into account the traffic and the operational conditions prevailing at the destination aerodrome, at the destination alternate aerodrome and at any other adequate aerodrome in deciding whether to proceed to the destination aerodrome or to divert so as to perform a safe landing with not less than final reserve fuel; or

the final reserve fuel if no alternate aerodrome is required, the commander shall take appropriate action and proceed to an adequate aerodrome so as to perform a safe landing with not less than final reserve fuel.

The commander shall declare an emergency when the calculated usable fuel on landing, at the nearest adequate aerodrome where a safe landing can be performed, is less than final reserve fuel.

Additional conditions for specific procedures

On a flight using the RCF procedure, to proceed to the destination 1 aerodrome, the commander shall ensure that the usable fuel remaining at the decision point is at least the total of:

trip fuel from the decision point to the destination 1 aerodrome;

contingency fuel equal to 5 % of trip fuel from the decision point to the destination 1 aerodrome;

destination 1 aerodrome alternate fuel, if a destination 1 alternate aerodrome is required; and

final reserve fuel.

On a flight using the PDP procedure to proceed to the destination aerodrome, the commander shall ensure that the usable fuel remaining at the PDP is at least the total of:

trip fuel from the PDP to the destination aerodrome;

contingency fuel from the PDP to the destination aerodrome; and (C) additional fuel.

CAT.OP.MPA.281 In-flight fuel management - helicopters

The operator shall establish a procedure to ensure that in-flight fuel checks and fuel management are carried out.

The commander shall ensure that the amount of usable fuel remaining in flight is not less than the fuel required to proceed to an aerodrome or operating site where a safe landing can be made, with final reserve fuel remaining.

The commander shall declare an emergency when the actual usable fuel on board is less than final reserve fuel.

CAT.OP.MPA.285 Use of supplemental oxygen

The commander shall ensure that flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen continuously whenever the cabin altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft.

CAT.OP.MPA.290 Ground proximity detection

When undue proximity to the ground is detected by a flight crew member or by a ground proximity warning system, the pilot flying shall take corrective action immediately to establish safe flight conditions.

CAT.OP.MPA.295 Use of airborne collision avoidance system (ACAS)

(a) The operator shall establish operational procedures and training programs when ACAS is installed and serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.

CAT.OP.MPA.300 Approach and landing conditions -aeroplanes

Before commencing an approach to land, the commander shall:

be satisfied that, according to the information available to him or her, the weather at the aerodrome and the condition of the runway intended to be used would not prevent a safe approach, landing or missed approach, having regard to the performance information contained in the operations manual (OM);

carry out a landing distance assessment in accordance with point CAT.OP.MPA.303.

CAT.OP.MPA.301 Approach and landing conditions - helicopters

Before commencing an approach to land, the commander shall be satisfied that according to the information available to him or her, the weather at the aerodrome and the condition of the final approach and take-off area (FATO) intended to be used would not prevent a safe approach, landing or missed approach, having regard to the performance information contained in the operations manual (OM).

CAT.OP.MPA.303 In-flight check of the landing distance at time of arrival - aeroplanes

No approach to land shall be continued unless the landing distance available (LDA) on the intended runway is at least 115 % of the landing distance at the estimated time of landing, determined in accordance with the performance information for the assessment of the landing distance at time of arrival (LDTA) and the approach to land is performed with performance class A aeroplanes that are certified in accordance with either of the following certification specifications, as indicated in the type-certificate:

CS-25 or equivalent;

CS-23 at level 4 with performance level “High speed” or equivalent.

For performance class A aeroplanes other than those referred to in point (a), no approach to land shall be continued, except in either of the following situations:

the LDA on the intended runway is at least 115 % of the landing distance at the estimated time of landing, determined in accordance with the performance information for the assessment of the LDTA;

if performance information for the assessment of the LDTA is not available, the LDA on the intended runway at the estimated time of landing is at least the required landing distance determined in accordance with CAT.POL.A.230 or CAT.POL.A.235, as applicable.

For performance class B aeroplanes, no approach to land shall be continued, except in either of the following situations:

the LDA on the intended runway is at least 115 % of the landing distance at the estimated time of landing, determined in accordance with the performance information for the assessment of the LDTA;

if performance information for the assessment of the LDTA is not available, the LDA on the intended runway at the estimated time of landing is at least the required landing distance determined in accordance with CAT.POL.A.330 or CAT.POL.A.335, as applicable

For performance class C aeroplanes, no approach to land shall be continued, except in either of the following situations:

the LDA on the intended runway is at least 115 % of the landing distance at the estimated time of landing, determined in accordance with the performance information for the assessment of the LDTA;

if performance information for the assessment of the LDTA is not available, the LDA on the intended runway at the estimated time of landing is at least the required landing distance determined in accordance with CAT.POL.A.430 or CAT.POL.A.435, as applicable.

Performance information for the assessment of the LDTA shall be based on approved data contained in the AFM. When approved data contained in the AFM are insufficient in respect of the assessment of the LDTA, they shall be supplemented with other data which are either determined in accordance with the applicable certification standards for aeroplanes or determined in line with the applicable AMCs.

The operator shall specify in the OM the performance information for the assessment of the LDTA and the assumptions made for its development, including other data that, in accordance with point (e), may be used to supplement that contained in the AFM.

CAT.OP.MPA.305 Commencement and continuation of approach

The commander or the pilot to whom conduct of the flight has been delegated may commence an instrument approach regardless of the reported RVR/VIS.

If the reported RVR/VIS is less than the applicable minimum the approach shall not be continued:

below 1 000 ft above the aerodrome; or

into the final approach segment in the case where the DA/H or MDA/H is more than 1 000 ft above the aerodrome.

Where the RVR is not available, RVR values may be derived by converting the reported visibility.

If, after passing 1 000 ft above the aerodrome, the reported RVR/VIS falls below the applicable minimum, the approach may be continued to DA/H or MDA/H.

The approach may be continued below DA/H or MDA/H and the landing may be completed provided that the visual reference adequate for the type of approach operation and for the intended runway is established at the DA/H or MDA/H and is maintained.

The touchdown zone RVR shall always be controlling. If reported and relevant, the midpoint and stopend RVR shall also be controlling. The minimum RVR value for the midpoint shall be 125 m or the RVR required for the touchdown zone if less, and 75 m for the stopend. For aircraft equipped with a rollout guidance or control system, the minimum RVR value for the midpoint shall be 75 m.

CAT.OP.MPA.310 Operating procedures - threshold crossing height - aeroplanes

The operator shall establish operational procedures designed to ensure that an aeroplane conducting precision approaches crosses the threshold of the runway by a safe margin, with the aeroplane in the landing configuration and attitude.

CAT.OP.MPA.311 Reporting on runway braking action

Whenever the runway braking action encountered during the landing roll is not as good as that reported by the aerodrome operator in the runway condition report (RCR), the commander shall notify the air traffic services (ATS) by means of a special air-report (AIREP) as soon as practicable.

CAT.OP.MPA.315 Flight hours reporting - helicopters

The operator shall make available to the Authority the hours flown for each helicopter operated during the previous calendar year.

CAT.OP.MPA.320 Aeroplane categories

Aeroplane categories shall be based on the indicated airspeed at threshold (VAT) which is equal to the stalling speed (V_{SO}) multiplied by 1,3 or one-g (gravity) stall speed (V_{S1g}) multiplied by 1,23 in the landing configuration at the maximum certified landing mass. If both V_{SO} and V_{S1g} are available, the higher resulting V_{AT} shall be used.

The aeroplane categories specified in the table below shall be used.

Table 1

Aeropl categories corresponding to Vv

Aeropl cate	
	Less than 91
	From 91 to 120
	From 121 to 140
	From 141 to 165
	From 166 to 210

The landing configuration that is to be taken into consideration shall be specified in the operations manual.

The operator may apply a lower landing mass for determining the V_{AT} if approved by the Authority. Such a lower landing mass shall be a permanent value, independent of the changing conditions of day-to-day operations.

SUBPART B RESERVED

SUBPART C AIRCRAFT PERFORMANCE AND OPERATING LIMITATIONS

SECTION 1 Aeroplanes

CHAPTER 1 General requirements

CAT.POL.A.100 Performance classes

The aeroplane shall be operated in accordance with the applicable performance class requirements.

Where full compliance with the applicable requirements of this Section cannot be shown due to specific design characteristics, the operator shall apply approved performance standards that ensure a level of safety equivalent to that of the appropriate chapter.

CAT.POL.A.105 General

The mass of the aeroplane:

at the start of the take-off; or

in the event of in-flight replanning, at the point from which the revised operational flight plan applies,

shall not be greater than the mass at which the requirements of the appropriate chapter can be complied with for the flight to be undertaken. Allowance may be made for expected reductions in mass as the flight proceeds and for fuel jettisoning.

The approved performance data contained in the AFM shall be used to determine compliance with the requirements of the appropriate chapter, supplemented as necessary with other data as prescribed in the relevant chapter. The operator shall specify other data in the operations manual. When applying the factors prescribed in the appropriate chapter, account may be taken of any operational factors already incorporated in the AFM performance data to avoid double application of factors.

Due account shall be taken of aeroplane configuration, environmental conditions and the operation of systems that have an adverse effect on performance.

The operator shall take account of charting accuracy when assessing the take-off requirements of the applicable chapters.

CHAPTER 2 Performance class A

CAT.POL.A.200 General

The approved performance data in the AFM shall be supplemented as necessary with other data if the approved performance data in the AFM is insufficient in respect of items such as:

accounting for reasonably expected adverse operating conditions such as take-off and landing on contaminated runways; and

consideration of engine failure in all flight phases.

For wet and contaminated runways, performance data determined in accordance with applicable standards on certification of large aeroplanes or equivalent shall be used.

The use of other data referred to in (a) and equivalent requirements referred to in (b) shall be specified in the operations manual.

CAT.POL.A.205 Take-off

The take-off mass shall not exceed the maximum take-off mass specified in the AFM for the pressure altitude and the ambient temperature at the aerodrome of departure.

The following requirements shall be met when determining the maximum permitted take-off mass:

the accelerate-stop distance shall not exceed the accelerate-stop distance available (ASDA);

the take-off distance shall not exceed the take-off distance available, with a clearway distance not exceeding half of the take-off run available (TORA);

the take-off run shall not exceed the TORA;

a single value of V1 shall be used for the rejected and continued take-off; and

on a wet or contaminated runway, the take-off mass shall not exceed that permitted for a take-off on a dry runway under the same conditions.

When showing compliance with (b), the following shall be taken into account:

the pressure altitude at the aerodrome;

the ambient temperature at the aerodrome;

the runway surface condition and the type of runway surface;

the runway slope in the direction of take-off;

not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component; and

the loss, if any, of runway length due to alignment of the aeroplane prior to take-off.

CAT.POL.A.210 Take-off obstacle clearance

The net take-off flight path shall be determined in such a way that the aeroplane clears all obstacles by a vertical distance of at least 35 ft or by a horizontal distance of at least 90 m plus 0,125 × D, where D is the horizontal distance the aeroplane has travelled from the end of the take-off distance available (TODA) or the end of the take-off distance if a turn is scheduled before the end of the TODA. For aeroplanes with a wingspan of less than 60 m, a horizontal obstacle clearance of half the aeroplane wingspan plus 60 m, plus 0,125 × D may be used.

When showing compliance with (a):

The following items shall be taken into account:

the mass of the aeroplane at the commencement of the take-off run;

the pressure altitude at the aerodrome;

the ambient temperature at the aerodrome; and

not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component.

Track changes shall not be allowed up to the point at which the net take-off flight path has achieved

a height equal to one half the wingspan but not less than 50 ft above the elevation of the end of the TORA. Thereafter, up to a height of 400 ft it is assumed that the aeroplane is banked by no more than 15°. Above 400 ft height bank angles greater than 15°, but not more than 25° may be scheduled.

Any part of the net take-off flight path in which the aeroplane is banked by more than 15° shall clear all obstacles within the horizontal distances specified in (a), (b)(6) and (b)(7) by a vertical distance of at least 50 ft.

Operations that apply increased bank angles of not more than 20° between 200 ft and 400 ft, or not more than 30° above 400 ft, shall be carried out in accordance with CAT.POL.A.240.

Adequate allowance shall be made for the effect of bank angle on operating speeds and flight path including the distance increments resulting from increased operating speeds.

For cases where the intended flight path does not require track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:

300 m, if the pilot is able to maintain the required navigational accuracy through the obstacle accountability area; or

600 m, for flights under all other conditions.

For cases where the intended flight path requires track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:

600 m, if the pilot is able to maintain the required navigational accuracy through the obstacle accountability area; or

900 m, for flights under all other conditions.

The operator shall establish contingency procedures to satisfy the requirements in (a) and (b) and to provide a safe route, avoiding obstacles, to enable the aeroplane to either comply with the en-route requirements of CAT.POL.A.215, or land at either the aerodrome of departure or at a take-off alternate aerodrome.

CAT.POL.A.215 En-route - one-engine-inoperative (OEI)

The OEI en-route net flight path data shown in the AFM, appropriate to the meteorological conditions expected for the flight, shall allow demonstration of compliance with (b) or (c) at all points along the route. The net flight path shall have a positive gradient at 1 500 ft above the aerodrome where the landing is assumed to be made after engine failure. In meteorological conditions requiring the operation of ice protection systems, the effect of their use on the net flight path shall be taken into account.

The gradient of the en-route net flight path shall be positive at least 1 000 ft above all terrain and obstructions along the route within 9,3 km (5 NM) on either side of the intended track.

The en-route net flight path shall permit the aeroplane to continue flight from the cruising altitude to an aerodrome where a landing can be made in accordance with CAT.POL.A.230, or CAT.POL.A.235 as appropriate. The en-route net flight path shall clear vertically, by at least 2 000 ft, all terrain and obstructions along the route within 9,3 km (5 NM) on either side of the intended track taking into account the following elements:

the engine is assumed to fail at the most critical point along the route;

account is taken of the effects of winds on the flight path;

fuel jettisoning is permitted to an extent consistent with reaching the aerodrome where the aeroplane

is assumed to landafter engine failure with the required fuel reserves in accordance with CAT.OP. MPA.150, appropriate for an alternate aerodrome, if a safe procedure is used;

the aerodrome where the aeroplane is assumed to land after engine failure shall meet the following criteria:

the performance requirements for the expected landing mass are met;

weather reports or forecasts and runway condition reports indicate that a safe landing can be accomplished at the estimated time of landing.

if the AFM does not contain en-route net flight path data, the gross OEI en-route flight path shall be reduced by a climb gradient of 1,1 % for two-engined aeroplanes, 1,4 % for three-engined aeroplanes, and 1,6 % for four-engined aeroplanes.

The operator shall increase the width margins provided for in (b) and (c) to 18,5 km (10 NM) if the navigational accuracy does not meet at least navigation specification RNAV 5.

CAT.POL.A.220 En-route - aeroplanes with three or more engines, two engines inoperative

An aeroplane that has three or more engines shall not be away from an aerodrome at which the requirements of CAT.POL.A.230 or CAT.POL.A.235(a) for the expected landing mass are met accordingly, at any point along the intended track for more than 90 minutes, with all engines operating at cruising power or thrust, as appropriate, at standard temperature in still air, unless (b) to (f) are complied with.

The two-engines-inoperative en-route net flight path data shall allow the aeroplane to continue the flight, in the expected meteorological conditions, from the point where two engines are assumed to fail simultaneously to an aerodrome at which it is possible to land and come to a complete stop when using the prescribed procedure for a landing with two engines inoperative. The en-route net flight path shall clear vertically, by at least 2 000 ft, all terrain and obstructions along the route within 9,3 km (5 NM) on either side of the intended track. At altitudes and in meteorological conditions that require ice protection systems to be operable, the effect of their use on the en-route net flight path data shall be taken into account. If the navigational accuracy does not meet at least navigation specification RNAV 5, the operator shall increase the prescribed width margin provided for in the second sentence to 18,5 km (10 NM).

The two engines shall be assumed to fail at the most critical point of that portion of the route where the aeroplane is operated for more than 90 minutes, with all engines operating at cruising power or thrust, as appropriate, at standard temperature in still air, away from the aerodrome referred to in (a).

The net flight path shall have a positive gradient at 1 500 ft above the aerodrome where the landing is assumed to be made after the failure of two engines.

Fuel jettisoning shall be permitted to an extent consistent with reaching the aerodrome with the required fuel reserves referred to in (f), if a safe procedure is used.

The expected mass of the aeroplane at the point where the two engines are assumed to fail shall not be less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at an altitude of at least 450m 1 500 ft directly over the landing area and thereafter to fly for 15 minutes at cruising power or thrust, as appropriate.

CAT.POL.A.225 Landing - destination and alternate aerodromes

(a) The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) shall not exceed the maximum landing mass specified for the altitude and the ambient temperature expected for the estimated time of landing at the destination aerodrome and alternate aerodrome.

CAT.POL.A.230 Landing - dry runways

The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) for the estimated time of landing at the destination aerodrome and at any alternate aerodrome shall allow a full stop landing from 50 ft above the threshold:

for turbo-jet powered aeroplanes, within 60 % of the landing distance available (LDA); and

for turbo-propeller powered aeroplanes, within 70 % of the LDA.

by way of derogation from points (a)(1) and (a)(2), for aeroplanes that are approved for reduced landing distance operations under CAT.POL.A.255, within 80 % of the LDA

For steep approach operations, the operator shall use the landing distance data factored in accordance with (a)(1) or (a)(2), as applicable, based on a screen height of less than 60 ft, but not less than 35 ft, and shall comply with CAT.POL.A.245.

For short landing operations, the operator shall use the landing distance data factored in accordance with (a)(1) or (a)(2), as applicable, and shall comply with CAT.POL.A.250.

When determining the landing mass, the operator shall take the following into account:

not more than 50 % of the headwind component or not less than 150 % of the tailwind component; and

corrections as provided in the AFM.

For dispatching the aeroplane the aeroplane shall either:

land on the most favourable runway, in still air; or

land on the runway most likely to be assigned, considering the probable wind speed and direction, the ground handling characteristics of the aeroplane and other conditions such as landing aids and terrain.

If the operator is unable to comply with (e) (2) for the destination aerodrome the aeroplane shall only be dispatched if an alternate aerodrome is designated that allows full compliance with:

(a) to (d), if the runway at the estimated time of arrival is dry;

CAT.POL.A.235(a) to (d), if the runway at the estimated time of arrival is wet or contaminated

CAT.POL.A.235 Landing - wet and contaminated runways

When the appropriate weather reports or forecasts or both indicate that the runway at the estimated time of arrival may be wet, the LDA shall be one of the following distances:

a landing distance provided in the AFM for use on wet runways at time of dispatch, but not less than that required by CAT.POL.A.230(a)(1) or (a)(2), as applicable;

if a landing distance is not provided in the AFM for use on wet runways at time of dispatch, at least 115 % of the required landing distance, determined in accordance with CAT.POL.A.230(a)(1) or (a)(2), as applicable;

a landing distance shorter than that required by (a)(2), but not less than that required by CAT.POL.A.230(a)(1) or (a)(2), as applicable, if the runway has specific friction-improving

characteristics and the AFM includes specific additional information for landing distance on that runway type;

by way of derogation from (a)(1), (a)(2) and (a)(3), for aeroplanes that are approved for reduced landing distance operations under CAT.POL.A.255, the landing distance determined in accordance with CAT.POL.A.255(b)(2)(v)(B).

When the appropriate weather reports or forecasts indicate that the runway at the estimated time of arrival may be contaminated, the LDA shall be one of the following distances:

at least the landing distance determined in accordance with (a), or at least 115 % of the landing distance determined in accordance with approved contaminated landing distance data or equivalent, whichever is greater;.

on specially prepared winter runways, a landing distance shorter than that required by (b)(1), but not less than that required by (a), may be used if the AFM includes specific additional information about landing distances on contaminated runways. Such landing distance shall be at least 115 % of the landing distance contained in the AFM.

By way of derogation from (b), the increment of 15 % needs not to be applied if it is already included in the approved landing distance data or equivalent.

For (a) and (b), the criteria of CAT.POL.A.230(b), (c) and (d) shall apply accordingly.

For dispatching the aeroplane, the aeroplane shall either:

land on the most favourable runway, in still air;

land on the runway most likely to be assigned, considering the probable wind speed and direction, the ground-handling characteristics of the aeroplane and other conditions such as landing aids and terrain

If the operator is unable to comply with (e)(1) for a destination aerodrome where the appropriate weather reports or forecasts indicate that the runway at the estimated time of arrival may be contaminated and where a landing depends upon a specific wind component, the aeroplane shall only be dispatched if two alternate aerodromes are designated.

If the operator is unable to comply with (e)(2) for the destination aerodrome where the appropriate weather reports or forecasts indicate that the runway at the estimated time of arrival may be wet or contaminated, the aeroplane shall only be dispatched if an alternate aerodrome is designated.

For (f) and (g), the designated alternate aerodrome or aerodromes shall allow compliance with one of the following:

CAT.POL.A.230(a) to (d), if the runway at the estimated time of arrival is dry;

CAT.POL.A.235(a) to (d), if the runway at the estimated time of arrival is wet or contaminated.

CAT.POL.A.240 Approval of operations with increased bank angles

Operations with increased bank angles require prior approval by the Authority.

To obtain the approval, the operator shall provide evidence that the following conditions are met:

the AFM contains approved data for the required increase of operating speed and data to allow the construction of the flight path considering the increased bank angles and speeds;

visual guidance is available for navigation accuracy;

weather minima and wind limitations are specified for each runway; and

the flight crew has obtained adequate knowledge of the route to be flown and of the procedures to be used in accordance with subpart FC of Part-ORO.

CAT.POL.A.245 Approval of steep approach operations

Steep approach operations using glideslope angles of 4,5° or more and with screen heights of less than 60 ft, but not less than 35 ft, require prior approval by the Authority.

To obtain the approval, the operator shall provide evidence that the following conditions are met:

the AFM states the maximum approved glideslope angle, any other limitations, normal, abnormal or emergency procedures for the steep approach as well as amendments to the field length data when using steep approach criteria;

for each aerodrome at which steep approach operations are to be conducted:

a suitable glide path reference system comprising at least a visual glide path indicating system shall be available;

weather minima shall be specified; and

the following items shall be taken into consideration:

the obstacle situation;

the type of glide path reference and runway guidance;

the minimum visual reference to be required at decision height (DH) and MDA;

available airborne equipment;

pilot qualification and special aerodrome familiarisation;

AFM limitations and procedures; and (G) missed approach criteria.

CAT.POL.A.250 Approval of short landing operations

Short landing operations require prior approval by the Authority.

To obtain the approval, the operator shall provide evidence that the following conditions are met:

the distance used for the calculation of the permitted landing mass may consist of the usable length of the declared safe area plus the declared LDA;

the State of the aerodrome has determined a public interest and operational necessity for the operation, either due to the remoteness of the aerodrome or to physical limitations relating to extending the runway;

the vertical distance between the path of the pilot’s eye and the path of the lowest part of the wheels, with the aeroplane established on the normal glide path, does not exceed 3 m;

RVR/VIS minimum shall not be less than 1 500 m and wind limitations are specified in the

operations manual;

minimum pilot experience, training and special aerodrome familiarisation requirements are specified and met;

the crossing height over the beginning of the usable length of the declared safe area is 50 ft;

the use of the declared safe area is approved by the State of the aerodrome;

the usable length of the declared safe area does not exceed 90 m;

the width of the declared safe area is not less than twice the runway width or twice the wing span, whichever is greater, centred on the extended runway centre line;

the declared safe area is clear of obstructions or depressions that would endanger an aeroplane undershooting the runway and no mobile object is permitted on the declared safe area while the runway is being used for short landing operations;

the slope of the declared safe area does not exceed 5 % upward nor 2 % downward in the direction of landing;

(11a) reduced required landing distance operations in accordance with CAT.POL.A.255 are prohibited

additional conditions, if specified by the Authority, taking into account aeroplane type characteristics, orographic characteristics in the approach area, available approach aids and missed approach/ balked landing considerations.

CAT.POL.A.255 Approval of reduced required landing distance operations

An aeroplane operator may conduct landing operations within 80 % of the landing distance available (LDA) if it complies with the following conditions:

the airplane has an MOPSC of 19 or less;

the airplane has an eligibility statement for reduced required landing distance in the AFM;

the airplane is used in non-scheduled on-demand commercial air transport (CAT) operations;

the landing mass of the aeroplane allows a full-stop landing within that reduced landing distance; (5) the operator has obtained a prior approval of the Authority.

To obtain the approval referred to in (a)(5), the operator shall provide evidence of either of the following circumstances:

that a risk assessment has been conducted to demonstrate that a level of safety equivalent to that intended by CAT.POL.A.230(a)(1) or (2), as applicable, is achieved;

that the following conditions are met:

special-approach procedures, such as steep approaches, planned screen heights higher than 60 ft or lower than 35 ft, low-visibility operations, approaches outside stabilised approach criteria approved under point CAT.OP.MPA.115(a), are prohibited;

short landing operations in accordance with point CAT.POL.A.250 are prohibited;

landing on contaminated runways is prohibited;

an adequate training, checking and monitoring process for the flight crew is established;

an aerodrome landing analysis programme (ALAP) is established by the operator to ensure that the following conditions are met:

no tailwind is forecast at the expected time of arrival;

if the runway is forecast to be wet at the expected time of arrival, the landing distance at dispatch shall either be determined in accordance with point CAT.OP.MPA.303(a) or (b) as applicable, or shall be 115 % of the landing distance determined for dry runways, whichever is longer;

no forecast contaminated runway conditions exist at the expected time of arrival;

no forecast adverse weather conditions exist at the expected time of arrival;

all the equipment that affects landing performance is operative before commencing the flight;

the flight crew is composed of at least two qualified and trained pilots that have recency in reduced required landing distance operations;

based on the prevailing conditions for the intended flight, the commander shall make the final decision to conduct reduced required landing distance operations and may decide not to do so when he or she considers that to be in the interest of safety;

additional aerodrome conditions, if specified by the Authority that has certified the aerodrome, taking into account orographic characteristics of the approach area, available approach aids, missed-approach and balked-landing considerations.'

CHAPTER 3 Performance class B

CAT.POL.A.300 General

Unless approved by the Authority in accordance with Part-SPA, Subpart L - SINGLE ENGINED TURBINE AEROPLANE OPERATIONS AT NIGHT OR IN IMC (SET-IMC) the operator shall not operate a single-engined aeroplane:

at night; or

in IMC except under special VFR.

The operator shall treat two-engined aeroplanes that do not meet the climb requirements of CAT.POL.A.340 as single-engined aeroplanes.

CAT.POL.A.305 Take-off

The take-off mass shall not exceed the maximum take-off mass specified in the AFM for the pressure altitude and the ambient temperature at the aerodrome of departure.

The unfactored take-off distance, specified in the AFM, shall not exceed:

when multiplied by a factor of 1,25, the take-off run available (TORA); or

when stop way and/or clearway is available, the following:

the TORA;

when multiplied by a factor of 1,15, the take-off distance available (TODA); or

when multiplied by a factor of 1,3, the ASDA.

When showing compliance with (b), the following shall be taken into account:

the mass of the aeroplane at the commencement of the take-off run;

the pressure altitude at the aerodrome;

the ambient temperature at the aerodrome;

the runway surface condition and the type of runway surface;

the runway slope in the direction of take-off; and

not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component.

CAT.POL.A.310 Take-off obstacle clearance - multi-engined aeroplanes

The take-off flight path of aeroplanes with two or more engines shall be determined in such a way that the aeroplane clears all obstacles by a vertical distance of at least 50 ft, or by a horizontal distance of at least 90 m plus 0,125 × D, where D is the horizontal distance travelled by the aeroplane from the end of the TODA or the end of the take-off distance if a turn is scheduled before the end of the TODA, except as provided in (b) and (c). For aeroplanes with a wingspan of less than 60 m, a horizontal obstacle clearance of half the aeroplane wingspan plus 60 m plus 0,125 × D may be used. It shall be assumed that:

the take-off flight path begins at a height of 50 ft above the surface at the end of the take-off distance required by CAT.POL.A.305(b) and ends at a height of 1 500 ft above the surface;

the aeroplane is not banked before the aeroplane has reached a height of 50 ft above the surface, and thereafter the angle of bank does not exceed 15°;

failure of the critical engine occurs at the point on the all engine take-off flight path where visual reference for the purpose of avoiding obstacles is expected to be lost;

the gradient of the take-off flight path from 50 ft to the assumed engine failure height is equal to the average all-engines gradient during climb and transition to the en-route configuration, multiplied by a factor of 0,77; and

the gradient of the take-off flight path from the height reached in accordance with (a)(4) to the end of the take-off flight path is equal to the OEI en-route climb gradient shown in the AFM.

For cases where the intended flight path does not require track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:

300 m, if the flight is conducted under conditions allowing visual course guidance navigation, or if navigational aids are available enabling the pilot to maintain the intended flight path with the same accuracy; or

600 m, for flights under all other conditions.

For cases where the intended flight path requires track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:

600 m, for flights under conditions allowing visual course guidance navigation; or

900 m, for flights under all other conditions.

When showing compliance with (a) to (c), the following shall be taken into account:

the mass of the aeroplane at the commencement of the take-off run;

the pressure altitude at the aerodrome;

the ambient temperature at the aerodrome; and

not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component.

The requirements in (a)(3), (a)(4), (a)(5), (b)(2) and (c)(2) shall not be applicable to VFR operations by day.

CAT.POL.A.315 En-route - multi-engined aeroplanes

The aeroplane, in the meteorological conditions expected for the flight and in the event of the failure of one engine, with the remaining engines operating within the maximum continuous power conditions specified, shall be capable of continuing flight at or above the relevant minimum altitudes for safe flight stated in the operations manual to a point of 1 000 ft above an aerodrome at which the performance requirements can be met.

It shall be assumed that, at the point of engine failure:

the aeroplane is not flying at an altitude exceeding that at which the rate of climb equals 300 ft per minute with all engines operating within the maximum continuous power conditions specified; and

the en-route gradient with OEI shall be the gross gradient of descent or climb, as appropriate, respectively increased by a gradient of 0,5 %, or decreased by a gradient of 0,5 %.

CAT.POL.A.320 En-route - single-engined aeroplanes

In the meteorological conditions expected for the flight, and in the event of engine failure, the aeroplane shall be capable of reaching a place at which a safe forced landing can be made, unless the operator is approved by the Authority in accordance with Part-SPA, Subpart L - SINGLE-ENGINED TURBINE AEROPLANE OPERATIONS AT NIGHT OR IN IMC (SET-IMC) and makes use of a risk period. .

For the propose of point (a) it shall be assumed that, at the point of engine failure:

the aeroplane is not flying at an altitude exceeding that at which the rate of climb equals 300 ft per minute, with the engine operating within the maximum continuous power conditions specified; and

the en-route gradient is the gross gradient of descent increased by a gradient of 0,5 %.

CAT.POL.A.325 Landing - destination and alternate aerodromes

The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) shall not exceed the maximum landing mass specified for the altitude and the ambient temperature expected at the estimated time of landing at the destination aerodrome and alternate aerodrome.

CAT.POL.A.330 Landing - dry runways

The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) for the estimated time of landing at the destination aerodrome and at any alternate aerodrome shall allow a full stop landing from 50 ft above the threshold within 70 % of the LDA

By way of derogation from (a), and where CAT.POL.A.355 is complied with, the landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) for the estimated time of landing at the destination aerodrome shall be such as to allow a full-stop landing from 50 ft above the threshold within 80 % of the LDA

When determining the landing mass, the operator shall take the following into account:

the altitude at the aerodrome;

not more than 50 % of the headwind component or not less than 150 % of the tailwind component; (3) the

type of runway surface;

(4) the runway slope in the direction of landing

For steep approach operations, the operator shall use landing distance data factored in accordance with (a), based on a screen height of less than 60 ft, but not less than 35 ft, and comply with CAT.POL.A.345.

For short landing operations, the operator shall use landing distance data factored in accordance with point (a), and comply with CAT.POL.A.350.

For dispatching the aeroplane, the aeroplane shall either:

land on the most favourable runway, in still air;

land on the runway most likely to be assigned considering the probable wind speed and direction, the ground-handling characteristics of the aeroplane and other conditions such as landing aids and terrain.

If the operator is unable to comply with (f)(2) for the destination aerodrome, the aeroplane shall only be dispatched if an alternate aerodrome is designated that permits full compliance with (a) to (f).

CAT.POL.A.335 Landing - wet and contaminated runways

When the appropriate weather reports or forecasts indicate that the runway at the estimated time of arrival may be wet, the LDA shall be one of the following distances:

a landing distance provided in the AFM for use on wet runways at time of dispatch, but not less than that required by point CAT.POL.A.330;

if a landing distance is not provided in the AFM for use on wet runways at time of dispatch, at least 115 % of the required landing distance, determined in accordance with point CAT.POL.A.330(a);

a landing distance shorter than that required by point (a)(2), but not less than that required by point CAT.POL.A.330(a), as applicable, if the runway has specific friction improving characteristics and the AFM includes specific additional information for landing distance on that runway type;

by way of derogation from points (a)(1), (a)(2) and (a)(3), for aeroplanes that are approved for reduced landing distance operations under point CAT.POL.A.355, the landing distance determined in accordance with point CAT.POL.A.355(b)(7)(iii).

When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be contaminated, the landing distance shall not exceed the LDA. The operator shall specify in the operations manual the landing distance data to be applied.

CAT.POL.A.340 Take-off and landing climb requirements

The operator of a two-engined aeroplane shall fulfil the following take-off and landing climb requirements.

Take-off climb

All engines operating

The steady gradient of climb after take-off shall be at least 4 % with:

take-off power on each engine;

the landing gear extended, except that if the landing gear can be retracted in not more than seven seconds, it may be assumed to be retracted;

the wing flaps in the take-off position(s); and

a climb speed not less than the greater of 1,1 V_{MC} (minimum control speed on or near ground) and 1,2 V_{S1} (stall speed or minimum steady flight speed in the landing configuration).

OEI

The steady gradient of climb at an altitude of 400 ft above the take-off surface shall be measurably positive with:

the critical engine inoperative and its propeller in the minimum drag position;

the remaining engine at take-off power;

the landing gear retracted;

the wing flaps in the take-off position(s); and

a climb speed equal to that achieved at 50 ft.

The steady gradient of climb shall be not less than 0,75 % at an altitude of 1 500 ft above the take-off surface with:

the critical engine inoperative and its propeller in the minimum drag position;

the remaining engine at not more than maximum continuous power;

the landing gear retracted;

the wing flaps retracted; and

a climb speed not less than 1,2 V_{S1}.

Landing climb

All engines operating

The steady gradient of climb shall be at least 2,5 % with:

not more than the power or thrust that is available eight seconds after initiation of movement of the power controls from the minimum flight idle position;

the landing gear extended;

the wing flaps in the landing position; and

a climb speed equal to V_{REF} (reference landing speed).

OEI

The steady gradient of climb shall be not less than 0,75 % at an altitude of 1 500 ft above the landing surface with:

the critical engine inoperative and its propeller in the minimum drag position;

the remaining engine at not more than maximum continuous power;

the landing gear retracted;

the wing flaps retracted; and

a climb speed not less than 1,2 V_{S1}.

CAT.POL.A.345 Approval of steep approach operations

Steep approach operations using glideslope angles of 4,5° or more and with screen heights of less than 60 ft, but not less than 35 ft, require prior approval by the Authority.

To obtain the approval, the operator shall provide evidence that the following conditions are met:

the AFM states the maximum approved glideslope angle, any other limitations, normal, abnormal or emergency procedures for the steep approach as well as amendments to the field length data when using steep approach criteria; and

for each aerodrome at which steep approach operations are to be conducted:

a suitable glide path reference system, comprising at least a visual glide path indicating system, is available;

weather minima are specified; and

the following items are taken into consideration:

the obstacle situation;

the type of glide path reference and runway guidance;

the minimum visual reference to be required at DH and MDA;

available airborne equipment;

pilot qualification and special aerodrome familiarisation;

AFM limitations and procedures; and (G) missed approach criteria.

CAT.POL.A.350 Approval of short landing operations

Short landing operations require prior approval by the Authority.

To obtain the approval, the operator shall provide evidence that the following conditions are met:

the distance used for the calculation of the permitted landing mass may consist of the usable length of the declared safe area plus the declared LDA;

the use of the declared safe area is approved by the State of the aerodrome;

the declared safe area is clear of obstructions or depressions that would endanger an aeroplane undershooting the runway and no mobile object is permitted on the declared safe area while the runway is being used for short landing operations;

the slope of the declared safe area does not exceed 5 % upward nor 2 % downward slope in the direction of landing;

the usable length of the declared safe area does not exceed 90 m;

the width of the declared safe area is not less than twice the runway width, centred on the extended runway centreline;

the crossing height over the beginning of the usable length of the declared safe area is not less than 50 ft;

weather minima are specified for each runway to be used and are not less than the greater of VFR or NPA minima;

pilot experience, training and special aerodrome familiarisation requirements are specified and met;

additional conditions, if specified by the Authority, taking into account the aeroplane type characteristics, orographic characteristics in the approach area, available approach aids and missed approach/balked landing considerations.

CAT.POL.A.355 Approval of reduced required landing distance operations

Operations with a landing mass of the aeroplane that allows a full-stop landing within 80 % of the landing distance available (LDA) require prior approval by the Authority. Such approval shall be obtained for each runway on which operations with reduced required landing distance are conducted.

To obtain the approval referred to in point (a), the operator shall conduct a risk assessment to demonstrate that a level of safety equivalent to that intended by point CAT.POL.A.330(a) is achieved and at least the following conditions are met:

the State of the aerodrome has determined a public interest and operational necessity for the operation, either due to the remoteness of the aerodrome or to physical limitations relating to the extension of the runway;

short landing operations in accordance with point CAT.POL.A.350 and approaches outside stabilised approach criteria approved under point CAT.OP.MPA.115(a) are prohibited;

landing on contaminated runways is prohibited;

a specific control procedure of the touchdown area is defined in the operations manual (OM) and implemented; this procedure shall include adequate go-around and balked-landing instructions when touchdown in the defined area cannot be achieved;

an adequate aerodrome training and checking programme for the flight crew is established;

the flight crew is qualified and has recency in reduced required landing distance operations at the aerodrome concerned;

an aerodrome landing analysis programme (ALAP) is established by the operator to ensure that the following conditions are met:

no tailwind is forecast at the expected time of arrival;

if the runway is forecast to be wet at the expected time of arrival, the landing distance at dispatch shall either be determined in accordance with point CAT.OP.MPA.303(c), or shall be 115 % of the landing distance determined for dry runways, whichever is longer;

no forecast contaminated runway conditions exist at the expected time of arrival;

no forecast adverse weather conditions exist at the expected time of arrival;

operational procedures are established to ensure that:

all the equipment that affects landing performance and landing distance is operative before commencing the flight;

deceleration devices are correctly used by the flight crew;

specific maintenance instructions and operational procedures are established for the aeroplane's deceleration devices to enhance the reliability of those systems;

the final approach and landing are conducted under visual meteorological conditions (VMC) only;

additional aerodrome conditions, if specified by the competent authority that has certified the aerodrome, taking into account orographic characteristics of the approach area, available approach aids, missed-approach and balked-landing considerations.

CHAPTER 4 Performance class C

CAT.POL.A.400 Take-off

The take-off mass shall not exceed the maximum take-off mass specified in the AFM for the pressure altitude and the ambient temperature at the aerodrome of departure.

For aeroplanes that have take-off field length data contained in their AFM that do not include engine failure accountability, the distance from the start of the take-off roll required by the aeroplane to reach a height of 50 ft above the surface with all engines operating within the maximum take-off power conditions specified, when multiplied by a factor of either:

1,33 for aeroplanes having two engines;

1,25 for aeroplanes having three engines; or

1,18 for aeroplanes having four engines,shall not exceed the take-off run available (TORA) at the aerodrome at which the take-off is to be made.

For aeroplanes that have take-off field length data contained in their AFM which accounts for engine failure, the following requirements shall be met in accordance with the specifications in the AFM:

the accelerate-stop distance shall not exceed the ASDA;

the take-off distance shall not exceed the take-off distance available (TODA), with a clearway distance not exceeding half of the TORA;

the take-off run shall not exceed the TORA;

a single value of V1 for the rejected and continued take-off shall be used; and

on a wet or contaminated runway the take-off mass shall not exceed that permitted for a take-off on a dry runway under the same conditions. (d) The following shall be taken into account:

the pressure altitude at the aerodrome;

the ambient temperature at the aerodrome;

the runway surface condition and the type of runway surface;

the runway slope in the direction of take-off;

not more that 50 % of the reported headwind component or not less than 150 % of the reported tailwind component; and

the loss, if any, of runway length due to alignment of the aeroplane prior to take-off.

CAT.POL.A.405 Take-off obstacle clearance

The take-off flight path with OEI shall be determined such that the aeroplane clears all obstacles by a vertical distance of at least 50 ft plus 0,01 × D, or by a horizontal distance of at least 90 m plus 0,125 × D, where D is the horizontal distance the aeroplane has travelled from the end of the TODA. For aeroplanes with a wingspan of less than 60 m, a horizontal obstacle clearance of half the aeroplane wingspan plus 60 m plus 0,125 × D may be used.

The take-off flight path shall begin at a height of 50 ft above the surface at the end of the take-off distance required by CAT.POL.A.400(b) or (c), as applicable, and end at a height of 1 500 ft above the surface.

When showing compliance with (a), the following shall be taken into account:

the mass of the aeroplane at the commencement of the take-off run;

the pressure altitude at the aerodrome;

the ambient temperature at the aerodrome; and

not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component.

Track changes shall not be allowed up to that point of the take-off flight path where a height of 50 ft above the surface has been achieved. Thereafter, up to a height of 400 ft it is assumed that the aeroplane is banked by no more than 15°. Above 400 ft height bank angles greater than 15°, but not more than 25°, may be

scheduled. Adequate allowance shall be made for the effect of bank angle on operating speeds and flight path, including the distance increments resulting from increased operating speeds.

For cases that do not require track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:

300 m, if the pilot is able to maintain the required navigational accuracy through the obstacle accountability area; or

600 m, for flights under all other conditions.

For cases that do require track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:

600 m, if the pilot is able to maintain the required navigational accuracy through the obstacle accountability area; or

900 m, for flights under all other conditions.

The operator shall establish contingency procedures to satisfy (a) to (f) and to provide a safe route, avoiding obstacles, to enable the aeroplane to either comply with the en-route requirements of CAT.POL.A.410, or land at either the aerodrome of departure or at a take-off alternate aerodrome.

CAT.POL.A.410 En-route - all engines operating

(a) In the meteorological conditions expected for the flight, at any point on its route or on any planned diversion therefrom, the aeroplane shall be capable of a rate of climb of at least 300 ft per minute with all engines operating within the maximum continuous power conditions specified at:

the minimum altitudes for safe flight on each stage of the route to be flown, or of any planned diversion therefrom, specified in or calculated from the information contained in the operations manual relating to the aeroplane; and

the minimum altitudes necessary for compliance with the conditions prescribed in CAT.POL.A.415 and 420, as appropriate.

CAT.POL.A.415 En-route - OEI

In the meteorological conditions expected for the flight, in the event of any one engine becoming inoperative at any point on its route or on any planned diversion therefrom and with the other engine(s) operating within the maximum continuous power conditions specified, the aeroplane shall be capable of continuing the flight from the cruising altitude to an aerodrome where a landing can be made in accordance with CAT.POL.A.430 or CAT.POL.A.435, as appropriate. The aeroplane shall clear obstacles within 9,3 km (5 NM) either side of the intended track by a vertical interval of at least:

1 000 ft, when the rate of climb is zero or greater; or

2 000 ft, when the rate of climb is less than zero.

The flight path shall have a positive slope at an altitude of 450 m (1 500 ft) above the aerodrome where the landing is assumed to be made after the failure of one engine.

The available rate of climb of the aeroplane shall be taken to be 150 ft per minute less than the gross rate of climb specified.

The width margins provided for in (a) shall be increased to 18,5 km (10 NM) if the navigational accuracy does not meet at least navigation specification RNAV.

Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome where the aeroplane is assumed to land after engine failure with the required fuel reserves, in accordance with CAT.OP. MPA.150, appropriate for an alternate aerodrome if a safe procedure is used.

CAT.POL.A.420 En-route - aeroplanes with three or more engines, two engines inoperative

An aeroplane that has three or more engines shall not be away from an aerodrome at which the requirements of CAT.POL.A.430 for at the expected landing mass are met, at any point along the intended track for more than 90 minutes with all engines operating at cruising power or thrust, as appropriate, at standard temperature in still air, unless it complies with (b) to (e).

The two-engines-inoperative flight path shall permit the aeroplane to continue the flight, in the expected meteorological conditions, clearing all obstacles within 9,3 km (5 NM) on either side of the intended track by a vertical interval of at least 2 000 ft, to an aerodrome at which the performance requirements applicable for the expected landing mass are met.

The two engines shall be assumed to fail at the most critical point of that portion of the route where the aeroplane is operated for more than 90 minutes, with all-engines operating at cruising power or thrust, as appropriate at standard temperature in still air, away from the aerodrome referred to in (a).

The expected mass of the aeroplane at the point where the two engines are assumed to fail shall not be less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at an altitude of a least 450 m (1 500 ft) directly over the landing area and thereafter to fly for 15 minutes at cruising power or thrust, as appropriate.

The available rate of climb of the aeroplane shall be 150 ft per minute less than that specified.

The width margins provided for in (b) shall be increased to 18,5 km (10 NM) if the navigational accuracy does not meet at least navigation specification RNAV 5.

Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, in accordance with (d) if a safe procedure is used.

CAT.POL.A.425 Landing - destination and alternate aerodromes

The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) shall not exceed the maximum landing mass specified in the AFM for the altitude and, if accounted for in the AFM, the ambient temperature expected for the estimated time of landing at the destination aerodrome and alternate aerodrome.

CAT.POL.A.430 Landing - dry runways

The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) for the estimated time of landing at the destination aerodrome and any alternate aerodrome shall allow a full stop landing from 50 ft above the threshold within 70 % of the LDA taking into account:

the altitude at the aerodrome;

not more than 50 % of the headwind component or not less than 150 % of the tailwind component;

the type of runway surface; and

the runway slope in the direction of landing.

For dispatching the aeroplane it shall be assumed that:

the aeroplane will land on the most favourable runway in still air; and

the aeroplane will land on the runway most likely to be assigned considering the probable wind speed and direction, the ground handling characteristics of the aeroplane and other conditions such as landing aids and terrain.

If the operator is unable to comply with (b)(2) for the destination aerodrome, the aeroplane shall only be dispatched if an alternate aerodrome is designated that permits full compliance with (a) and (b).

CAT.POL.A.435 Landing - wet and contaminated runways

When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be wet, the LDA shall be one of the following distances:

a landing distance provided in the AFM for use on wet runways at time of dispatch, but not less than that required by point CAT.POL.A.430;

if a landing distance is not provided in the AFM for use on wet runways at time of dispatch, at least 115 % of the required landing distance, determined in accordance with point CAT.POL.A.430.

When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be contaminated, the landing distance shall not exceed the LDA. The operator shall specify in the operations manual the landing distance data to be applied.

SECTION 2 Helicopters

CHAPTER 1 General requirements

CAT.POL.H.100 Applicability

Helicopters shall be operated in accordance with the applicable performance class requirements.

Helicopters shall be operated in performance class 1:

when operated to/from aerodromes or operating sites located in a congested hostile environment, except when operated to/from a public interest site (PIS) in accordance with CAT.POL.H.225; or

when having an MOPSC of more than 19, except when operated to/from a helideck in performance class 2 under an approval in accordance with CAT.POL.H.305.

Unless otherwise prescribed by (b), helicopters that have an MOPSC of 19 or less but more than nine shall be operated in performance class 1 or 2.

Unless otherwise prescribed by (b), helicopters that have an MOPSC of nine or less shall be operated in performance class 1, 2 or 3.

CAT.POL.H.105 General

The mass of the helicopter:

at the start of the take-off; or

in the event of in-flight replanning, at the point from which the revised operational flight plan applies,

shall not be greater than the mass at which the applicable requirements of this Section can be complied with for the flight to be undertaken, taking into account expected reductions in mass as the flight proceeds and such fuel jettisoning as is provided for in the relevant requirement.

The approved performance data contained in the AFM shall be used to determine compliance with the requirements of this Section, supplemented as necessary with other data as prescribed in the relevant requirement. The operator shall specify such other data in the operations manual. When applying the factors prescribed in this Section, account may be taken of any operational factors already incorporated in the AFM performance data to avoid double application of factors.

When showing compliance with the requirements of this Section, account shall be taken of the following parameters:

mass of the helicopter;

the helicopter configuration;

the environmental conditions, in particular:

pressure altitude and temperature;

wind:

except as provided in (C), for take-off, take-off flight path and landing requirements, accountability for wind shall be no more than 50 % of any reported steady headwind component of 5 kt or more;

where take-off and landing with a tailwind component is permitted in the AFM, and in all cases for the take-off flight path, not less than 150 % of any reported tailwind component shall be taken into account; and

where precise wind measuring equipment enables accurate measurement of wind velocity over the point of take-off and landing, wind components in excess of 50 % may be established by the operator, provided that the operator demonstrates to the Authority that the proximity to the FATO and accuracy enhancements of the wind measuring equipment
provide an equivalent level of safety;

the operating techniques; and

the operation of any systems that have an adverse effect on performance.

CAT.POL.H.110 Obstacle accountability

For the purpose of obstacle clearance requirements, an obstacle located beyond the FATO, in the take-off flight path, or the missed approach flight path shall be considered if its lateral distance from the nearest point on the surface below the intended flight path is not further than the following:

For operations under VFR:

half of the minimum width defined in the AFM - or, when no width is defined, '0,75 × D', where D is the largest dimension of the helicopter when the rotors are turning; (ii) plus, the greater of '0,25 × D' or '3 m';

(iii) plus:

0,10 × distance DR for operations under VFR by day; or

0,15 × distance DR for operations under VFR at night.

For operations under IFR:

‘1,5 D’ or 30 m, whichever is greater, plus:

0,10 × distance DR, for operations under IFR with accurate course guidance; (B) 0,15 × distance

DR, for operations under IFR with standard course guidance; or

(C) 0,30 × distance DR for operations under IFR without course guidance.

When considering the missed approach flight path, the divergence of the obstacle accountability area only applies after the end of the take-off distance available.

For operations with initial take-off conducted visually and converted to IFR/IMC at a transition point, the criteria required in (1) apply up to the transition point, and the criteria required in (2) apply after the transition point. The transition point cannot be located before the end of the take-off distance required for helicopters (TODRH) operating in performance class 1 or before the defined point after take-off (DPATO) for helicopters operating in performance class 2.

For take-off using a back-up or a lateral transition procedure, for the purpose of obstacle clearance requirements, an obstacle located in the back-up or lateral transition area shall be considered if its lateral distance from the nearest point on the surface below the intended flight path is not further than:

half of the minimum width defined in the AFM or, when no width is defined, ‘0,75 × D’; (2) plus the greater

of ‘0,25 × D’ or ‘3 m’;

(3) plus:

for operations under VFR by day 0,10 × the distance travelled from the back of the FATO, or

for operations under VFR at night 0,15 × the distance travelled from the back of the FATO.

Obstacles may be disregarded if they are situated beyond:

7 × rotor radius (R) for day operations, if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;

10 × R for night operations, if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;

300 m if navigational accuracy can be achieved by appropriate navigation aids; or

900 m in all other cases.

CHAPTER 2 Performance class 1

CAT.POL.H.200 General

Helicopters operated in performance class 1 shall be certified in category A or equivalent as determined by the Authority.

CAT.POL.H.205 Take-off

The take-off mass shall not exceed the maximum take-off mass specified in the AFM for the procedure to be used.

The take-off mass shall be such that:

it is possible to reject the take-off and land on the FATO in case of the critical engine failure being recognised at or before the take-off decision point (TDP);

the rejected take-off distance required (RTODRH) does not exceed the rejected take-off distance available (RTODAH); and

the TODRH does not exceed the take-off distance available (TODAH).

Notwithstanding (b)(3), the TODRH may exceed the TODAH if the helicopter, with the critical engine failure recognised at TDP can, when continuing the take-off, clear all obstacles to the end of the TODRH by a vertical margin of not less than 10,7 m (35 ft).

When showing compliance with (a) and (b), account shall be taken of the appropriate parameters of CAT.POL.H.105(c) at the aerodrome or operating site of departure.

That part of the take-off up to and including TDP shall be conducted in sight of the surface such that a rejected take-off can be carried out.

For take-off using a backup or lateral transition procedure, with the critical engine failure recognition at or before the TDP, all obstacles in the back-up or lateral transition area shall be cleared by an adequate margin.

CAT.POL.H.210 Take-off flight path

From the end of the TODRH with the critical engine failure recognised at the TDP:

The take-off mass shall be such that the take-off flight path provides a vertical clearance, above all obstacles located in the climb path, of not less than 10,7 m (35 ft) for operations under VFR and 10,7 m (35 ft) + 0,01 × distance DR for operations under IFR. Only obstacles as specified in CAT.POL.H.110 have to be considered.

Where a change of direction of more than 15° is made, adequate allowance shall be made for the effect of bank angle on the ability to comply with the obstacle clearance requirements. This turn is not to be initiated before reaching a height of 61 m (200 ft) above the take-off surface unless it is part of an approved procedure in the AFM.

When showing compliance with (a), account shall be taken of the appropriate parameters of CAT.POL.H.105(c) at the aerodrome or operating site of departure.

CAT.POL.H.215 En-route - critical engine inoperative

The mass of the helicopter and flight path at all points along the route, with the critical engine inoperative and the meteorological conditions expected for the flight, shall permit compliance with (1), (2) or (3):

When it is intended that the flight will be conducted at any time out of sight of the surface, the mass of the helicopter permits a rate of climb of at least 50 ft/minute with the critical engine inoperative at an altitude of at least 300 m (1 000 ft), or 600 m (2 000 ft) in areas of mountainous terrain, above all terrain and obstacles along the route within 9,3 km (5 NM) on either side of the intended track.

When it is intended that the flight will be conducted without the surface in sight, the flight path permits the helicopter to continue flight from the cruising altitude to a height of 300 m (1 000 ft) above a landing site where a landing can be made in accordance with CAT.POL.H.220. The flight path clears vertically, by at least 300 m (1 000 ft) or 600 m (2 000 ft) in areas of mountainous terrain, all terrain and obstacles along the route within 9,3 km (5 NM) on either side of the intended track. Drift-down techniques may be used.

When it is intended that the flight will be conducted in VMC with the surface in sight, the flight path permits the helicopter to continue flight from the cruising altitude to a height of 300 m (1 000 ft) above a landing site where a landing can be made in accordance with CAT.POL.H.220, without flying at any time below the appropriate minimum flight altitude. Obstacles within 900 m on either side of the route need to be considered.

When showing compliance with (a)(2) or (a)(3):

the critical engine is assumed to fail at the most critical point along the route;

account is taken of the effects of winds on the flight path;

fuel jettisoning is planned to take place only to an extent consistent with reaching the aerodrome or operating site with the required fuel reserves and using a safe procedure; and

fuel jettisoning is not planned below 1 000 ft above terrain.

The width margins of (a)(1) and (a)(2) shall be increased to 18,5 km (10 NM) if the navigational accuracy cannot be met for 95 % of the total flight time.

CAT.POL.H.220 Landing

The landing mass of the helicopter at the estimated time of landing shall not exceed the maximum mass specified in the AFM for the procedure to be used.

In the event of the critical engine failure being recognised at any point at or before the landing decision point (LDP), it is possible either to land and stop within the FATO, or to perform a balked landing and clear all obstacles in the flight path by a vertical margin of 10,7 m (35 ft). Only obstacles as specified in CAT.POL.H.110 have to be considered.

In the event of the critical engine failure being recognised at any point at or after the LDP, it is possible to:

clear all obstacles in the approach path; and

land and stop within the FATO.

When showing compliance with (a) to (c), account shall be taken of the appropriate parameters of CAT.POL.H.105(c) for the estimated time of landing at the destination aerodrome or operating site, or any alternate if required.

That part of the landing from the LDP to touchdown shall be conducted in sight of the surface.

CAT.POL.H.225 Helicopter operations to/from a public interest site

Operations to/from a public interest site (PIS) may be conducted in performance class 2, without complying with CAT.POL.H.310(b) or CAT.POL.H.325(b), provided that all of the following are complied with:

the PIS was in use before 1 July 2002;

the size of the PIS or obstacle environment does not permit compliance with the requirements for operation in performance class 1;

the operation is conducted with a helicopter with an MOPSC of six or less;

the operator complies with CAT.POL.H.305(b)(2) and (b)(3);

the helicopter mass does not exceed the maximum mass specified in the AFM for a climb gradient of 8 % in still air at the appropriate take-off safety speed (VTOSS) with the critical engine inoperative and the remaining engines operating at an appropriate power rating; and

the operator has obtained prior approval for the operation from the Authority. Before such operations take place in another State, the operator shall obtain an endorsement from the competent authority of that State.

Site-specific procedures shall be established in the operations manual to minimise the period during which there would be danger to helicopter occupants and persons on the surface in the event of an engine failure during take-off and landing.

The operations manual shall contain for each PIS: a diagram or annotated photograph, showing the main aspects, the dimensions, the non-conformance with the requirements performance class 1, the main hazards and the contingency plan should an incident occur.

CHAPTER 3 Performance class 2

CAT.POL.H.300 General

Helicopters operated in performance class 2 shall be certified in category A or equivalent as determined by the Authority.

CAT.POL.H.305 Operations without an assured safe forced landing capability

Operations without an assured safe forced landing capability during the take-off and landing phases shall only be conducted if the operator has been granted an approval by the Authority.

To obtain and maintain such approval the operator shall:

conduct a risk assessment, specifying:

the type of helicopter; and

the type of operations;

implement the following set of conditions

attain and maintain the helicopter/engine modification standard defined by the manufacturer;

conduct the preventive maintenance actions recommended by the helicopter or engine manufacturer;

include take-off and landing procedures in the operations manual, where they do not already exist in the AFM;

specify training for flight crew; and

provide a system for reporting to the manufacturer loss of power, engine shutdown or engine failure events; and

implement a usage monitoring system (UMS).

CAT.POL.H.310 Take-off

The take-off mass shall not exceed the maximum mass specified for a rate of climb of 150 ft/min at 300 m (1 000 ft) above the level of the aerodrome or operating site with the critical engine inoperative and the remaining engine(s) operating at an appropriate power rating.

For operations other than those specified in CAT.POL.H.305, the take-off shall be conducted such that a safe forced landing can be executed until the point where safe continuation of the flight is possible.

For operations in accordance with CAT.POL.H.305, in addition to the requirements of (a):

the take-off mass shall not exceed the maximum mass specified in the AFM for an all engines operative out of ground effect (AEO OGE) hover in still air with all engines operating at an appropriate power rating; or

for operations from a helideck:

with a helicopter that has an MOPSC of more than 19; or

any helicopter operated from a helideck located in a hostile environment,

the take-off mass shall take into account: the procedure; deck-edge miss and drop down appropriate to the height of the helideck with the critical engine(s) inoperative and the remaining engines operating at an appropriate power rating.

When showing compliance with (a) to (c), account shall be taken of the appropriate parameters of CAT.POL.H.105(c) at the point of departure.

That part of the take-off before the requirement of CAT.POL.H.315 is met shall be conducted in sight of the surface.

CAT.POL.H.315 Take-off flight path

From the defined point after take-off (DPATO) or, as an alternative, no later than 200 ft above the take-off surface, with the critical engine inoperative, the requirements of CAT.POL.H.210(a)(1), (a)(2) and (b) shall be complied with.

CAT.POL.H.320 En-route - critical engine inoperative

The requirement of CAT.POL.H.215 shall be complied with.

CAT.POL.H.325 Landing

The landing mass at the estimated time of landing shall not exceed the maximum mass specified for a rate of climb of 150 ft/min at 300 m (1 000 ft) above the level of the aerodrome or operating site with the critical engine inoperative and the remaining engine(s) operating at an appropriate power rating.

If the critical engine fails at any point in the approach path:

a balked landing can be carried out meeting the requirement of CAT.POL.H.315; or

for operations other than those specified in CAT.POL.H.305, the helicopter can perform a safe forced landing.

For operations in accordance with CAT.POL.H.305, in addition to the requirements of (a):

the landing mass shall not exceed the maximum mass specified in the AFM for an AEO OGE hover in still air with all engines operating at an appropriate power rating; or

for operations to a helideck:

with a helicopter that has an MOPSC of more than 19; or

any helicopter operated to a helideck located in a hostile environment,

the landing mass shall take into account the procedure and drop down appropriate to the height of the helideck with the critical engine inoperative and the remaining engine(s) operating at an appropriate power rating.

When showing compliance with (a) to (c), account shall be taken of the appropriate parameters of CAT.POL.H.105(c) at the destination aerodrome or any alternate, if required.

That part of the landing after which the requirement of (b)(1) cannot be met shall be conducted in sight of the surface.

CHAPTER 4 Performance class 3

CAT.POL.H.400 General

Helicopters operated in performance class 3 shall be certified in category A or equivalent as determined by the Authority, or category B.

Operations shall only be conducted in a non-hostile environment, except:

when operating in accordance with CAT.POL.H.420; or

for the take-off and landing phase, when operating in accordance with (c).

Provided the operator is approved in accordance with CAT.POL.H.305, operations may be conducted to/ from an aerodrome or operating site located outside a congested hostile environment without an assured safe forced landing capability:

during take-off, before reaching V_Y (speed for best rate of climb) or 200 ft above the take-off surface; or

during landing, below 200 ft above the landing surface.

Operations shall not be conducted:

out of sight of the surface;

at night;

when the ceiling is less than 600 ft; or

when the visibility is less than 800 m.

CAT.POL.H.405 Take-off

The take-off mass shall be the lower of:

the MCTOM; or

the maximum take-off mass specified for a hover in ground effect with all engines operating at take-off power, or if conditions are such that a hover in ground effect is not likely to be established, the take-off mass specified for a hover out of ground effect with all engines operating at take-off power.

Except as provided in CAT.POL.H.400(b), in the event of an engine failure the helicopter shall be able to perform a safe forced landing.

CAT.POL.H.410 En-route

The helicopter shall be able, with all engines operating within the maximum continuous power conditions, to continue along its intended route or to a planned diversion without flying at any point below the appropriate minimum flight altitude.

Except as provided in CAT.POL.H.420, in the event of an engine failure the helicopter shall be able to perform a safe forced landing.

CAT.POL.H.415 Landing

The landing mass of the helicopter at the estimated time of landing shall be the lower of:

the maximum certified landing mass; or

the maximum landing mass specified for a hover in ground effect, with all engines operating at take-off power, or if conditions are such that a hover in ground effect is not likely to be established, the landing mass for a hover out of ground effect with all engines operating at take-off power.

Except as provided in CAT.POL.H.400(b), in the event of an engine failure, the helicopter shall be able to perform a safe forced landing.

CAT.POL.H.420 Helicopter operations over a hostile environment located outside a congested area

Operations over a non-congested hostile environment without a safe forced landing capability with turbinepowered helicopters with an MOPSC of six or less shall only be conducted if the operator has been granted an approval by the Authority, following a safety risk assessment performed by the operator.

To obtain and maintain such approval the operator shall:

only conduct these operations in the areas and under the conditions specified in the approval;

not conduct these operations under a HEMS approval;

substantiate that helicopter limitations, or other justifiable considerations, preclude the use of the appropriate performance criteria; and

be approved in accordance with CAT.POL.H.305(b).

Notwithstanding CAT.IDE.H.240, such operations may be conducted without supplemental oxygen equipment, provided the cabin altitude does not exceed 10 000 ft for a period in excess of 30 minutes and never exceeds 13 000 ft pressure altitude.

SECTION 3 Mass and balance

CHAPTER 1 Motor-powered aircraft

CAT.POL.MAB.100 Mass and balance, loading

During any phase of operation, the loading, mass and centre of gravity (CG) of the aircraft shall comply with the limitations specified in the AFM, or the operations manual if more restrictive.

The operator shall establish the mass and the CG of any aircraft by actual weighing prior to initial entry into service and thereafter at intervals of four years if individual aircraft masses are used, or nine years if fleet masses are used. The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented. Aircraft shall be reweighed if the effect of modifications on the mass and balance is not accurately known.

The weighing shall be accomplished by the manufacturer of the aircraft or by an approved maintenance organisation.

The operator shall determine the mass of all operating items and crew members included in the aircraft dry operating mass by weighing or by using standard masses. The influence of their position on the aircraft's CG shall be determined.

The operator shall establish the mass of the traffic load, including any ballast, by actual weighing or by determining the mass of the traffic load in accordance with standard passenger and baggage masses.

In addition to standard masses for passengers and checked baggage, the operator can use standard masses for other load items, if it demonstrates to the Authority that these items have the same mass or that their masses are within specified tolerances.

The operator shall determine the mass of the fuel load by using the actual density or, if not known, the density calculated in accordance with a method specified in the operations manual.

The operator shall ensure that the loading of:

its aircraft is performed under the supervision of qualified personnel; and

traffic load is consistent with the data used for the calculation of the aircraft mass and balance.

The operator shall comply with additional structural limits such as the floor strength limitations, the maximum load per running metre, the maximum mass per cargo compartment and the maximum seating limit. For helicopters, in addition, the operator shall take account of in-flight changes in loading.

The operator shall specify, in the operations manual, the principles and methods involved in the loading and in the mass and balance system that meet the requirements contained in (a) to (i). This system shall cover all types of intended operations.

CAT.POL.MAB.105 Mass and balance data and documentation

The operator shall establish mass and balance data and produce mass and balance documentation prior to each flight specifying the load and its distribution. The mass and balance documentation shall enable the commander to determine that the load and its distribution is such that the mass and balance limits of the aircraft are not exceeded. The mass and balance documentation shall contain the following information:

Aircraft registration and type;

Flight identification, number and date;

Name of the commander;

Name of the person who prepared the document;

Dry operating mass and the corresponding CG of the aircraft:

(i) for performance class B aeroplanes and for helicopters the CG position may not need to be on the mass and balance documentation if, for example, the load distribution is in accordance with a pre-calculated balance table or if it can be shown that for the planned operations a correct balance can be ensured, whatever the real load is;

Mass of the fuel at take-off and the mass of trip fuel;

Mass of consumables other than fuel, if applicable;

Load components including passengers, baggage, freight and ballast;

Take-off mass, landing mass and zero fuel mass;

Applicable aircraft CG positions; and

The limiting mass and CG values.

The information above shall be available in flight planning documents or mass and balance systems. Some of this information may be contained in other documents readily available for use.

Where mass and balance data and documentation is generated by a computerised mass and balance system, the operator shall

verify the integrity of the output data to ensure that the data are within AFM limitations; and

specify the instructions and procedures for its use in its operations manual.

The person supervising the loading of the aircraft shall confirm by hand signature or equivalent that the load and its distribution are in accordance with the mass and balance documentation given to the commander. The commander shall indicate his/her acceptance by hand signature or equivalent.

The operator shall specify procedures for last minute changes to the load to ensure that:

any last minute change after the completion of the mass and balance documentation is brought to the attention of the commander and entered in the flight planning documents containing the mass and balance documentation;

the maximum last minute change allowed in passenger numbers or hold load is specified; and

new mass and balance documentation is prepared if this maximum number is exceeded.

SUBPART D INSTRUMENTS, DATA, EQUIPMENT

SECTION 1 Aeroplanes

GEN.IDE.010 CVR alternate power source

An alternate power source shall automatically engage and provide ten minutes, plus or minus one minute, of operation whenever aeroplane power to the recorder ceases, either by normal shutdown or by any other loss of power. The alternate power source shall power the CVR and its associated cockpit area microphone components. The CVR shall be located as close as practicable to the alternate power source.

Note 1.- "Alternate" means separate from the power source that normally provides power to the CVR.The use of aeroplane batteries or other power sources is acceptable provided that the requirements above are met and electrical power to essential and critical loads is not compromised.

Note 2.- When the CVR function is combined with other recording functions within the same unit, powering the other functions is allowed."

GEN.IDE.015 Reserved

GEN.IDE.A.020 Built-in fire extinguisher/s

Any agent used in a built-in fire extinguisher for each lavatory disposal receptacle for towels, paper or waste in an aeroplane shall meet the applicable minimum performance requirements of the State of Libya."

CAT.IDE.A.100 Instruments and equipment - general

Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements except for the following items:

Spare fuses;

Independent portable lights;

An accurate time piece;

Chart holder;

First-aid kits;

Emergency medical kit;

Megaphones;

Survival and signalling equipment;

Sea anchors and equipment for mooring; and

Child restraint devices.

Instruments and equipment not required under this Part-CAT as well as any other equipment which is not required under this regulation but carried on a flight, shall comply with the following:

the information provided by those instruments, equipment or accessories shall not be used by the flight crew members to comply with the applicable airworthiness requirements or CAT.IDE.A.330, CAT.IDE.A.335, CAT.IDE.A.340 and CAT.IDE.A.345 of this Part; and

the instruments and equipment shall not affect the airworthiness of the aeroplane, even in the case of failures or malfunction.

If equipment is to be used by one flight crew member at his/her station during flight, it shall be readily operable from that station. When a single item of equipment is required to be operated by more than one flight crew member it shall be installed so that the equipment is readily operable from any station at which the equipment is required to be operated.

Those instruments that are used by any flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision that he/she normally assumes when looking forward along the flight path.

All required emergency equipment shall be easily accessible for immediate use.

CAT.IDE.A.105 Minimum equipment for flight

A flight shall not be commenced when any of the aeroplane's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

the aeroplane is operated in accordance with the operator's MEL; or

the operator is approved by the Authority to operate the aeroplane within the constraints of the master minimum equipment list (MMEL) in accordance with point ORO.MLR.105 (j) of Part -ORO .

CAT.IDE.A.110 Spare electrical fuses

Aeroplanes shall be equipped with spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are allowed to be replaced in flight.

The number of spare fuses that are required to be carried shall be the higher of:

10% of the number of fuses of each rating; or

three fuses for each rating.

CAT.IDE.A.115 Operating lights

Aeroplanes operated by day shall be equipped with:

an anti-collision light system;

lighting supplied from the aeroplane's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aeroplane;

lighting supplied from the aeroplane's electrical system to provide illumination in all passenger compartments; and

an independent portable light for each required crew member readily accessible to crew members when seated at their designated stations.

Aeroplanes operated at night shall in addition be equipped with:

navigation/position lights;

two landing lights or a single light having two separately energised filaments; and

lights to conform with the International Regulations for Preventing Collisions at Sea if the aeroplane is operated as a seaplane.

CAT.IDE.A.120 Equipment to clear windshield

Aeroplanes with an MCTOM of more than 5 700 kg shall be equipped at each pilot station with a means to maintain a clear portion of the windshield during precipitation.

CAT.IDE.A.125 Operations under VFR by day - flight and navigational instruments and associated equipment

Aeroplanes operated under VFR by day shall be equipped with the following equipment, available at the pilot's station:

A means of measuring and displaying:

Magnetic heading;

Time in hours, minutes, and seconds;

Barometric altitude;

Indicated airspeed;

Vertical speed;

Turn and slip;

Attitude;

Heading;

Outside air temperature; and

Mach number whenever speed limitations are expressed in terms of Mach number.

A means of indicating when the supply of power to the required flight instruments is not adequate.

Whenever two pilots are required for the operation, an additional separate means of displaying the following shall be available for the second pilot:

barometric altitude;

Indicated airspeed;

Vertical speed;

Turn and slip;

Attitude; and

Heading.

A means for preventing malfunction of the airspeed indicating systems due to condensation or icing shall be available for:

aeroplanes with an MCTOM of more than 5 700 kg or an MOPSC of more than nine; and

aeroplanes first issued with an individual CofA on or after 1 April 1999.

Single engine aeroplanes first issued with an individual CofA before 22 May 1995 are exempted from the requirements of (a)(1)(vi), (a)(1)(vii), (a)(1)(viii) and (a)(1)(ix) if the compliance would require retrofitting.

CAT.IDE.A.130 Operations under IFR or at night - flight and navigational instruments and associated equipment

Aeroplanes operated under VFR at night or under IFR shall be equipped with the following equipment, available at the pilot's station:

A means of measuring and displaying:

Magnetic heading;

Time in hours, minutes and seconds;

Indicated airspeed;

Vertical speed;

Turn and slip, or in the case of aeroplanes equipped with a standby means of measuring and displaying attitude, slip;

Attitude;

Stabilised heading;

Outside air temperature; and

Mach number whenever speed limitations are expressed in terms of Mach number.

Two means of measuring and displaying Barometric altitude.

A means of indicating when the supply of power to the required flight instruments is not adequate.

A means for preventing malfunction of the airspeed indicating systems required in (a)(3) and (h)(2) due to condensation or icing.

A means of annunciating to the flight crew the failure of the means required in (d) for aeroplanes:

issued with an individual CofA on or after 1 April 1998; or

issued with an individual CofA before 1 April 1998 with an MCTOM of more than 5 700 kg, and with an MOPSC of more than nine.

Except for propeller-driven aeroplanes with an MCTOM of 5 700 kg or less, two independent static pressure systems.

One static pressure system and one alternate source of static pressure for propeller-driven aeroplanes with an MCTOM of 5 700 kg or less.

Whenever two pilots are required for the operation, a separate means of displaying for the second pilot:

Barometric altitude;

Indicated airspeed;

Vertical speed;

Turn and slip;

Attitude; and

Stabilised heading.

A standby means of measuring and displaying attitude capable of being used from either pilot's station for aeroplanes with an MCTOM of more than 5 700 kg or an MOPSC of more than nine that:

is powered continuously during normal operation and, after a total failure of the normal electrical generating system, is powered from a source independent from the normal electrical generating system;

provides reliable operation for a minimum of 30 minutes after total failure of the normal electrical generating system, taking into account other loads on the emergency power supply and operational procedures;

operates independently of any other means of measuring and displaying attitude;

is operative automatically after total failure of the normal electrical generating system;

is appropriately illuminated during all phases of operation, except for aeroplanes with an MCTOM of 5 700 kg or less, already registered in Libya on 1 April 1995 and equipped with a standby attitude indicator in the left-hand instrument panel;

is clearly evident to the flight crew when the standby attitude indicator is being operated by emergency power; and

where the standby attitude indicator has its own dedicated power supply, has an associated indication, either on the instrument or on the instrument panel, when this supply is in use.

A chart holder in an easily readable position that can be illuminated for night operations.

CAT.IDE.A.135 Additional equipment for single-pilot operation under IFR

Aeroplanes operated under IFR with a single-pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

CAT.IDE.A.140 Altitude alerting system

The following aeroplanes shall be equipped with an altitude alerting system:

turbine propeller powered aeroplanes with an MCTOM of more than 5 700 kg or having an MOPSC of more than nine; and

aeroplanes powered by turbo-jet engines.

The altitude alerting system shall be capable of:

alerting the flight crew when approaching a preselected altitude; and

alerting the flight crew by at least an aural signal, when deviating from a preselected altitude.

Notwithstanding (a), aeroplanes with an MCTOM of 5 700 kg or less, having an MOPSC of more than nine, first issued with an individual CofA before 1 April 1972 and already registered in the State of Libya on 1 April 1995 are exempted from being equipped with an altitude alerting system.

CAT.IDE.A.150 Terrain awareness warning system (TAWS)

Turbine-powered aeroplanes having an MCTOM of more than 5 700 kg or an MOPSC of more than nine shall be equipped with a TAWS that meets the requirements for Class A equipment as specified in an acceptable standard.

Reciprocating-engine-powered aeroplanes with an MCTOM of more than 5 700 kg or an MOPSC of more than nine shall be equipped with a TAWS that meets the requirements for Class A equipment as specified in an acceptable standard.

Turbine-powered aeroplanes for which the individual certificate of airworthiness (CofA) was first issued after 1 January 2019 and having an MCTOM of 5 700 kg or less and an MOPSC of six to nine shall be equipped with a TAWS that meets the requirements for Class B equipment, as specified in an acceptable standard.

CAT.IDE.A.155 Airborne collision avoidance system (ACAS)

Turbine-powered aeroplanes with an MCTOM of more than 5 700 kg or an MOPSC of more than 19, shall be equipped with ACAS II .

CAT.IDE.A.160 Airborne weather detecting equipment

The following shall be equipped with airborne weather detecting equipment when operated at night or in IMC in areas where thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route:

pressurised aeroplanes;

non-pressurised aeroplanes with an MCTOM of more than 5 700 kg; and

non-pressurised aeroplanes with an MOPSC of more than nine.

CAT.IDE.A.165 Additional equipment for operations in icing conditions at night

Aeroplanes operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

The means to illuminate the formation of ice shall not cause glare or reflection that would handicap crew members in the performance of their duties.

CAT.IDE.A.170 Flight crew interphone system

Aeroplanes operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

CAT.IDE.A.175 Crew member interphone system

Aeroplanes with an MCTOM of more than 15 000 kg, or with an MOPSC of more than 19 shall be equipped with a crew member interphone system, except for aeroplanes first issued with an individual CofA before 1 April 1965 and already registered in Libya on 1 April 1995.

CAT.IDE.A.180 Public address system

Aeroplanes with an MOPSC of more than 19 shall be equipped with a public address system.

CAT.IDE.A.185 Cockpit voice recorder

The following aeroplanes shall be equipped with a cockpit voice recorder (CVR):

aeroplanes with an MCTOM of more than 5 700 kg; and

multi-engined turbine-powered aeroplanes with an MCTOM of 5 700 kg or less, with an MOPSC of more than nine and first issued with an individual CofA on or after 1 January 1990.

Until 31 December 2018, the CVR shall be capable of retaining the data recorded during at least:

the preceding 2 hours in the case of aeroplanes referred to in (a)(1) when the individual CofA has been issued on or after 1 April 1998

the preceding 30 minutes for aeroplanes referred to in (a)(1) when the individual CofA has been issued before 1 April 1998; or

the preceding 30 minutes, in the case of aeroplanes referred to in (a)(2).

By 1 January 2019 at the latest, the CVR shall be capable of retaining the data recorded during at least:

the preceding 25 hours for aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2022 ; or

the preceding 2 hours in all other cases.

By 1 January 2019 at the latest,The CVR shall record on means other than magnetic tape or magnetic wire.

The CVR shall record with reference to a timescale:

voice communications transmitted from or received in the flight crew compartment by radio;

flight crew members' voice communications using the interphone system and the public address system, if installed;

the aural environment of the flight crew compartment, including without interruption:

for aeroplanes first issued with an individual CofA on or after 1 April 1998, the audio signals received from each boom and mask microphone in use;

for aeroplanes referred to in (a) and first issued with an individual CofA before 1 April 1998, the audio signals received from each boom and mask microphone, where practicable;

(1) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

The CVR shall start to record prior to the aeroplane moving under its own power and shall continue to record until the termination of the flight when the aeroplane is no longer capable of moving under its own power. In addition, in the case of aeroplanes issued with an individual CofA on or after 1 April 1998, the CVR shall start automatically to record prior to the aeroplane moving under its own power and continue to record until the termination of the flight when the aeroplane is no longer capable ofmoving under its own power.

In addition to (f), depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight, in the case of:

aeroplanes referred to in (a)(1) and issued with an individual CofA on or after 1 April 1998;

aeroplanes referred to in (a)(2).

If the CVR is not deployable, it shall have a device to assist in locating it under water. By 16 June 2018 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

Aeroplanes with an MCTOM of over 27 000 kg and first issued with an individual CofA on or after 5 September 2022 shall be equipped with an alternate power source to which the CVR and the cockpitmounted area microphone are switched automatically in the event that all other power to the CVR is interrupted.

CAT.IDE.A.190 Flight data recorder

The following aeroplanes shall be equipped with a flight data recorder (FDR) that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available:

aeroplanes with an MCTOM of more than 5 700 kg and first issued with an individual CofA on or after 1 June 1990;;

turbine-engined aeroplanes with an MCTOM of more than 5 700 kg and first issued with an individual CofA on or after 1 June 1990; and

multi-engined turbine-powered aeroplanes with an MCTOM of 5 700 kg or less with an MOPSC of more than nine and first issued with an individual CofA on or after 1 April 1998.

The FDR shall record:

time, altitude, airspeed, normal acceleration and heading and be capable of retaining the data recorded during at least the preceding 25 hours for aeroplanes referred to in (a)(2) with an MCTOM of less than 27 000 kg;

the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power and configuration of lift and drag devices and be capable of retaining the data recorded during at least the preceding 25 hours, for aeroplanes referred to in (a)(1) with an MCTOM of less than 27 000 kg and first issued with an individual CofA before 1 January 2016;

the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power, configuration and operation and be capable of retaining the data recorded during at least the preceding 25 hours, for aeroplanes referred to in (a)(1) and (a)(2) with an MCTOM of over 27 000 kg and first issued with an individual CofA before 1 January 2016;

the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power and configuration of lift and drag devices and be capable of retaining the data recorded during at least the preceding 10 hours, in the case of aeroplanes referred to in (a)(3) and first issued with an individual CofA before 1 January 2016; or

the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power, configuration and operation and be capable of retaining the data recorded during at least the preceding 25 hours, for aeroplanes referred to in (a)(1) and (a)(3) and first issued with an individual CofA on or after 1 January 2016.

Data shall be obtained from aeroplane sources that enable accurate correlation with information displayed to the flight crew.

The FDR shall start automatically to record the data prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is incapable of moving under its own power. In addition, in the case of aeroplanes issued with an individual CofA on or after 1 April 1998, the FDR shall start automatically to record the data prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is incapable of moving under its own power.

If the FDR is not deployable, it shall have a device to assist in locating it under water. By 16 June 2018 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

CAT.IDE.A.191 Lightweight flight recorder

Turbine-engined aeroplanes with an MCTOM of 2 250 kg or more and aeroplanes with an MOPSC of more than 9 shall be equipped with a flight recorder if all of the following conditions are met:

they are not within the scope of CAT.IDE.A.190(a);

they are first issued with an individual CofA on or after 5 September 2022.

The flight recorder shall record, by means of flight data or images, information that is sufficient to determine the flight path and aircraft speed.

The flight recorder shall be capable of retaining the flight data and the images recorded during at least the preceding 5 hours.

The flight recorder shall automatically start to record prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is no longer capable of moving under its own power.

If the flight recorder records images or audio of the flight crew compartment, then a function shall be provided which can be operated by the commander and which modifies image and audio recordings made before the operation of that function, so that those recordings cannot be retrieved using normal replay or copying techniques.

CAT.IDE.A.195 Data link recording

Aeroplanes first issued with an individual CofA on or after 8 April 2014 that have the capability to operate data link communications and are required to be equipped with a CVR, shall record on a recorder, where applicable:

data link communication messages related to ATS communications to and from the aeroplane, including messages applying to the following applications:

data link initiation;

controller-pilot communication;

addressed surveillance;

flight information;

as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

as far as is practicable, given the architecture of the system, aircraft operational control data; and

as far as is practicable, given the architecture of the system, graphics;

information that enables correlation to any associated records related to data link communications and stored separately from the aeroplane; and

information on the time and priority of data link communications messages, taking into account the system's architecture.

The recorder shall use a digital method of recording and storing data and information and a method for retrieving that data. The recording method shall allow the data to match the data recorded on the ground.

The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in CAT.IDE.A.185.

If the recorder is not deployable, it shall have a device to assist in locating it under water. By 16 June 2018 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in CAT.IDE.A.185(d) and (e).

CAT.IDE.A.200 Combination recorder

Compliance with CVR and FDR requirements may be achieved by:

one flight data and cockpit voice combination recorder in the case of aeroplanes required to be equipped with a CVR or an FDR;

one flight data and cockpit voice combination recorder in the case of aeroplanes with an MCTOM of 5 700 kg or less and required to be equipped with a CVR and an FDR; or

two flight data and cockpit voice combination recorders in the case of aeroplanes with an MCTOM of more than 5 700 kg and required to be equipped with a CVR and an FDR.

CAT.IDE.A.205 Seats, seat safety belts, restraint systems and child restraint devices

Aeroplanes shall be equipped with:

a seat or berth for each person on board who is aged 24 months or more;

a seat belt on each passenger seat and restraining belts for each berth except as specified in (3);

a seat belt with upper torso restraint system on each passenger seat and restraining belts on each berth in the case of aeroplanes with an MCTOM of less than 5 700 kg and with an MOPSC of nine or less, having an individual CofA first issued on or after 8 April 2015;

a child restraint device (CRD) for each person on board younger than 24 months;

a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration:

on each flight crew seat and on any seat alongside a pilot's seat;

on each observer seat located in the flight crew compartment;

a seat belt with upper torso restraint system on each seat for the minimum required cabin crew.

A seat belt with upper torso restraint system shall:

have a single point release;

on the seats for the minimum required cabin crew, two shoulder straps and a seat belt that may be used independently; and

on flight crew members seats and on any seat alongside a pilot's seat either of the following:

two shoulder straps and a seat belt that may be used independently;

a diagonal shoulder strap and a seat belt that may be used independently for the following aeroplanes:

aeroplanes with an MCTOM of less than 5 700 kg and with an MOPSC of nine or less that are compliant with the emergency landing dynamic conditions defined in the applicable certification specification;

aeroplanes with an MCTOM of less than 5 700 kg and with an MOPSC of nine or less that are not compliant with the emergency landing dynamic conditions defined in the applicable certification specification and having an individual CofA first issued before 28 October 2014; and

aeroplanes certified in accordance with CS-VLA or equivalent and CS-LSA or equivalent.';

CAT.IDE.A.210 Fasten seat belt and no smoking signs

Aeroplanes in which not all passenger seats are visible from the flight crew seat(s) shall be equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

CAT.IDE.A.215 Internal doors and curtains

Aeroplanes shall be equipped with:

in the case of aeroplanes with an MOPSC of more than 19, a door between the passenger compartment and the flight crew compartment, with a placard indicating 'crew only' and a locking means to prevent passengers from opening it without the permission of a member of the flight crew;

a readily accessible means for opening each door that separates a passenger compartment from another compartment that has emergency exits;

a means for securing in the open position any doorway or curtain separating the passenger compartment from other areas that need to be accessed to reach any required emergency exit from any passenger seat;

a placard on each internal door or adjacent to a curtain that is the means of access to a passenger emergency exit, to indicate that it shall be secured open during take-off and landing; and

a means for any member of the crew to unlock any door that is normally accessible to passengers and that can be locked by passengers.

CAT.IDE.A.220 First-aid kit

(a) Aeroplanes shall be equipped with first-aid kits, in accordance with Table 1.

Table 1

Number of first-aid kits required

Number of passenger seats installed	Number of first-aid kits required
0	
101	
201	
301	
401	
or	

First-aid kits shall

readily accessible for use; and

kept up to date.

CAT.IDE.A.225 Emergency medical kit

Aeroplanes with an MOPSC of more than 30 shall be equipped with an emergency medical kit when any point on the planned route is more than 60 minutes flying time at normal cruising speed from an aerodrome at which qualified medical assistance could be expected to be available.

The commander shall ensure that drugs are only administered by appropriately qualified persons.

The emergency medical kit referred to in (a) shall be:

dust and moisture proof;

carried in a way that prevents unauthorised access; and

kept up to date.

CAT.IDE.A.230 First-aid oxygen

Pressurised aeroplanes operated at pressure altitudes above 25 000 ft, in the case of operations for which a cabin crew member is required, shall be equipped with a supply of undiluted oxygen for passengers who, for physiological reasons, might require oxygen following a cabin depressurisation.

The oxygen supply referred to in (a) shall be sufficient for the remainder of the flight after cabin depressurisation when the cabin altitude exceeds 8 000 ft but does not exceed 15 000 ft, for at least 2 % of the passengers carried, but in no case for less than one person.

There shall be a sufficient number of dispensing units, but in no case less than two, with a means for cabin crew to use the supply.

The first-aid oxygen equipment shall be capable of generating a mass flow to each person.

CAT.IDE.A.235 Supplemental oxygen - pressurised aeroplanes

Pressurised aeroplanes operated at pressure altitudes above 10 000 ft shall be equipped with supplemental oxygen equipment that is capable of storing and dispensing the oxygen supplies in accordance with Table 1.

Pressurised aeroplanes operated at pressure altitudes above 25 000 ft shall be equipped with:

quick donning types of masks for flight crew members;

sufficient spare outlets and masks or portable oxygen units with masks distributed evenly throughout the passenger compartment, to ensure immediate availability of oxygen for use by each required cabin crew member;

an oxygen dispensing unit connected to oxygen supply terminals immediately available to each cabin crew member, additional crew member and occupants of passenger seats, wherever seated; and

a device to provide a warning indication to the flight crew of any loss of pressurisation.

In the case of pressurised aeroplanes first issued with an individual CofA after 8 November 1998 and operated at pressure altitudes above 25 000 ft, or operated at pressure altitudes at, or below 25 000 ft under conditions that would not allow them to descend safely to 13 000 ft within four minutes, the individual oxygen dispensing units referred to in (b)(3) shall be automatically deployable.

The total number of dispensing units and outlets referred to in (b)(3) and (c) shall exceed the number of seats by at least 10 %. The extra units shall be evenly distributed throughout the passenger compartment.

Notwithstanding (a), the oxygen supply requirements for cabin crew member(s), additional crew member(s) and passenger(s), in the case of aeroplanes not certified to fly at altitudes above 25 000 ft, may be reduced to the entire flying time between 10 000 ft and 13 000 ft cabin pressure altitudes for all required cabin crew members and for at least 10 % of the passengers if, at all points along the route to be flown, the aeroplane is able to descend safely within four minutes to a cabin pressure altitude of 13 000 ft.

The required minimum supply in Table 1, row 1 item (b)(1) and row 2, shall cover the quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certified operating altitude to 10 000 ft in 10 minutes and followed by 20 minutes at 10 000 ft.

The required minimum supply in Table 1, row 1 item 1(b)(2), shall cover the quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certified operating altitude to 10 000 ft in 10 minutes followed by 110 minutes at 10 000 ft.

The required minimum supply in Table 1, row 3, shall cover the quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certified operating altitude to 15 000 ft in 10 minutes.

Table 1

Oxygen minimum requirements for pressurised aeroplanes

Suppl	Duration and cabin pressure altitude
Occup compartm s compartm	The entire flying time when the cabin pressure altitude exceeds 13 remai f v c pres alti exc ex i min t altitu less

	30 minutes' supply for aeroplanes certified to fly at altitudes not exceeding 25 000 ft; and 2 hours' supply for aeroplanes certified to fly at altitudes of more than 25 000 ft.
Required cabin crew members	(a) The entire flying time when the cabin pressure altitude exceeds 13 000 ft, but not less than 30 minutes' supply. (b) The remainder of the flying time when the cabin pressure altitude exceeds 10 000 ft but does not exceed 13 000 ft, after the initial 30 minutes at these altitudes.
100 % of passengers (1)	The entire flying time when the cabin pressure altitude exceeds 15 000 ft, but in no case less than 10 minutes' supply.
30 % of passengers (1)	The entire flying time when the cabin pressure altitude exceeds 14 000 ft but does not exceed 15 000 ft.
10 % of passengers (1)	The remainder of the flying time when the cabin pressure altitude exceeds 10 000 ft but does not exceed 14 000 ft, after the initial 30 minutes at these altitudes.

(1) Passenger numbers in Table 1 refer to passengers actually carried on board, including persons younger than 24 months.

CAT.IDE.A.240 Supplemental oxygen - non-pressurised aeroplanes

Non-pressurised aeroplanes operated at pressure altitudes above 10 000 ft shall be equipped with supplemental oxygen equipment capable of storing and dispensing the oxygen supplies in accordance with Table 1.

Table 1

Oxygen minimum requirements for non-pressurised aeroplanes

Suppl	Duration and cabin pressure altitude
Occupants compartmentseats compartment members assisting flight crew in their duties	The entire flying time at pressure altitudes above 10
Required cabin members	entire flying pressurealtitudesabove period exceeding minutes pressurealtitudesabove exceeding
Additional members passengers	The entire flying time at pressure altitudes above 13

passengers	entire flight time exceeding 13 minutes pressure altitudes above

(1)Passenger numbers in Table 1 refer to passengers actually carried on board, including persons younger than 24 months.

CAT.IDE.A.245 Crew protective breathing equipment

All pressurised aeroplanes and those unpressurised aeroplanes with an MCTOM of more than 5 700 kg or having an MOPSC of more than 19 seats shall be equipped with protective breathing equipment (PBE) to protect the eyes, nose and mouth and to provide for a period of at least 15 minutes:

oxygen for each flight crew member on duty in the flight crew compartment;

breathing gas for each required cabin crew member, adjacent to his/her assigned station; and

breathing gas from a portable PBE for one member of the flight crew, adjacent to his/her assigned station, in the case of aeroplanes operated with a flight crew of more than one and no cabin crew member.

A PBE intended for flight crew use shall be installed in the flight crew compartment and be accessible for immediate use by each required flight crew member at his/her assigned station.

A PBE intended for cabin crew use shall be installed adjacent to each required cabin crew member station.

Aeroplanes shall be equipped with an additional portable PBE installed adjacent to the hand fire extinguisher referred to in CAT.IDE.A.250 (b) and (c), or adjacent to the entrance of the cargo compartment, in case the hand fire extinguisher is installed in a cargo compartment.

A PBE while in use shall not prevent the use of the means of communication referred to in CAT.IDE.A.170, CAT.IDE.A.175, CAT.IDE.A.270 and CAT.IDE.A.330.

CAT.IDE.A.250 Hand fire extinguishers

Aeroplanes shall be equipped with at least one hand fire extinguisher in the flight crew compartment.

At least one hand fire extinguisher shall be located in, or readily accessible for use in, each galley not located on the main passenger compartment.

At least one hand fire extinguisher shall be available for use in each class A or class B cargo or baggage compartment and in each class E cargo compartment that is accessible to crew members in flight.

The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

Aeroplanes shall be equipped with at least a number of hand fire extinguishers in accordance with Table 1, conveniently located to provide adequate availability for use in each passenger compartment.

Table 1

Number of hand fire extinguishers

Maximum Approved Passenger Seating Configuration MOPSC	**Number of extinguishers**

31-60	
61-200	
201-300	
301-400	
401-500	
501-600	
or more	

CAT.IDE.A.255 Crash axe and crowbar

Aeroplanes with an MCTOM of more than 5 700 kg or with an MOPSC of more than nine shall be equipped with at least one crash axe or crowbar located in the flight crew compartment.

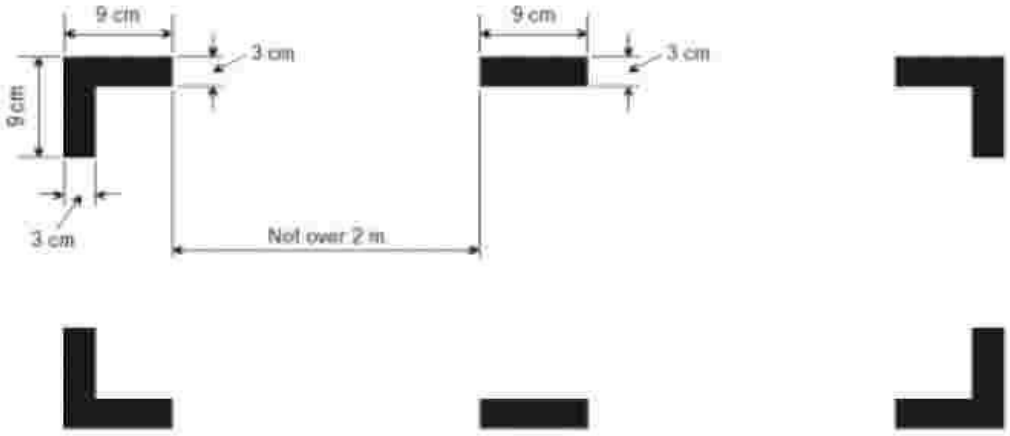
In the case of aeroplanes with an MOPSC of more than 200, an additional crash axe or crowbar shall be installed in or near the rearmost galley area.

Crash axes and crowbars located in the passenger compartment shall not be visible to passengers.

CAT.IDE.A.260 Marking of break-in points

If areas of the aeroplane's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.

Figure 1:



CAT.IDE.A.265 Means for emergency evacuation

Aeroplanes with passenger emergency exit sill heights of more than 1,83 m (6 ft) above the ground shall be equipped at each of those exits with a means to enable passengers and crew to reach the ground safely in an emergency.

Notwithstanding (a), such means are not required at overwing exits if the designated place on the aeroplane structure at which the escape route terminates is less than 1,83 m (6 ft) from the ground with the aeroplane on the ground, the landing gear extended, and the flaps in the take-off or landing position, whichever flap position is higher from the ground.

Aeroplanes required to have a separate emergency exit for the flight crew for which the lowest point of the emergency exit is more than 1,83 m (6 ft) above the ground shall have a means to assist all flight crew members in descending to reach the ground safely in an emergency.

The heights referred to in (a) and (c) shall be measured:

with the landing gear extended; and

after the collapse of, or failure to extend of, one or more legs of the landing gear, in the case of aeroplanes with a type certificate issued after 31 March 2000.

CAT.IDE.A.270 Megaphones

Aeroplanes with an MOPSC of more than 60 and carrying at least one passenger shall be equipped with the following quantities of portable battery-powered megaphones readily accessible for use by crew members during an emergency evacuation:

(a) For each passenger deck:

Table 1

Number of megaphones

Passenger seating configuration	Number of megaphones
61 to 99	1
100 or more	2

(b) For aeroplanes with more than one passenger deck, in all cases when the total passenger seating configuration is more than 60, at least one megaphone.

CAT.IDE.A.275 Emergency lighting and marking

Aeroplanes with an MOPSC of more than nine shall be equipped with an emergency lighting system having an independent power supply to facilitate the evacuation of the aeroplane.

In the case of aeroplanes with an MOPSC of more than 19, the emergency lighting system, referred to in (a) shall include:

sources of general cabin illumination;

internal lighting in floor level emergency exit areas;

illuminated emergency exit marking and locating signs;

(1) in the case of aeroplanes for which the application for the type certificate or equivalent was filed before 1 May 1972, when operated by night, exterior emergency lighting at all overwing exits and at exits where descent assist means are required;

(2) in the case of aeroplanes for which the application for the type certificate or equivalent was filed after 30 April 1972, when operated by night, exterior emergency lighting at all passenger emergency exits; and

(3) in the case of aeroplanes for which the type certificate was first issued on or after 31 December 1957, floor proximity emergency escape path marking system(s) in the passenger compartments.

(a) For aeroplanes with an MOPSC of 19 or less and type certified on the basis of the Authority's airworthiness codes, the emergency lighting system, referred to in (a) shall include the equipment referred to in (b)(1) to
(3).

(b) For aeroplanes with an MOPSC of 19 or less that are not certified on the basis of the Authority's airworthiness codes, the emergency lighting system, referred to in (a) shall include the equipment referred to in (b)(1).

(c) Aeroplanes with an MOPSC of nine or less, operated at night, shall be equipped with a source of general cabin illumination to facilitate the evacuation of the aeroplane.

CAT.IDE.A.280 Emergency locator transmitter (ELT)

(a) Aeroplanes with an MOPSC of more than 19 shall be equipped with at least:

(1) two ELTs, one of which shall be automatic, or one ELT and one aircraft localisation means meeting the requirement of CAT.GEN.MPA.210 in the case of aeroplanes first issued with an individual CofA after 1 July 2008; or

(2) one automatic ELT or two ELTs of any type or one aircraft localisation means meeting the requirement of CAT.GEN.MPA.210, in the case of aeroplanes first issued with an individual CofA after 1 July 2008

(b) Aeroplanes with an MOPSC of 19 or less shall be equipped with at least:

(1) One automatic ELTor one aircraft localisation means meeting the requirement of CAT.GEN.MPA.210 in the case of aeroplanes first issued with an individual CofA after 1 July 2008; or

(2) One ELT of any type or one aircraft localisation means meeting the requirement of CAT.GEN.MPA.210 in the case of aeroplanes first issued with an individual CofA after 1 July 2008.

(c) An ELT of any type shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

CAT.IDE.A.285 Flight over water

(a) The following aeroplanes shall be equipped with a life-jacket for each person on board or equivalent flotation device for each person on board younger than 24 months, stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided:

(1) landplanes operated over water at a distance of more than 50 NM from the shore or taking off or landing at an aerodrome where the take-off or approach path is so disposed over water that there would be a likelihood of a ditching; and

(2) seaplanes operated over water.

(b) Each life-jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

(c) Seaplanes operated over water shall be equipped with:

(1) a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the seaplane on water, appropriate to its size, weight and handling characteristics; and

(2) equipment for making the sound signals as prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

(d) Aeroplanes operated over water at a distance away from land suitable for making an emergency landing, greater than that corresponding to:

(1) 120 minutes at cruising speed or 400 NM, whichever is the lesser, in the case of aeroplanes capable of continuing the flight to an aerodrome with the critical engine(s) becoming inoperative at any point along the route or planned diversions; or

(2) for all other aeroplanes, 30 minutes at cruising speed or 100 NM, whichever is the lesser, shall be equipped with the equipment specified in (e).

(e) Aeroplanes complying with (d) shall carry the following equipment:

(1) life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in an emergency, and being of sufficient size to accommodate all the survivors in the event of a loss of one raft of the largest rated capacity;

(2) a survivor locator light in each life-raft;

(3) life-saving equipment to provide the means for sustaining life, as appropriate for the flight to be undertaken; and

(4) at least two survival ELTs (ELT(S)).

(f) By 1 January 2019 at the latest, aeroplanes with an MCTOM of more than 27 000 kg and with an MOPSC of more than 19 and all aeroplanes with an MCTOM of more than 45 500 kg shall be fitted with a securely attached underwater locating device that operates at a frequency of 8,8 kHz ± 1 kHz, unless:

(1) the aeroplane is operated over routes on which it is at no point at a distance of more than 180 NM from the shore; or

(2) the aeroplane is equipped with robust and automatic means to accurately determine, following an accident where the aeroplane is severely damaged, the location of the point of end of flight.

CAT.IDE.A.305 Survival equipment

(a) Aeroplanes operated over areas in which search and rescue would be especially difficult shall be equipped with:

(1) signalling equipment to make the distress signals;

(2) at least one ELT(S); and

(3) additional survival equipment for the route to be flown taking account of the number of persons on board.

(b) The additional survival equipment specified in (a)(3) does not need to be carried when the aeroplane:

(1) remains within a distance from an area where search and rescue is not especially difficult corresponding to:

(i) 120 minutes at one-engine-inoperative (OEI) cruising speed for aeroplanes capable of continuing the flight to an aerodrome with the critical engine(s) becoming inoperative at any point along the route or planned diversion routes; or

(ii) 30 minutes at cruising speed for all other aeroplanes;

(2) remains within a distance no greater than that corresponding to 90 minutes at cruising speed from an area suitable for making an emergency landing, for aeroplanes certified in accordance with the applicable airworthiness standard.

CAT.IDE.A.325 Headset

(a) Aeroplanes shall be equipped with a headset with a boom or throat microphone or equivalent for each flight crew member at their assigned station in the flight crew compartment.

(b) Aeroplanes operated under IFR or at night shall be equipped with a transmit button on the manual pitch and roll control for each required flight crew member.

CAT.IDE.A.330 Radio communication equipment

(a) Aeroplanes shall be equipped with the radio communication equipment required by the applicable airspace requirements.

(b) The radio communication equipment shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

CAT.IDE.A.335 Audio selector panel

Aeroplanes operated under IFR shall be equipped with an audio selector panel operable from each required flight crew member station.

CAT.IDE.A.340 Radio equipment for operations under VFR over routes navigated by reference to visual landmarks

Aeroplanes operated under VFR over routes navigated by reference to visual landmarks shall be equipped with radio communication equipment necessary under normal radio propagation conditions to fulfil the following:

(a) communicate with appropriate ground stations;

(b) communicate with appropriate ATC stations from any point in controlled airspace within which flights are intended; and

(c) receive meteorological information.

CAT.IDE.A.345 Communication, navigation and surveillance equipment for operations under IFR or under VFR over routes not navigated by reference to visual landmarks

(a) Aeroplanes operated under IFR or under VFR over routes that cannot be navigated by reference to visual landmarks shall be equipped with radio communication, navigation and surveillance equipment in accordance with the applicable airspace requirements.

(b) Radio communication equipment shall include at least two independent radio communication systems necessary under normal operating conditions to communicate with an appropriate ground station from any point on the route, including diversions.

(c) Notwithstanding (b), aeroplanes operated for short haul operations in the North Atlantic high-level (NAT HLA) airspace and not crossing the North Atlantic shall be equipped with at least one long range communication system, in case alternative communication procedures are published for the airspace concerned.

(d) Aeroplanes shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with the flight plan.

(e) Aeroplanes operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodrome.

(f) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

CAT.IDE.A.350 Transponder

(a) Aeroplanes shall be equipped with a pressure altitude reporting secondary surveillance radar (SSR) transponder and any other SSR transponder capability required for the route being flown.

(b) All aeroplanes shall be equipped with a data source that provides pressure-altitude information with a resolution of 7.62 m (25 ft), or better.

CAT.IDE.A.355 Management of Aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in LYCARs-Part 19, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.
In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.

CAT.IDE.A.360 Radiation Indicator

All aeroplanes intended to be operated above 15 000 m (49 000 ft) shall carry equipment to measure and indicate continuously the dose rate of total cosmic radiation being received (i.e. the total of ionizing and neutron radiation of galactic and solar origin) and the cumulative dose on each flight. The display unit of the equipment shall be readily visible to a flight crew member.

SECTION 2 Helicopters

CAT.IDE.H.100 Instruments and equipment - general

(a) Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements, except for the following items:

(1) Independent portable lights;

(2) An accurate time piece;

(3) Chart holder;

(4) First-aid kit;

(5) Megaphones;

(6) Survival and signalling equipment;

(7) Sea anchors and equipment for mooring; and

(8) Child restraint devices.

(b) Instruments and equipment not required under this Part-CAT as well as any other equipment which is not required under this Regulation but carried on a flight, shall comply with the following requirements:

(1) the information provided by these instruments, equipment or accessories shall not be used by the flight crew to comply with the applicable airworthiness requirements or CAT.IDE.H.330, CAT.IDE.H.335, CAT.IDE.H.340 and CAT.IDE.H.345;

(2) the instruments and equipment shall not affect the airworthiness of the helicopter, even in the case of failures or malfunction.'

(c) If equipment is to be used by one flight crew member at his/her station during flight, it shall be readily operable from that station. When a single item of equipment is required to be operated by more than one flight crew member it shall be installed so that the equipment is readily operable from any station at which the equipment is required to be operated.

(d) Those instruments that are used by any flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision that he/she normally assumes when looking forward along the flight path.

(e) All required emergency equipment shall be easily accessible for immediate use.

CAT.IDE.H.105 Minimum equipment for flight

A flight shall not be commenced when any of the helicopter's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

(a) the helicopter is operated in accordance with the operator's MEL; or

(b) the operator is approved by the Authority to operate the helicopter within the constraints of the MMEL in accordance with ORO.MLR.105(j) of Part -ORO.

CAT.IDE.H.115 Operating lights

(a) Helicopters operated under VFR by day shall be equipped with an anti-collision light system.

(b) Helicopters operated at night or under IFR shall, in addition to (a), be equipped with:

(1) lighting supplied from the helicopter's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the helicopter;

(2) lighting supplied from the helicopter's electrical system to provide illumination in all passenger compartments;

(3) an independent portable light for each required crew member readily accessible to crew members when seated at their designated stations;

(4) navigation/position lights;

(5) two landing lights of which at least one is adjustable in flight so as to illuminate the ground in front of and below the helicopter and the ground on either side of the helicopter; and

(6) lights to conform with the International Regulations for Preventing Collisions at Sea if the helicopter is amphibious.

CAT.IDE.H.125 Operations under VFR by day - flight and navigational instruments and associated equipment

(a) Helicopters operated under VFR by day shall be equipped with the following equipment, available at the pilot's station:

(1) A means of measuring and displaying:

(i) Magnetic heading;

(ii) Time in hours, minutes, and seconds;

(iii) Barometric altitude;

(iv) Indicated airspeed;

(v) Vertical speed;

(vi) Slip; and

(vii) Outside air temperature.

(2) A means of indicating when the supply of power to the required flight instruments is not adequate.

(b) Whenever two pilots are required for the operation, an additional separate means of displaying the following shall be available for the second pilot:

(1) Pressure altitude;

(2) Indicated airspeed; (3) Vertical speed; and

(4) Slip.

(c) Helicopters with an MCTOM of more than 3 175 kg or any helicopter operating over water when out of sight of land or when the visibility is less than 1 500 m, shall be equipped with a means of measuring and displaying:

(1) Attitude; and

(2) Heading.

(d) A means for preventing malfunction of the airspeed indicating systems due to condensation or icing shall be available for helicopters with an MCTOM of more than 3 175 kg or an MOPSC of more than nine.

CAT.IDE.H.130 Operations under IFR or at night - flight and navigational instruments and associated equipment

Helicopters operated under VFR at night or under IFR shall be equipped with the following equipment, available at the pilot's station:

(a) A means of measuring and displaying:

(1) Magnetic heading;

(2) Time in hours, minutes and seconds;

(3) Indicated airspeed;

(4) Vertical speed;

(5) Slip;

(6) Attitude;

(7) Stabilised heading; and

(8) Outside air temperature.

(b) Two means of measuring and displaying barometric altitude. For single-pilot operations under VFR at night one pressure altimeter may be substituted by a radio altimeter.

(c) A means of indicating when the supply of power to the required flight instruments is not adequate.

(d) A means of preventing malfunction of the airspeed indicating systems required in (a)(3) and (h)(2) due to either condensation or icing.

(e) A means of annunciating to the flight crew the failure of the means required in (d) for helicopters:

(1) issued with an individual CofA on or after 1 August 1999; or

(2) issued with an individual CofA before 1 August 1999 with an MCTOM of more than 3 175 kg, and with an MOPSC of more than nine.

(f) A standby means of measuring and displaying attitude that:

(1) is powered continuously during normal operation and, in the event of a total failure of the normal electrical generating system, is powered from a source independent of the normal electrical generating system;

(2) operates independently of any other means of measuring and displaying attitude;

(3) is capable of being used from either pilot's station;

(4) is operative automatically after total failure of the normal electrical generating system;

(5) provides reliable operation for a minimum of 30 minutes or the time required to fly to a suitable alternate landing site when operating over hostile terrain or offshore, whichever is greater, after total failure of the normal electrical generating system, taking into account other loads on the emergency power supply and operational procedures;

(6) is appropriately illuminated during all phases of operation; and

(7) is associated with a means to alert the flight crew when operating under its dedicated power supply, including when operated by emergency power.

(g) An alternate source of static pressure for the means of measuring altitude, airspeed and vertical speed.

(h) Whenever two pilots are required for the operation, a separate means for displaying for the second pilot:

(1) Barometric altitude;

(2) Indicated airspeed;

(3) Vertical speed;

(4) Slip;

(5) Attitude; and

(6) Stabilised heading.

(i) For IFR operations, a chart holder in an easily readable position that can be illuminated for night operations.

CAT.IDE.H.135 Additional equipment for single-pilot operation under IFR

Helicopters operated under IFR with a single-pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

CAT.IDE.H.145 Radio altimeters

(a) Helicopters on flights over water shall be equipped with a radio altimeter capable of emitting an audio warning below a pre-set height and a visual warning at a height selectable by the pilot, when operating: (1) out of sight of the land;

(2) in a visibility of less than 1 500 m;

(3) at night; or

(4) at a distance from land corresponding to more than three minutes at normal cruising speed.

CAT.IDE.H.160 Airborne weather detecting equipment

Helicopters with an MOPSC of more than nine and operated under IFR or at night shall be equipped with airborne weather detecting equipment when current weather reports indicate that thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route to be flown.

CAT.IDE.H.165 Additional equipment for operations in icing conditions at night

(a) Helicopters operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

(b) The means to illuminate the formation of ice shall not cause glare or reflection that would handicap crew members in the performance of their duties.

CAT.IDE.H.170 Flight crew interphone system

Helicopters operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

CAT.IDE.H.175 Crew member interphone system

Helicopters shall be equipped with a crew member interphone system when carrying a crew member other than a flight crew member.

CAT.IDE.H.180 Public address system

(a) Helicopters with an MOPSC of more than nine shall be equipped with a public address system, with the exception of (b).

(b) Notwithstanding (a) helicopters with an MOPSC of more than nine and less than 20 are exempted from having a public address system, if:

(1) the helicopter is designed without a bulkhead between pilot and passengers; and

(2) the operator is able to demonstrate that when in flight, the pilot's voice is audible and intelligible at all passengers' seats.

CAT.IDE.H.185 Cockpit voice recorder

(a) The following helicopter types shall be equipped with a cockpit voice recorder (CVR):

(1) all helicopters with an MCTOM of more than 7 000 kg; and

(2) helicopters with an MCTOM of more than 3 175 kg and first issued with an individual CofA on or after 1 January 1987.

(b) The CVR shall be capable of retaining the data recorded during at least:

(1) the preceding two hours for helicopters referred to in (a)(1) and (a)(2), when first issued with an individual CofA on or after 1 January 2016;

(2) the preceding one hour for helicopters referred to in (a)(1), when first issued with an individual CofA on or after 1 August 1999 and before 1 January 2016;

(3) the preceding 30 minutes for helicopters referred to in (a)(1), when first issued with an individual CofA before 1 August 1999; or

(4) the preceding 30 minutes for helicopters referred to in (a)(2), when first issued with an individual CofA before 1 January 2016.

(c) By 1 January 2019 at the latest, the CVR shall record on means other than magnetic tape or magnetic wire.

(d) The CVR shall record with reference to a timescale:

(1) voice communications transmitted from or received in the flight crew compartment by radio;

(2) flight crew members' voice communications using the interphone system and the public address system, if installed;

(3) the aural environment of the flight crew compartment, including without interruption:

(i) for helicopters first issued with an individual CofA on or after 1 August 1999, the audio signals received from each crew microphone;

(ii) for helicopters first issued with an individual CofA before 1 August 1999, the audio signals received from each crew microphone, where practicable;

(4) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

(e) The CVR shall start to record prior to the helicopter moving under its own power and shall continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power.

(f) In addition to (e), for helicopters referred to in (a)(2) issued with an individual CofA on or after 1 August 1999:

(1) the CVR shall start automatically to record prior to the helicopter moving under its own power and continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power; and

(2) depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

(g) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.'.

CAT.IDE.H.190 Flight data recorder

(a) The following helicopters shall be equipped with an FDR that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available:

(1) helicopters with an MCTOM of more than 3 175 kg and first issued with an individual CofA on or after 1 August 1999

(2) helicopters with an MCTOM of more than 7 000 kg, or an MOPSC of more than nine, and first issued with an individual CofA on or after 1 January 1989 but before 1 August 1999.

(b) The FDR shall record the parameters required to determine accurately the:

(1) flight path, speed, attitude, engine power, operation and configuration and be capable of retaining the data recorded during at least the preceding 10 hours;

(2) flight path, speed, attitude, engine power and operation and be capable of retaining the data recorded during at least the preceding eight hours, for helicopters referred to in (a)(1) and first issued with an individual CofA before 1 January 2016;

(3) flight path, speed, attitude, engine power and operation and be capable of retaining the data recorded during at least the preceding five hours, for helicopters referred to in (a)(2).

(c) Data shall be obtained from helicopter sources that enable accurate correlation with information displayed to the flight crew.

(d) The FDR shall automatically start to record the data prior to the helicopter being capable of moving under its own power and shall stop automatically after the helicopter is incapable of moving under its own power.

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

CAT.IDE.H.191 Lightweight flight recorder

(a) Turbine-engined helicopters with an MCTOM of 2 250 kg or more shall be equipped with a flight recorder if all of the following conditions are met: (1) they are not within the scope of point CAT.IDE.H.190(a); (2) they are first issued with an individual CofA on or after 5 September 2022.

(b) The flight recorder shall record, by means of flight data or images, information that is sufficient to determine the flight path and aircraft speed.

(c) The flight recorder shall be capable of retaining the flight data and the images recorded during at least the preceding 5 hours.

(d) The flight recorder shall automatically start to record prior to the helicopter being capable of moving under its own power and shall stop automatically after the helicopter is no longer capable of moving under its own power.

(e) If the flight recorder records images or audio of the flight crew compartment, then a function shall be provided which can be operated by the commander and which modifies image and audio recordings made before the operation of that function, so that those recordings cannot be retrieved using normal replay or copying techniques.

CAT.IDE.H.195 Data link recording

(a) Helicopters first issued with an individual CofA on or after 8 April 2014 that have the capability to operate data link communications and are required to be equipped with a CVR, shall record on a recorder, where applicable:

(1) data link communication messages related to ATS communications to and from the helicopter, including messages applying to the following applications:

(i) data link initiation;

(ii) controller-pilot communication;

(iii) addressed surveillance;

(iv) flight information;

(v) as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

(vi) as far as is practicable, given the architecture of the system, aircraft operational control data;

(vii) as far as is practicable, given the architecture of the system, graphics;

(2) information that enables correlation to any associated records related to data link communications and stored separately from the helicopter; and

(3) information on the time and priority of data link communications messages, taking into account the system’s architecture.

(b) The recorder shall use a digital method of recording and storing data and information and a method of readily retrieving that data shall be available. The recording method shall allow the data to match the data recorded on the ground.

(c) The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in CAT.IDE.H.185.

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

(e) The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in CAT.IDE.H.185(d) and (e).

CAT.IDE.H.200 Flight data and cockpit voice combination recorder

Compliance with CVR and FDR requirements may be achieved by the carriage of one combination recorder.

CAT.IDE.H.205 Seats, seat safety belts, restraint systems and child restraint devices

(a) Helicopters shall be equipped with:

(1) a seat or berth for each person on board who is aged 24 months or more;

(2) a seat belt on each passenger seat and restraining belts for each berth;

(3) for helicopters first issued with an individual CofA on or after 1 August 1999, a safety belt with upper torso restraint system for use on each passenger seat for each passenger aged 24 months or more;

(4) a child restraint device (CRD) for each person on board younger than 24 months;

(5) a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration on each flight crew seat;

(6) a seat belt with upper torso restraint system on each seat for the minimum required cabin crew.

(b) A seat belt with upper torso restraint system shall:

(1) have a single point release; and

(2) on flight crew seats and on the seats for the minimum required cabin crew include two shoulder straps and a seat belt that may be used independently.

CAT.IDE.H.210 Fasten seat belt and no smoking signs

Helicopters in which not all passenger seats are visible from the flight crew seat(s) shall be equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

CAT.IDE.H.220 First-aid kits

(a) Helicopters shall be equipped with at least one first-aid kit.

(b) First-aid kits shall be:

(1) readily accessible for use;

(2) kept up to date.

CAT.IDE.H.240 Supplemental oxygen - non-pressurised helicopters

Non-pressurised helicopters operated at pressure altitudes above 10 000 ft shall be equipped with supplemental oxygen equipment capable of storing and dispensing the oxygen supplies in accordance with the following tables.

Table 1

Oxygen minimum requirements for complex non-pressurised helicopters

Suppl	Duration and cabin pressure altitude
Occupants compartmentseats compartment members assisting flight crewin their duties	The entire flying time at pressure altitudes above 10
Required cabin	entire flying pressurealtitudesabove period

Table 2

Oxygen minimum requirements for other-than-complex non-pressurised helicopters

Suppl	Duration and cabin pressure altitude
Occupants compartment compartment members assisting duties, required cabin members	entire flying pressurealtitudesabove period sexceeding minutes pressurealtitudesabove exceeding
Additional members passengers	The entire flying time at pressure altitudes above 13
passengers	flying minutes pressurealtitudesabove not exceeding 13

(1)Passenger numbers in Table 2 refer to passengers actually carried on board including persons younger than 24 months.

CAT.IDE.H.250 Hand fire extinguishers

(a) Helicopters shall be equipped with at least one hand fire extinguisher in the flight crew compartment.

(b) At least one hand fire extinguisher shall be located in, or readily accessible for use in, each galley not located on the main passenger compartment.

(c) At least one hand fire extinguisher shall be available for use in each cargo compartment that is accessible to crew members in flight.

(d) The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

(e) The helicopter shall be equipped with at least a number of hand fire extinguishers in accordance with Table 1, conveniently located to provide adequate availability for use in each passenger compartment.

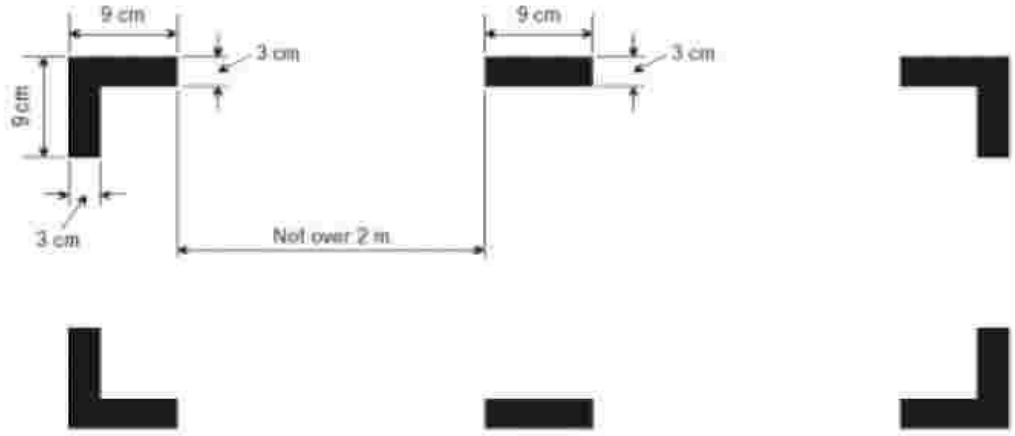
Table 1

Number of hand fire extinguishers

MOPSC	Number of extinguishers
7-30	1
31-60	2
61-200	3

CAT.IDE.H.260 Marking of break-in points

If areas of the helicopter's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.



CAT.IDE.H.270 Megaphones

Helicopters with an MOPSC of more than 19 shall be equipped with one portable battery-powered megaphone readily accessible for use by crew members during an emergency evacuation.

CAT.IDE.H.275 Emergency lighting and marking

(a) Helicopters with an MOPSC of more than 19 shall be equipped with:

(1) an emergency lighting system having an independent power supply to provide a source of general cabin illumination to facilitate the evacuation of the helicopter; and

(2) emergency exit marking and locating signs visible in daylight or in the dark.

(b) Helicopters shall be equipped with emergency exit markings visible in daylight or in the dark when operated:

(1) in performance class 1 or 2 on a flight over water at a distance from land corresponding to more than
10 minutes flying time at normal cruising speed;

(2) in performance class 3 on a flight over water at a distance corresponding to more than three minutes flying time at normal cruising speed.

CAT.IDE.H.280 Emergency locator transmitter (ELT)

(a) Helicopters shall be equipped with at least one automatic ELT.

(b) An ELT of any type shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

CAT.IDE.H.290 Life-jackets

(a) Helicopters shall be equipped with a life-jacket for each person on board or equivalent floatation device for each person on board younger than 24 months, stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided, when operated in:

(1) performance class 1 or 2 on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;

(2) performance class 3 on a flight over water beyond autorotational distance from land;

(3) performance class 2 or 3 when taking off or landing at an aerodrome or operating site where the takeoff or approach path is over water.

(b) Each life-jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

CAT.IDE.H.295 Crew survival suits

Each crew member shall wear a survival suit when operating in performance class 3 on a flight over water beyond autorotational distance or safe forced landing distance from land, when the weather report or forecasts available to the commander indicate that the sea temperature will be less than plus 10 °C during the flight.

CAT.IDE.H.300 Life-rafts, survival ELTs and survival equipment on extended overwater flights

Helicopters operated:

(a) in performance class 1 or 2 on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;

(b) in performance class 3 on a flight over water at a distance corresponding to more than three minutes flying time at normal cruising speed, shall be equipped with:

(1) in the case of a helicopter carrying less than 12 persons, at least one life-raft with a rated capacity of not less than the maximum number of persons on board, stowed so as to facilitate its ready use in an emergency;

(2) in the case of a helicopter carrying more than 11 persons, at least two life-rafts, stowed so as to facilitate their ready use in an emergency, sufficient together to accommodate all persons capable of being carried on board and, if one is lost, the remaining life-raft(s) having, the overload capacity sufficient to accommodate all persons on the helicopter;

(3) at least one survival ELT (ELT(S)) for each required life-raft; and

(4) life-saving equipment, including means of sustaining life, as appropriate to the flight to be undertaken.

CAT.IDE.H.305 Survival equipment

Helicopters operated over areas in which search and rescue would be especially difficult shall be equipped with:

(a) signalling equipment to make distress signals;

(b) at least one ELT(S); and

(c) additional survival equipment for the route to be flown taking account of the number of persons on board.

CAT.IDE.H.315 Helicopters certified for operating on water - miscellaneous equipment

Helicopters certified for operating on water shall be equipped with:

(a) a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the helicopter on water, appropriate to its size, mass and handling characteristics; and

(b) equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

CAT.IDE.H.320 All helicopters on flights over water - ditching

(a) Helicopters shall be designed for landing on water or certified for ditching in accordance with the relevant certification specification when operated in performance class 1 or 2 on a flight over water in a hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruise speed.

(b) Helicopters shall be designed for landing on water or certified for ditching in accordance the relevant certification specification or fitted with emergency flotation equipment when operated in:

(1) performance class 1 or 2 on a flight over water in a non-hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruise speed;

(2) performance class 2, when taking off or landing over water, except in the case of helicopter emergency medical services (HEMS) operations, where for the purpose of minimising exposure, the landing or take-off at a HEMS operating site located in a congested environment is conducted over water;

(3) performance class 3 on a flight over water beyond safe forced landing distance from land.

CAT.IDE.H.325 Headset

Whenever a radio communication and/or radio navigation system is required, helicopters shall be equipped with a headset with boom microphone or equivalent and a transmit button on the flight controls for each required pilot and/or crew member at his/her assigned station.

CAT.IDE.H.330 Radio communication equipment

(a) Helicopters shall be equipped with the radio communication equipment required by the applicable airspace requirements.

(b) The radio communication equipment shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

CAT.IDE.H.335 Audio selector panel

Helicopters operated under IFR shall be equipped with an audio selector panel operable from each required flight crew member station.

CAT.IDE.H.340 Radio equipment for operations under VFR over routes navigated by reference to visual landmarks

Helicopters operated under VFR over routes that can be navigated by reference to visual landmarks shall be equipped with radio communication equipment necessary under normal radio propagation conditions to fulfil the following:

(a) communicate with appropriate ground stations;

(b) communicate with appropriate ATC stations from any point in controlled airspace within which flights are intended; and

(c) receive meteorological information.

CAT.IDE.H.345 Communication, navigation and surveillance equipment for operations under IFR or under VFR over routes not navigated by reference to visual landmarks

(a) Helicopters operated under IFR or under VFR over routes that cannot be navigated by reference to visual landmarks shall be equipped with radio communication, navigation and surveillance equipment in accordance with the applicable airspace requirements.

(b) Radio communication equipment shall include at least two independent radio communication systems necessary under normal operating conditions to communicate with an appropriate ground station from any point on the route, including diversions.

(c) Helicopters shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with the flight plan.

(d) Helicopters operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodromes.

(e) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

CAT.IDE.H.350 Transponder

Helicopters shall be equipped with a pressure altitude reporting secondary surveillance radar (SSR) transponder and any other SSR transponder capability required for the route being flown.

CAT.IDE.H.355 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined LYCARs Part-19, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.
In such cases, the operator shall inform flight crew and other personnel concerned and shall ensure that the affected data is not used."

PART SPA SPECIFIC APPROVALS

SUBPART A GENERAL REQUIREMENTS

F. Libyan Civil Aviation Regulation 5 of 2020 on Air operations is amended by the replacement of Part Specific Approvals - Part SPA as follows:

"PART SPECIFIC APPROVALS

[PART-SPA]

SUBPART A GENERAL REQUIREMENTS

SPA.GEN.100 Competent Authority

(a) The competent authority for issuing a specific approval shall be:

(1) for the commercial operator, the authority of the State in which the operator has its principal place of business;

(2) for the non-commercial operator, the authority of the State in which the operator has its principal place of business, is established or is residing.

(b) Notwithstanding point (a)(2), for the non-commercial operator using aircraft registered in a third country, the applicable requirements under this Part for the approval of the following operations shall not apply if those approvals are issued by a third-country State of Registry:

(1) performance-based navigation (PBN);

(2) minimum operational performance specifications (MNPS);

(3) reduced vertical separation minima (RVSM) airspace;

(4) low visibility operations (LVO).

SPA.GEN.105 Application for a specific approval

(a) The operator applying for the initial issue of a specific approval shall provide to the Authority the documentation required in the applicable Subpart, together with the following information:

(1) the name, address and mailing address of the applicant;

(2) a description of the intended operation.

(b) The operator shall provide the following evidence to the Authority:

(1) compliance with the requirements of the applicable Subpart;

(2) that the relevant elements defined in the mandatory part of the applicable operational suitability data. are taken into account.

(c) The operator shall retain records relating to (a) and (b) at least for the duration of the operation requiring a specific approval, or, if applicable, in accordance with Part-ORO.

SPA.GEN.110 Privileges of an operator holding a specific approval

The scope of the activity that an operator is approved to conduct shall be documented and specified:

(a) for operators holding an air operator certificate (AOC) in the operations specifications to the AOC;

(b) for all other operators in the list of specific approvals.

SPA.GEN.115 Changes to a specific approval

When the conditions of a specific approval are affected by changes, the operator shall provide the relevant documentation to the Authority and obtain prior approval for the operation.

SPA.GEN.120 Continued validity of a specific approval

Specific approvals shall be issued for an unlimited duration and shall remain valid subject to the operator remaining in compliance with the requirements associated with the specific approval and taking into account the relevant elements defined in the mandatory part of the applicable operational suitability data.

SUBPART B PERFORMANCE-BASED NAVIGATION (PBN) OPERATIONS

SPA.PBN.100 PBN operations

(a) An approval is required for each of the following PBN specifications:

(1) RNP AR APCH; and

(2) RNP 0.3 for helicopter operation.

(b) An approval for RNP AR APCH operations shall allow operations on public instrument approach procedures which meet the applicable ICAO procedure design criteria.

(c) A procedure-specific approval for RNP AR APCH or RNP 0.3 shall be required for private instrument approach procedures or any public instrument approach procedure that does not meet the applicable ICAO procedure design criteria, or where required by the Aeronautical Information Publication (AIP) or the Authority.

SPA.PBN.105 PBN operational approval

To obtain a PBN operational approval from the Authority, the operator shall provide evidence that:

(a) the relevant airworthiness approval suitable for the intended PBN operation, is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval;

(b) a training programme for the flight crew members and relevant personnel involved in the flight preparation has been established;

(c) a safety assessment has been carried out;

(d) operating procedures have been established specifying:

(1) the equipment to be carried, including its operating limitations and appropriate entries in the minimum equipment list (MEL);

(2) flight crew composition, qualification and experience;

(3) normal abnormal and contingency procedures; and;

(4) electronic navigation data management ;

(e) a list of reportable events has been specified; and

(f) a management RNP monitoring programme has been established for RNP AR APCH operations, if applicable.

SPA.PBN.110 PBCS operational approval

To obtain a PBCS operational approval from the Authority, the operator shall follow the applicable requirements and guidelines and meet the specifications as prescribed in ICAO Doc 9869 - Performance-Based Communication and Surveillance (PBCS) Manual

SUBPART C OPERATIONS WITH SPECIFIED MINIMUM NAVIGATION PERFORMANCE (MNPS)

SPA.MNPS.100 MNPS operations

Aircraft shall only be operated in designated minimum navigation performance specifications (MNPS) airspace in accordance with regional supplementary procedures, where minimum navigation performance specifications are established, if the operator has been granted an approval by the Authority to conduct such operations.

SPA.MNPS.105 MNPS operational approval

To obtain an MNPS operational approval from the Authority, the operator shall provide evidence that:

(a) the navigation equipment meets the required performance;

(b) navigation displays, indicators and controls are visible and operable by either pilot seated at his/her duty station;

(c) a training programme for the flight crew members involved in these operations has been established;

(d) operating procedures have been established specifying:

(1) the equipment to be carried, including its operating limitations and appropriate entries in the MEL;

(2) flight crew composition and experience requirements;

(3) normal procedures;

(4) contingency procedures including those specified by the authority responsible for the airspace concerned;

(5) monitoring and incident reporting.

SUBPART D OPERATIONS IN AIRSPACE WITH REDUCED VERTICAL SEPARATION MINIMA (RVSM)

SPA.RVSM.100 RVSM operations

Aircraft shall only be operated in designated airspace where a reduced vertical separation minimum of 300 m (1 000 ft) applies between flight level (FL) 290 and FL 410, inclusive, if the operator has been granted an approval by the Authority to conduct such operations.

SPA.RVSM.105 RVSM operational approval

To obtain an RVSM operational approval from the Authority, the operator shall provide evidence that:

(a) the RVSM airworthiness approval has been obtained;

(b) procedures for monitoring and reporting height-keeping errors have been established;

(c) a training programme for the flight crew members involved in these operations has been established;

(d) operating procedures have been established specifying:

(1) the equipment to be carried, including its operating limitations and appropriate entries in the MEL;

(2) flight crew composition and experience requirements;

(3) flight planning;

(4) pre-flight procedures;

(5) procedures prior to RVSM airspace entry;

(6) in-flight procedures;

(7) post-flight procedures;

(8) incident reporting;

(9) specific regional operating procedures.

SPA.RVSM.110 RVSM equipment requirements

Aircraft used for operations in RVSM airspace shall be equipped with:

(a) two independent altitude measurement systems;

(b) an altitude alerting system;

(c) an automatic altitude control system;

(d) a secondary surveillance radar (SSR) transponder with altitude reporting system that can be connected to the altitude measurement system in use for altitude control.

SPA.RVSM.115 RVSM height-keeping errors

(a) The operator shall report recorded or communicated occurrences of height-keeping errors caused by malfunction of aircraft equipment or of operational nature, equal to or greater than:

(1) a total vertical error (TVE) of ± 90 m (± 300 ft);

(2) an altimetry system error (ASE) of ± 75 m (± 245 ft); and

(3) an assigned altitude deviation (AAD) of ± 90 m (± 300 ft).

(b) Reports of such occurrences shall be sent to the Authority within 72 hours. Reports shall include an initial analysis of causal factors and measures taken to prevent repeat occurrences.

(c) When height-keeping errors are recorded or received, the operator shall take immediate action to rectify the conditions that caused the errors and provide follow-up reports, if requested by the Authority.

SUBPART E LOW VISIBILITY OPERATIONS (LVO)

SPA.LVO.100 Low visibility operations

The operator shall only conduct the following low visibility operations (LVO) when approved by the Authority:

(a) low visibility take-off (LVTO) operation;

(b) lower than standard category I (LTS CAT I) operation;

(c) standard category II (CAT II) operation;

(d) other than standard category II (OTS CAT II) operation;

(e) standard category III (CAT III) operation;

(f) approach operation utilising enhanced vision systems (EVS) for which an operational credit is applied to reduce the runway visual range (RVR) minima by no more than one third of the published RVR.

SPA.LVO.105 LVO approval

To obtain an LVO approval from the Authority, the operator shall demonstrate compliance with the requirements of this Subpart.

SPA.LVO.110 General operating requirements

(a) The operator shall only conduct LTS CAT I operations if:

(1) each aircraft concerned is certified for operations to conduct CAT II operations; and

(2) the approach is flown:

(i) auto-coupled to an auto-land that needs to be approved for CAT IIIA operations; or

(ii) using an approved head-up display landing system (HUDLS) to at least 150 ft above the threshold.

(b) The operator shall only conduct CAT II, OTS CAT II or CAT III operations if:

(1) each aircraft concerned is certified for operations with a decision height (DH) below 200 ft, or no DH, and equipped in accordance with the applicable airworthiness requirements;

(2) a system for recording approach and/or automatic landing success and failure is established and maintained to monitor the overall safety of the operation;

(3) the DH is determined by means of a radio altimeter;

(4) the flight crew consists of at least two pilots;

(5) all height call-outs below 200 ft above the aerodrome threshold elevation are determined by a radio altimeter.

(c) The operator shall only conduct approach operations utilising an EVS if:

(1) the EVS is certified for the purpose of this Subpart and combines infra-red sensor image and flight information on the HUD;

(2) for operations with an RVR below 550 m, the flight crew consists of at least two pilots;

(3) for CAT I operations, natural visual reference to runway cues is attained at least at 100 ft above the aerodrome threshold elevation;

(4) for approach procedure with vertical guidance (APV) and non-precision approach (NPA) operations flown with CDFA technique, natural visual reference to runway cues is attained at least at 200 ft above the aerodrome threshold elevation and the following requirements are complied with:

(i) the approach is flown using an approved vertical flight path guidance mode;

(ii) the approach segment from final approach fix (FAF) to runway threshold is straight and the difference between the final approach course and the runway centreline is not greater than 2 degrees;

(iii) the final approach path is published and not greater than 3,7 degrees;

(iv) the maximum cross-wind components established during certification of the EVS are not exceeded.

SPA.LVO.115 Aerodrome related requirements

(a) The operator shall not use an aerodrome for LVOs below a visibility of 800 m unless:

(1) the aerodrome has been approved for such operations by the State of the aerodrome; and

(2) low visibility procedures (LVP) have been established.

(b) If the operator selects an aerodrome where the term LVP is not used, the operator shall ensure that there are equivalent procedures that adhere to the requirements of LVP at the aerodrome. This situation shall be clearly noted in the operations manual or procedures manual including guidance to the flight crew on how to determine that the equivalent LVP are in effect.

SPA.LVO.120 Flight crew training and qualifications

The operator shall ensure that, prior to conducting an LVO:

(a) each flight crew member:

(1) complies with the training and checking requirements prescribed in the operations manual, including flight simulation training device (FSTD) training, in operating to the limiting values of RVR/VIS
(visibility) and DH specific to the operation and the aircraft type;

(2) is qualified in accordance with the standards prescribed in the operations manual;

(b) the training and checking is conducted in accordance with a detailed syllabus.

SPA.LVO.125 Operating procedures

(a) The operator shall establish procedures and instructions to be used for LVOs. These procedures and instructions shall be included in the operations manual or procedures manual and contain the duties of flight crew members during taxiing, take-off, approach, flare, landing, rollout and missed approach operations, as appropriate.

(b) Prior to commencing an LVO, the pilot-in-command/commander shall be satisfied that:

(1) the status of the visual and non-visual facilities is sufficient;

(2) appropriate LVPs are in force according to information received from air traffic services (ATS);

(3) flight crew members are properly qualified.

SPA.LVO.130 Minimum equipment

(a) The operator shall include the minimum equipment that has to be serviceable at the commencement of an LVO in accordance with the aircraft flight manual (AFM) or other approved document in the operations manual or procedures manual, as applicable.

(b) The pilot-in-command/commander shall be satisfied that the status of the aircraft and of the relevant airborne systems is appropriate for the specific operation to be conducted.

SUBPART F EXTENDED RANGE OPERATIONS WITH TWO-ENGINED AEROPLANES (ETOPS)

SPA.ETOPS.100 ETOPS

In commercial air transport operations, two-engined aeroplanes shall only be operated beyond the threshold distance determined in accordance with CAT.OP.MPA.140 if the operator has been granted an ETOPS operational approval by the Authority.

SPA.ETOPS.105 ETOPS operational approval

To obtain an ETOPS operational approval from the Authority, the operator shall provide evidence that:

(a) the aeroplane/engine combination holds an ETOPS type design and reliability approval for the intended operation;

(b) a training programme for the flight crew members and all other operations personnel involved in these operations has been established and the flight crew members and all other operations personnel involved are suitably qualified to conduct the intended operation;

(c) the operator's organisation and experience are appropriate to support the intended operation;

(d) operating procedures have been established.

SPA.ETOPS.110 ETOPS en-route alternate aerodrome

(a) An ETOPS en-route alternate aerodrome shall be considered adequate, if, at the expected time of use, the aerodrome is available and equipped with necessary ancillary services such as air traffic services (ATS), sufficient lighting, communications, weather reporting, navigation aids and emergency services and has at least one instrument approach procedure available.

(b) Prior to conducting an ETOPS flight, the operator shall ensure that an ETOPS en-route alternate aerodrome is available, within either the operator's approved diversion time, or a diversion time based on the MEL generated serviceability status of the aeroplane, whichever is shorter.

(c) The operator shall specify any required ETOPS en-route alternate aerodrome(s) in the operational flight plan and ATS flight plan.

SPA.ETOPS.115 ETOPS en-route alternate aerodrome planning minima

(a) The operator shall only select an aerodrome as an ETOPS en-route alternate aerodrome when the appropriate weather reports or forecasts, or any combination thereof, indicate that, between the

anticipated time of landing until one hour after the latest possible time of landing, conditions will exist at or above the planning minima calculated by adding the additional limits of Table 1.

(b) The operator shall include in the operations manual the method for determining the operating minima at the planned ETOPS en-route alternate aerodrome.

Table 1

Planning minima for the ETOPS en-route alternate aerodrome

Type of approach	Planning minima
Precision approach	DA/H + 200 ft RVR/VIS + 800 m (1)
Non-precision approach or Circling approach	MDA/H + 400 ft (1) RVR/VIS + 1 500 m

(1)VIS: visibility; MDA/H: minimum descent altitude/height.

SUBPART G TRANSPORT OF DANGEROUS GOODS

SPA.DG.100 Transport of dangerous goods

Except as provided for in Part-CAT, Part-NCC, Part-NCO and Part-SPO, the operator shall only transport dangerous goods by air if the operator has been approved by the Authority.

SPA.DG.105 Approval to transport dangerous goods

To obtain the approval to transport dangerous goods, the operator shall in accordance with the Technical Instructions and ORO.GEN.110(j):

(a) establish and maintain a training programme for all personnel involved and demonstrate to the LYCAA that adequate training has been given to all personnel;

(b) establish operating procedures to ensure the safe handling of dangerous goods at all stages of air transport, containing information and instructions on:

(1) the operator's policy to transport dangerous goods;

(2) the requirements for acceptance, handling, loading, stowage, segregation and unloading of dangerous goods;

(3) actions to take in the event of an aircraft accident or serious incident when dangerous goods are being carried;

(4) the response to emergency situations involving dangerous goods;

(5) the removal of any possible contamination;

(6) the duties of all personnel involved, especially with relevance to ground handling and

aircraft handling; (7) inspection for damage, leakage or contamination;

(8) reporting dangerous goods accidents, incidents and occurrences in accordance with the Technical Instructions.

SPA.DG.110 Dangerous goods information and documentation

The operator shall, in accordance with the Technical Instructions:

(a) provide written information to the pilot-in-command/commander:

(1) about dangerous goods to be carried on the aircraft;

(2) for use in responding to in-flight emergencies;

(b) [reserved]

(c) use an acceptance checklist;

(d) ensure that dangerous goods are accompanied by the required dangerous goods transport document(s), as completed by the person offering dangerous goods for air transport, except when the information applicable to the dangerous goods is provided in electronic form;

(e) ensure that where a dangerous goods transport document is provided in written form, a copy of the document is retained on the ground where it will be possible to obtain access to it within a reasonable period until the goods have reached their final destination;

(f) ensure that a copy of the information to the pilot-in-command/commander is retained on the ground and that, that copy, or the information contained in it, is readily accessible to the flight operations officer, flight dispatcher, or the designated ground personnel responsible for their part of the flight operations, until after the completion of the flight to which the information refers;

(g) retain the acceptance checklist, transport document and information to the pilot-in-command/commander for at least three months after completion of the flight;

(h) retain the training records of all personnel for at least three years.

(i) provide information to the emergency services without delay in the event of an aircraft accident or serious incident when dangerous goods are being carried.

SPA.DG.115 Dangerous goods Loading Restrictions in Passenger Cabin or On Flight Deck

Dangerous goods shall not be carried in an aircraft cabin occupied by passengers or on the flight deck of an aircraft, except in circumstances permitted by the provisions of the Technical Instructions.

SUBPART H HELICOPTER OPERATIONS WITH NIGHT VISION IMAGING SYSTEMS

SPA.NVIS.100 Night vision imaging system (NVIS) operations

(a) Helicopters shall only be operated under VFR at night with the aid of NVIS if the operator has been approved by the Authority.

(b) To obtain such approval by the Authority, the operator shall:

(1) operate in commercial air transport (CAT) and hold a CAT AOC in accordance with Part-ORO;

(2) demonstrate to the Authority:

(i) compliance with the applicable requirements contained in this Subpart;

(ii) the successful integration of all elements of the NVIS.

SPA.NVIS.110 Equipment requirements for NVIS operations

(a) Before conducting NVIS operations each helicopter and all associated NVIS equipment shall have been issued with the relevant airworthiness approval in accordance with the applicable airworthiness requirements.

(b) Radio altimeter. The helicopter shall be equipped with a radio altimeter capable of emitting an audio warning below a pre-set height and an audio and visual warning at a height selectable by the pilot, instantly discernable during all phases of NVIS flight.

(c) Aircraft NVIS compatible lighting. To mitigate the reduced peripheral vision cues and the need to enhance situational awareness, the following shall be provided:

(1) NVIS-compatible instrument panel flood-lighting, if installed, that can illuminate all essential flight instruments;

(2) NVIS-compatible utility lights;

(3) portable NVIS compatible flashlight; and

(4) a means for removing or extinguishing internal NVIS non-compatible lights.

(d) Additional NVIS equipment. The following additional NVIS equipment shall be provided: (1) a back-up or secondary power source for the night vision goggles (NVG);

(2) a helmet with the appropriate NVG attachment.

(e) All required NVGs on an NVIS flight shall be of the same type, generation and model.

(f) Continuing airworthiness

(1) Procedures for continuing airworthiness shall contain the information necessary for carrying out ongoing maintenance and inspections on NVIS equipment installed in the helicopter and shall cover, as a minimum:

(i) helicopter windscreens and transparencies;

(ii) NVIS lighting;

(iii) NVGs; and

(iv) any additional equipment that supports NVIS operations.

SPA.NVIS.120 NVIS operating minima

(a) Operations shall not be conducted below the VFR weather minima for the type of night operations being conducted.

(b) The operator shall establish the minimum transition height from where a change to/from aided flight may be continued.

SPA.NVIS.130 Crew requirements for NVIS operations

(a) Selection. The operator shall establish criteria for the selection of crew members for the NVIS task.

(b) Experience. The minimum experience for the commander shall not be less than 20 hours VFR at night as pilot-in-command/commander of a helicopter before commencing training.

(c) Operational training. All pilots shall have completed the operational training in accordance with the NVIS procedures contained in the operations manual.

(d) Recency. All pilots and NVIS technical crew members conducting NVIS operations shall have completed three NVIS flights in the last 90 days. Recency may be re-established on a training flight in the helicopter or an approved full flight simulator (FFS), which shall include the elements of (f)(1).

(e) Crew composition. The minimum crew shall be the greater of that specified:

(1) in the aircraft flight manual (AFM);

(2) for the underlying activity; or

(3) in the operational approval for the NVIS operations.

(f) Crew training and checking

(1) Training and checking shall be conducted in accordance with a detailed syllabus approved by the LYCAA and included in the operations manual.

(2) Crew members

(i) Crew training programmes shall: improve knowledge of the NVIS working environment and equipment; improve crew coordination; and include measures to minimise the risks associated with entry into low visibility conditions and NVIS normal and emergency procedures.

(ii) The measures referred to in (f)(2)(i) shall be assessed during: (A) night

proficiency checks; and (B) line checks.

SPA.NVIS.140 Information and documentation

The operator shall ensure that, as part of its risk analysis and management process, risks associated with the NVIS environment are minimised by specifying in the operations manual: selection, composition and training of crews; levels of equipment and dispatch criteria; and operating procedures and minima, such that normal and likely abnormal operations are described and adequately mitigated.

SUBPART I HELICOPTER HOIST OPERATIONS

SPA.HHO.100 Helicopter hoist operations (HHO)

(a) Helicopters shall only be operated for the purpose of CAT hoist operations if the operator has been approved by the Authority.

(b) To obtain such approval by the Authority, the operator shall:

(1) operate in CAT and hold a CAT AOC in accordance with Part-ORO;

(2) demonstrate to the Authority compliance with the requirements contained in this Subpart.

SPA.HHO.110 Equipment requirements for HHO

(a) The installation of all helicopter hoist equipment other than a simple PCDS, including any radio equipment to comply with SPA.HHO.115, and any subsequent modifications, shall have an airworthiness approval appropriate to the intended function. Ancillary equipment shall be designed and tested to the appropriate standard as required by the Authority.

(b) Maintenance instructions for HHO equipment and systems shall be established by the operator in liaison with the manufacturer and included in the operator's helicopter maintenance programme as required by LYCARs-continuing airworthiness.

SPA.HHO.115 HHO communication

Two-way radio communication shall be established with the organisation for which the HHO is being provided and, where possible, a means of communicating with ground personnel at the HHO site for:

(a) day and night offshore operations;

(b) night onshore operations, except for HHO at a helicopter emergency medical services (HEMS) operating site.

SPA.HHO.125 Performance requirements for HHO

Except for HHO at a HEMS operating site, HHO shall be capable of sustaining a critical engine failure with the remaining engine(s) at the appropriate power setting without hazard to the suspended person(s)/cargo, third parties or property.

SPA.HHO.130 Crew requirements for HHO

(a) Selection. The operator shall establish criteria for the selection of flight crew members for the HHO task, taking previous experience into account.

(b) Experience. The minimum experience level for the commander conducting HHO flights shall not be less than:

(1) Offshore:

(i) 1 000 hours as pilot-in-command/commander of helicopters, or 1 000 hours as co-pilot in HHO of which 200 hours is as pilot-in-command under supervision; and

(ii) 50 hoist cycles conducted offshore, of which 20 cycles shall be at night if night operations are being conducted, where a hoist cycle means one down-and-up cycle of the hoist hook.

(2) Onshore:

(i) 500 hours as pilot-in-command/commander of helicopters, or 500 hours as co-pilot in HHO of which 100 hours is as pilot-in-command under supervision;

(ii) 200 hours operating experience in helicopters gained in an operational environment similar to the intended operation; and

(iii) 50 hoist cycles, of which 20 cycles shall be at night if night operations are being conducted.

(c) Operational training and experience. Successful completion of training in accordance with the HHO procedures contained in the operations manual and relevant experience in the role and environment under which HHO are conducted.

(d) Recency. All pilots and HHO crew members conducting HHO shall have completed in the last 90 days:

(1) when operating by day: any combination of three day or night hoist cycles, each of which shall include

a transition to and from the hover;

(2) when operating by night: three night hoist cycles, each of which shall include a transition to and from the hover.

(e) Crew composition. The minimum crew for day or night operations shall be as stated in the operations manual. The minimum crew will be dependent on the type of helicopter, the weather conditions, the type of task, and, in addition for offshore operations, the HHO site environment, the sea state and the movement of the vessel. In no case shall the minimum crew be less than one pilot and one HHO crew member.

(f) Training and checking

(1) Training and checking shall be conducted in accordance with a detailed syllabus approved by the Authority and included in the operations manual.

(2) Crew members:

(i) Crew training programmes shall: improve knowledge of the HHO working environment and equipment; improve crew coordination; and include measures to minimise the risks associated with HHO normal and emergency procedures and static discharge.

(ii) The measures referred to in (f)(2)(i) shall be assessed during visual meteorological conditions (VMC) day proficiency checks, or VMC night proficiency checks when night HHO are undertaken by the operator.

SPA.HHO.135 HHO passenger briefing

Prior to any HHO flight, or series of flights, HHO passengers shall have been briefed and made aware of the dangers of static electricity discharge and other HHO considerations.

SPA.HHO.140 Information and documentation

(a) The operator shall ensure that, as part of its risk analysis and management process, risks associated with the HHO environment are minimised by specifying in the operations manual: selection, composition and training of crews; levels of equipment and dispatch criteria; and operating procedures and minima, such that normal and likely abnormal operations are described and adequately mitigated.

(b) Relevant extracts from the operations manual shall be available to the organisation for which the HHO is being provided.

SUBPART J HELICOPTER EMERGENCY MEDICAL SERVICE OPERATIONS

SPA.HEMS.100 Helicopter emergency medical service (HEMS) operations

(a) Helicopters shall only be operated for the purpose of HEMS operations if the operator has been approved by the Authority.

(b) To obtain such approval by the Authority, the operator shall:

(1) operate in CAT and hold a CAT AOC in accordance with Part-ORO;

(2) demonstrate to the Authority compliance with the requirements contained in this Subpart.

SPA.HEMS.110 Equipment requirements for HEMS operations

The installation of all helicopter dedicated medical equipment and any subsequent modifications and, where appropriate, its operation shall be approved in accordance with the applicable airworthiness requirements .

SPA.HEMS.115 Communication

In addition to that required by CAT.IDE.H, helicopters conducting HEMS flights shall have communication equipment capable of conducting two-way communication with the organisation for which the HEMS is being conducted and, where possible, to communicate with ground emergency service personnel.

SPA.HEMS.120 HEMS operating minima

(a) HEMS flights operated in performance class 1 and 2 shall comply with the weather minima in Table 1 for dispatch and en-route phase of the HEMS flight. In the event that during the en-route phase the weather conditions fall below the cloud base or visibility minima shown, helicopters certified for flights only under VMC shall abandon the flight or return to base. Helicopters equipped and certified for instrument meteorological conditions (IMC) operations may abandon the flight, return to base or convert in all respects to a flight conducted under instrument flight rules (IFR), provided the flight crew are suitably qualified.

Table 1

HEMS operating

Ceiling	Visibility	Ceiling	Visibility
ft and above	defined applicable airspace VFR minima	ft and above	defined applicable airspace VFR minima
‘		‘	
‘		‘	
NIGHT			
Cloud base	Visibility	Cloud base	Visibility

(1)During the en-route phase visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacles in time to avoid a collision.

(2)During the en-route phase, cloud base may be reduced to 1 000 ft for short periods.

(b) The weather minima for the dispatch and en-route phase of a HEMS flight operated in performance class 3 shall be a cloud ceiling of 600 ft and a visibility of 1 500 m. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

SPA.HEMS.125 Performance requirements for HEMS operations

(a) Performance class 3 operations shall not be conducted over a hostile environment.

(b) Take-off and landing

(1) Helicopters conducting operations to/from a final approach and take-off area (FATO) at a hospital that is located in a congested hostile environment and that is used as a HEMS operating base shall be operated in accordance with performance class 1.

(2) Helicopters conducting operations to/from a FATO at a hospital that is located in a congested hostile environment and that is not a HEMS operating base shall be operated in accordance with performance class 1, except when the operator holds an approval in accordance with CAT.POL.H.225.

(3) Helicopters conducting operations to/from a HEMS operating site located in a hostile environment shall be operated in accordance with performance class 2 and be exempt from the approval required by CAT.POL.H.305(a), provided compliance is shown with CAT.POL.H.305(b)(2) and (b)(3).

(4) The HEMS operating site shall be big enough to provide adequate clearance from all obstructions. For night operations, the site shall be illuminated to enable the site and any obstructions to be identified.

SPA.HEMS.130 Crew requirements

(a) *Selection*. The operator shall establish criteria for the selection of flight crew members for the HEMS task, taking previous experience into account.

(b) *Experience*. The minimum experience level for the commander conducting HEMS flights shall not be less than:

(1) either:

(i) 1 000 hours as pilot-in-command/commander of aircraft of which 500 hours are as pilot-in command/commander on helicopters; or

(ii) 1 000 hours as co-pilot in HEMS operations of which 500 hours are as pilot-in-command under supervision and 100 hours pilot-in-command/commander of helicopters;

(2) 500 hours' operating experience in helicopters, gained in an operational environment similar to the intended operation; and

(3) for pilots engaged in night operations, 20 hours of VMC at night as pilot-in-command/commander.

(c) *Operational training.* Successful completion of operational training in accordance with the HEMS procedures contained in the operations manual.

(d) *Recency.* All pilots conducting HEMS operations shall have completed a minimum of 30 minutes' flight by sole reference to instruments in a helicopter or in an FSTD within the last six months.

(e) *Crew composition*

(1) Day flight. The minimum crew by day shall be one pilot and one HEMS technical crew member.

(i) This may be reduced to one pilot only when:

(A) at a HEMS operating site the commander is required to fetch additional medical supplies. In such case the HEMS technical crew member may be left to give assistance to ill or
injured persons while the commander undertakes this flight;

(B) after arriving at the HEMS operating site, the installation of the stretcher precludes the HEMS technical crew member from occupying the front seat; or

(C) the medical passenger requires the assistance of the HEMS technical crew member in flight.

(ii) In the cases described in (i), the operational minima shall be as defined by the applicable airspace requirements; the HEMS operating minima contained in Table 1 of SPA.HEMS.120 shall not be used.

(iii) Only in the case described in (i)(A) may the commander land at an HEMS operating site without the technical crew member assisting from the front seat.

(2) Night flight. The minimum crew by night shall be:

(i) two pilots; or

(ii) one pilot and one HEMS technical crew member in specific geographical areas defined by the operator in the operations manual taking into account the following:

(A) adequate ground reference;

(B) flight following system for the duration of the HEMS mission;

(C) reliability of weather reporting facilities;

(D) HEMS minimum equipment list;

(E) continuity of a crew concept;

(F) minimum crew qualification, initial and recurrent training;

(G) operating procedures, including crew coordination;

(H) weather minima; and

(I) additional considerations due to specific local conditions.

(f) Crew training and checking

(1) Training and checking shall be conducted in accordance with a detailed syllabus approved by the Authority and included in the operations manual.

(2) Crew members

(i) Crew training programmes shall: improve knowledge of the HEMS working environment and equipment; improve crew coordination; and include measures to minimise the risks associated with en-route transit in low visibility conditions, selection of HEMS operating sites and approach and departure profiles.

(ii) The measures referred to in (f)(2)(i) shall be assessed during:

(A) VMC day proficiency checks, or VMC night proficiency checks when night HEMS operations are undertaken by the operator; and

(B) line checks.

SPA.HEMS.135 HEMS medical passenger and other personnel briefing

(a) Medical passenger. Prior to any HEMS flight, or series of flights, medical passengers shall have been briefed to ensure that they are familiar with the HEMS working environment and equipment, can operate

on-board medical and emergency equipment and can take part in normal and emergency entry and exit procedures.

(b) Ground emergency service personnel. The operator shall take all reasonable measures to ensure that ground emergency service personnel are familiar with the HEMS working environment and equipment and the risks associated with ground operations at a HEMS operating site.

(c) Medical patient. Notwithstanding CAT.OP.MPA.170, a briefing shall only be conducted if the medical condition makes this practicable.

SPA.HEMS.140 Information and documentation

(a) The operator shall ensure that, as part of its risk analysis and management process, risks associated with the HEMS environment are minimised by specifying in the operations manual: selection, composition and training of crews; levels of equipment and dispatch criteria; and operating procedures and minima, such that normal and likely abnormal operations are described and adequately mitigated.

(b) Relevant extracts from the operations manual shall be made available to the organisation for which the HEMS is being provided.

SPA.HEMS.145 HEMS operating base facilities

(a) If crew members are required to be on standby with a reaction time of less than 45 minutes, dedicated suitable accommodation shall be provided close to each operating base.

(b) At each operating base the pilots shall be provided with facilities for obtaining current and forecast weather information and shall be provided with satisfactory communications with the appropriate air traffic services (ATS) unit. Adequate facilities shall be available for the planning of all tasks.

SPA.HEMS.150 Fuel supply

(a) When the HEMS mission is conducted under VFR within a local and defined geographical area, standard fuel planning can be employed provided the operator establishes final reserve fuel to ensure that, on completion of the mission the fuel remaining is not less than an amount of fuel sufficient for:

(1) 30 minutes of flying time at normal cruising conditions; or

(2) when operating within an area providing continuous and suitable precautionary landing sites, 20 minutes of flying time at normal cruising speed.

SPA.HEMS.155 Refuelling with passengers embarking, on board or disembarking

When the commander considers refuelling with passengers on board to be necessary, it can be undertaken either rotors stopped or rotors turning provided the following requirements are met:

(a) door(s) on the refuelling side of the helicopter shall remain closed;

(b) door(s) on the non-refuelling side of the helicopter shall remain open, weather permitting;

(c) fire fighting facilities of the appropriate scale shall be positioned so as to be immediately available in the event of a fire; and

(d) sufficient personnel shall be immediately available to move patients clear of the helicopter in the event of a fire.

SUBPART K HELICOPTER OFFSHORE OPERATIONS

SPA.HOFO.100 Helicopter offshore operations (HOFO)

The requirements of this Subpart apply to:

(a) a commercial air transport operator holding a valid AOC in accordance with Part-ORO;

(b) a specialised operations operator having declared its activity in accordance with Part-ORO; or

(c) a non-commercial operator having declared its activity in accordance with Part-ORO.

SPA.HOFO.105 Approval for helicopter offshore operations

(a) Prior to engaging in operations under this Subpart, a specific approval by the Authority shall have been issued to the operator.

(b) To obtain such approval, the operator shall submit an application to the Authority as specified in SPA.GEN.105, and shall demonstrate compliance with the requirements of this Subpart.

(c) The requirements under which the offshore approval is issued will be at least equal to the applicable Standards specified in ICAO Annex 6, Part III — International Operations — Helicopters

SPA.HOFO.110 Operating procedures

(a) The operator shall, as part of its safety management process, mitigate and minimise risks and hazards specific to helicopter offshore operations. The operator shall specify in the operations manual the:

(1) selection, composition and training of crews;

(2) duties and responsibilities of crew members and other involved personnel;

(3) required equipment and dispatch criteria; and

(4) operating procedures and minima, such that normal and likely abnormal operations are described and adequately mitigated.

(b) The operator shall ensure that:

(1) an operational flight plan is prepared prior to each flight;

(2) the passenger safety briefing also includes any specific information on offshore related items and is
provided prior to boarding the helicopter;

(3) each member of the flight crew wears an approved survival suit:

(i) when the weather report or forecasts available to the pilot-in-command/commander indicate that the sea temperature will be less than plus 10°C during the flight; or

(ii) when the estimated rescue time exceeds the calculated survival time; or

(iii) when the flight is planned to be conducted at night in a hostile environment;

(4) where established, the offshore route structure provided by the appropriate ATS is followed;

(5) pilots make optimum use of the automatic flight control systems (AFCS) throughout the flight;

(6) specific offshore approach profiles are established, including stable approach parameters and the corrective action to be taken if an approach becomes unstable;

(7) for multi-pilot operations, procedures are in place for a member of the flight crew to monitor the flight instruments during an offshore flight, especially during approach or departure, to ensure that a safe flight path is maintained;

(8) the flight crew takes immediate and appropriate action when a height alert is activated;

(9) procedures are in place to require the emergency flotation systems to be armed, when safe to do so,for all overwater arrivals and departures; and

(10) operations are conducted in accordance with any restriction on the routes or the areas of operation specified by the Authority or the appropriate authority responsible for the airspace.

SPA.HOFO.115 Use of offshore locations

The operator shall only use offshore locations that are suitable in relation to size and mass of the type of helicopter and to the operations concerned.

SPA.HOFO.120 Selection of aerodromes and operating sites

(a) Onshore destination alternate aerodrome. Notwithstanding CAT.OP.MPA.181, NCC.OP.152, and SPO.OP.151, the pilot-in command/commander does not need to specify a destination alternate aerodrome in the operational flight plan when conducting flights from an offshore location to a land aerodrome if either:

(1) the destination aerodrome is defined as a coastal aerodrome, or

(2) the following criteria are met:

(i) the destination aerodrome has a published instrument approach;

(ii) the flight time is less than 3 hours; and

(iii) the published weather forecast valid from 1 hour prior, and 1 hour subsequent to the expected landing time specifies that:

(A) the cloud base is at least 700 feet above the minima associated with the instrument approach, or 1 000 feet above the destination aerodrome, whichever is the higher; and

(B) visibility is at least 2 500 meters.

(b) Offshore destination alternate helideck. The operator may select an offshore destination alternate helideck when all of the following criteria are met:

(1) An offshore destination alternate helideck shall be used only after the point of no return (PNR) and when an onshore destination alternative aerodrome is not geographically available. Prior to the PNR, an onshore destination alternate aerodrome shall be used.

(2) One engine inoperative (OEI) landing capability shall be attainable at the offshore destination alternate helideck.

(3) To the extent possible, helideck availability shall be guaranteed prior to PNR. The dimensions, configuration and obstacle clearance of individual helidecks or other sites shall be suitable for its use as an alternate helideck by each helicopter type intended to be used.

(4) Weather minima shall be established taking into account the accuracy and reliability of meteorological information.

(5) The MEL shall contain specific provisions for this type of operation.

(6) An offshore destination alternate helideck shall only be selected if the operator has established a procedure in the operations manual.

SPA.HOFO.125 Airborne radar approaches (ARAs) to offshore locations - CAT Operations

(a) A commercial air transport (CAT) operator shall establish operational procedures and ensure that ARAs are only flown if:

(1) the helicopter is equipped with a radar that is capable of providing information regarding the obstacle environment; and

(2) either:

(i) the minimum descent height (MDH) is determined from a radio altimeter; or

(ii) the minimum descent altitude (MDA) plus an adequate margin is applied.

(b) ARAs to rigs or vessels in transit shall be flown as multi-pilot operations.

(c) The decision range shall provide adequate obstacle clearance in the missed approach from any destination for which an ARA is planned.

(d) The approach shall only be continued beyond decision range or below the minimum descent altitude/height (MDA/H) when visual reference to the destination has been established.

(e) For single-pilot CAT operations, appropriate increments shall be added to the MDA/H and decision range.

(f) When an ARA is flown to a non-moving offshore location (i.e. fixed installation or moored vessel) and a reliable GPS position for the location is available in the navigation system, the GPS/area navigation system shall be used to enhance the safety of the ARA.

SPA.HOFO.130 Meteorological conditions

Notwithstanding CAT.OP.MPA.247, NCC.OP.180 and SPO.OP.170, when flying between offshore locations located in class G airspace where the overwater sector is less than 10 NM, VFR flights may be conducted when the limits are at, or better than, the following:

Minima for flying between offshore locations located in class G airspace				
	Day		Night	
	Height*	Visibility	Height*	Visibility
Single pilot	300 feet	3 km	500 feet	5 km

Two pilots	300 feet	2 km**	500 feet	5 km***

* The cloud base shall allow flight at the specified height to be below and clear of cloud.
** Helicopters may be operated in flight visibility down to 800 m, provided the destination or an intermediate structure is continuously visible.
*** Helicopters may be operated in flight visibility down to 1 500 m, provided the destination or an intermediate structure is continuously visible.

SPA.HOFO.135 Wind limitations for operations to offshore locations

Operation to an offshore location shall only be performed when the wind speed at the helideck is reported to be not more than 60 knots including gusts.

SPA.HOFO.140 Performance requirements at offshore locations

Helicopters taking off from and landing at offshore locations shall be operated in accordance with the performance requirements of the appropriate Part according to their type of operation.

SPA.HOFO.145 Flight data monitoring (FDM) system

(a) When conducting CAT operations with a helicopter equipped with a flight data recorder, the operator shall establish and maintain a FDM system, as part of its integrated management system, by 1 January 2019.

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

SPA.HOFO.150 Aircraft tracking system

An operator shall establish and maintain a monitored aircraft tracking system for offshore operations in a hostile environment from the time the helicopter departs until it arrives at its final destination.

SPA.HOFO.155 Vibration health monitoring (VHM) system

(a) The following helicopters conducting CAT offshore operations in a hostile environment shall be fitted with a VHM system capable of monitoring the status of critical rotor and rotor drive systems by 1 January 2019:

(1) complex motor-powered helicopters first issued with an individual Certificate of Airworthiness (CofA) after 31 December 2016;

(2) all helicopters with a maximum operational passenger seating configuration (MOPSC) of more than 9 and first issued with an individual CofA before 1 January 2017;

(3) all helicopters first issued with an individual CofA after 31 December 2018.

(b) The operator shall have a system to:

(1) collect the data including system generated alerts; (2) analyse and determine component

serviceability; and

(3) respond to detected incipient failures.

SPA.HOFO.160 Equipment requirements

(a) The operator shall comply with the following equipment requirements:

(1) Public Address (PA) system in helicopters used for CAT and non-commercial operations with complex motor-powered helicopters (NCC):

(i) Helicopters with a maximum operational passenger seat configuration (MOPSC) of more than 9 shall be equipped with a PA system.

(ii) Helicopters with an MOPSC of 9 or less need not be equipped with a PA system if the operator can demonstrate that the pilot's voice is understandable at all passengers' seats in flight.

(2) Radio altimeter
Helicopters shall be equipped with a radio altimeter that is capable of emitting an audio warning below a pre-set height and a visual warning at a height selectable by the pilot.

(b) Emergency exits
All emergency exits, including crew emergency exits, and any door, window or other opening that is suitable for emergency egress, and the means for opening them shall be clearly marked for the guidance of occupants using them in daylight or in the dark. Such markings shall be designed to remain visible if the helicopter is capsized or the cabin is submerged.

(c) Helicopter terrain awareness warning system (HTAWS)
Helicopters used in CAT operations with a maximum certificated take-off mass of more than 3 175 kg or a MOPSC of more than 9 and first issued with an individual CofA after 31 December 2018 shall be equipped with an HTAWS that meets the requirements for class A equipment as specified in an acceptable standard.

SPA.HOFO.160 Additional procedures and equipment for operations in a hostile environment

(a) Life jackets
Approved life jackets shall be worn at all times by all persons on board unless integrated survival suits that meet the combined requirement of the survival suit and life jacket are worn.

(b) Survival suits
All passengers on board shall wear an approved survival suit:

(1) when the weather report or forecasts available to the commander/pilot-in-command indicate that the sea temperature will be less than plus 10 °C during the flight; or (2) when the estimated rescue time exceeds the calculated survival time; or

(3) when the flight is planned to be conducted at night.

(c) Emergency breathing system
All persons on board shall carry and be instructed in the use of emergency breathing systems.

(d) Life rafts

(1) All life rafts carried shall be installed so as to be usable in the sea conditions in which the helicopter's ditching, flotation, and trim characteristics were evaluated for certification.

(2) All life rafts carried shall be installed so as to facilitate their ready use in an emergency.

(3) The number of life rafts installed:

(i) in the case of a helicopter carrying less than 12 persons, at least one life raft with a rated capacity of not less than the maximum number of persons on board; or

(ii) in the case of a helicopter carrying more than 11 persons, at least two life rafts, sufficient together to accommodate all persons capable of being carried on board and, if one is lost, the remaining life raft(s) having the overload capacity sufficient to accommodate all persons on the helicopter.

(4) Each life raft shall contain at least one survival emergency locator transmitter (ELT(S)); and

(5) Each life raft shall contain life-saving equipment, including means of sustaining life, as appropriate to the flight to be undertaken.

(e) Emergency cabin lighting
The helicopter shall be equipped with an emergency lighting system with an independent power supply to provide a source of general cabin illumination to facilitate the evacuation of the helicopter.

(f) Automatically deployable emergency locator transmitter (ELT(AD))
The helicopter shall be equipped with an ELT(AD) that is capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

(g) Securing of non-jettisonable doors
Non-jettisonable doors that are designated as ditching emergency exits shall have a means of securing them in the open position so that they do not interfere with the occupants' egress in all sea conditions up to the maximum sea conditions required to be evaluated for ditching and flotation.

(h) Emergency exits and escape hatches
All emergency exits, including crew emergency exits, and any door, window or other opening suitable to be used for the purpose of underwater escape shall be equipped so as to be operable in an emergency.

(i) Notwithstanding (a), (b) and (c) above the operator may, based on a risk assessment, allow passengers, medically incapacitated at an offshore location, to partly wear or not wear life jackets, survival suits or emergency breathing systems on return flights or flights between offshore locations.

SPA.HOFO.170 Crew requirements

(a) The operator shall establish:

(1) criteria for the selection of flight crew members, taking into account the flight crew members' previous experience;

(2) a minimum experience level for a commander/pilot-in-command intending to conduct offshore operations; and

(3) a flight crew training and checking programme that each flight crew member shall complete successfully. Such programme shall be adapted to the offshore environment and include normal, abnormal and emergency procedures, crew resource management, water entry and sea survival training.

(b) Recency requirements
A pilot shall only operate a helicopter carrying passengers:

(1) at an offshore location, as commander or pilot-in-command, or co-pilot, when he or she has carried out in the preceding 90 days at least 3 take-offs, departures, approaches and landings at an offshore
location in a helicopter of the same type or a full flight simulator (FFS) representing that type; or

(2) by night at an offshore location, as commander or pilot-in-command, or co-pilot, when he/she has carried out in the preceding 90 days at least 3 take-offs, departures, approaches and landings at night at an offshore location in a helicopter of the same type or an FFS representing that type.
The 3 take-offs and landings shall be performed in either multi-pilot or single-pilot operations, depending on the operation to be performed.

(c) Specific requirements for CAT:

(1) The 90-day period presented in points (b)(1) and (2) above may be extended to 120 days as long as the pilot undertakes line flying under the supervision of a type rating instructor or examiner.

(2) If the pilot does not comply with the requirements in (1), he/she shall complete a training flight in the helicopter or an FFS of the helicopter type to be used, which shall include at least the requirements described in (b)(1) and (2) before he or she can exercise his or her privileges.

SUBPART L SINGLE-ENGINED TURBINE AEROPLANE OPERATIONS AT NIGHT OR IN INSTRUMENT METEOROLOGICAL CONDITIONS (SET-IMC)

SPA.SET-IMC.100 SET-IMC operations

In commercial air transport (CAT) operations, single-engined turbine aeroplanes shall only be operated at night or in IMC if the operator has been granted a SET-IMC approval by the Authority.

SPA.SET-IMC.105 SET-IMC operations approval

To obtain a SET-IMC approval by the Authority, the operator shall provide evidence that all the following conditions have been complied with:

(a) an acceptable level of turbine engine reliability is achieved in service by the world fleet for the particular airframe-engine combination;

(b) specific maintenance instructions and procedures to ensure the intended levels of continued airworthiness and reliability of the aeroplane and its propulsion system have been established and included in the operator's aircraft maintenance programme in accordance with LYCARs-continuing airworthiness (Part-M), including all the following:

(1) an engine trend monitoring programme, except for aeroplanes first issued with an individual certificate of airworthiness after 31 December 2004 that shall have an automatic trend monitoring system;

(2) a propulsion and associated systems' reliability programme;

(c) flight crew composition and a training/checking programme for the flight crew members involved in these operations have been established;

(d) operating procedures have been established specifying all the following:

(1) the equipment to be carried, including its operating limitations and appropriate entries in the MEL;

(2) the flight planning;

(3) the normal procedures;

(4) the contingency procedures, including procedures following a propulsion system failure, as well as forced landing procedures in all weather conditions;

(5) the monitoring and incident reporting.

(e) a safety risk assessment has been performed, including the determination of an acceptable risk period if an operator intends to make use of it.

SPA.SET-IMC.110 Equipment requirements for SET-IMC operations

Aeroplanes used for SET-IMC operations shall be equipped with all the following equipment:

(a) two separate electrical generating systems, each one capable of supplying adequate power to all essential flight instruments, navigation systems and aeroplane systems required for continued flight to the destination or alternate aerodrome;

(b) two attitude indicators, powered from independent sources;

(c) for passenger operations, a shoulder harness or a safety belt with a diagonal shoulder strap for each passenger seat;

(d) airborne weather-detecting equipment;

(e) in a pressurised aeroplane, sufficient supplemental oxygen for all occupants to allow descent, following engine failure at the maximum certificated cruising altitude, at the best range gliding speed and in the best gliding configuration, assuming the maximum cabin leak rate, until sustained cabin altitudes below 13 000 ft are reached;

(f) an area navigation system capable of being programmed with the positions of landing sites and providing lateral guidance to the flight crew to reach those sites;

(g) a radio altimeter;

(h) a landing light, capable of illuminating the touchdown point on the power-off glide path from 200 ft away;

(i) an emergency electrical supply system of sufficient capacity and endurance capable of providing power, following the failure of all generated power, to additional loads necessary for all of the following:

(1) the essential flight and area navigation instruments during descent from maximum operating altitude after engine failure;

(2) the means to provide for one attempt to restart the engine;

(3) if appropriate, the extension of landing gear and flaps;

(4) the use of the radio altimeter throughout the landing approach;

(5) the landing light;

(6) one pitot heater;

(7) if installed, the electrical means to give sufficient protection against impairment of the pilot's vision for landing;

(j) an ignition system that activates automatically, or is capable of being operated manually, for take-off, landing, and during flight, in visible moisture;

(k) a means of continuously monitoring the power train lubrication system to detect the presence of debris associated with the imminent failure of a drivetrain component, including a flight crew compartment caution indication;

(l) an emergency engine power control device that permits continuing operation of the engine at a sufficient power range to safely complete the flight in the event of any reasonably probable failure of the fuel control unit.

SUBPART M ELECTRONIC FLIGHT BAGS (EFBs)

SPA.EFB.100 Use of electronic flight bags (EFBs) - operational approval

(a) A commercial air transport operator shall only use a type B EFB application if the operator has been granted an approval by the Authority for such use.

(b) In order to obtain an operational approval from the Authority for the use of a type B EFB application, the operator shall provide evidence that:

• a risk assessment related to the use of the EFB device that hosts the application and to the EFB application and its associated function(s) has been conducted, identifying the associated risks and ensuring that they are appropriately managed and mitigated;

• the human-machine interfaces of the EFB device and the EFB application have been assessed against human factors principles;

• it has established an EFB administration system and that procedures and training requirements for the administration and use of the EFB device and the EFB application have been established and implemented; these shall include procedures for:

(i) operating the EFB;

(ii) the management of changes to the EFB;

(iv) the management of EFB data;

(iv) EFB maintenance; and

(v) EFB security;

• the EFB host platform is suitable for the intended use of the EFB application.

This demonstration shall be specific to the EFB application and the EFB host platform on which the application is installed.';"

PART NCC - NON-COMMERCIAL AIR OPERATIONS WITH COMPLEX MOTOR-POWERED AIRCRAFT

SUBPART A GENERAL REQUIREMENTS

G. Libyan Civil Aviation Regulation 5 of 2020 on Air operations is amended by the replacement of Part Non-Commercial Air Operations with Complex Motor-Powered Aircraft - Part NCC as follows:

"**PART NON-COMMERCIAL AIR OPERATIONS WITH COMPLEX MOTOR-POWERED AIRCRAFT**

[PART-NCC]

SUBPART A GENERAL REQUIREMENTS

NCC.GEN.100 Competent Authority

The competent authority shall be the authority designated by the State in which the operator has its principal place of business, is established or is residing.

NCC.GEN.101 Additional requirements for flight training organisations

Approved training organisations that are required to comply with this Part shall also comply with:

(a) ORO.GEN.310, as applicable; and

(b) ORO.MLR.105.

NCC.GEN.105 Crew responsibilities

(a) The crew member shall be responsible for the proper execution of his/her duties that are:

(1) related to the safety of the aircraft and its occupants; and

(2) specified in the instructions and procedures in the operations manual.

(b) During critical phases of flight or whenever deemed necessary by the pilot-in-command in the interest of safety, the crew member shall be seated at his/her assigned station and shall not perform any activities other than those required for the safe operation of the aircraft.

(c) During flight, the flight crew member shall keep his/her safety belt fastened while at his/her station.

(d) During flight, at least one qualified flight crew member shall remain at the controls of the aircraft at all times.

(e) The crew member shall not undertake duties on an aircraft:

(1) if he/she knows or suspects that he/she is suffering from fatigue if he/she knows or suspects that he/she is suffering from fatigue or feels otherwise unfit such that his/her task achievement/decision making has deteriorated to the extent that the flight may be endangered; or

(2) when under the influence of psychoactive substances or when unfit due to injury, fatigue, medication, sickness or other similar causes

(f) The crew member who undertakes duties for more than one operator shall:

(1) maintain his/her individual records regarding flight and duty times and rest periods as referred to in applicable FTL requirements; and

(2) provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements.

(g) The crew member shall report to the pilot-in-command:

(1) any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

(2) any incident that was endangering, or could endanger, the safety of the operation.

NCC.GEN.106 Pilot-in-command responsibilities and authority

(a) The pilot-in-command shall be responsible for:

(1) the safety of the aircraft and of all crew members, passengers and cargo on board during aircraft operations;

(2)) the initiation, continuation, termination or diversion of a flight in the interest of safety;

(3) ensuring that all instructions, operational procedures and checklists are complied with in accordance with the operations manual;

(4) only commencing a flight if he/she is satisfied that the following operational limitations are complied with as follows:

(i) the aircraft is airworthy;

(ii) the aircraft is duly registered;

(iii) instruments and equipment required for the execution of that flight are installed in the aircraft and are operative, unless operation with inoperative equipment is permitted by the minimum equipment list (MEL) or equivalent document, as required in NCC.IDE.A.105 or NCC.IDE.H.105;

(iv) the mass of the aircraft and centre of gravity location are such that the flight can be conducted
within the limits prescribed in the airworthiness documentation;

(v) all cabin baggage, hold luggage and cargo are properly loaded and secured;

(vi) the aircraft operating limitations as specified in the aircraft flight manual (AFM) will not be exceeded at any time during the flight;

(vii) each flight crew member holds a valid licence in accordance with LYCARs-Aircrew Licensing; and

(viii) flight crew members are properly rated and meet competency and recency requirements;

(ix) any navigational database required for performance-based navigation is suitable and current;

(5) not commencing a flight if any flight crew member is incapacitated from performing duties by any cause such as injury, sickness, fatigue or the effects of any psychoactive substance;

(6) not continuing a flight beyond the nearest weather-permissible aerodrome or operating site, when the capacity of any flight crew member to perform duties is significantly reduced from causes such as fatigue, sickness or lack of oxygen;

(7) deciding on acceptance of the aircraft with unserviceabilities in accordance with the configuration deviation list (CDL) or minimum equipment list (MEL), as applicable;

(8) recording utilisation data and all known or suspected defects in the aircraft at the termination of the flight, or series of flights, in the aircraft technical log or journey log for the aircraft; and

(9) ensuring that:

(i) flight recorders are not disabled or switched off during flight;

(ii) in the event of an occurrence other than an accident or a serious incident that shall be reported according to ORO.GEN.160(a), flight recorders' recordings are not intentionally erased; and

(iii) in the event of an accident or a serious incident, or if preservation of recordings of flight recorders is directed by the investigating authority:

(A) flight recorders' recordings are not intentionally erased;

(B) flight recorders are deactivated immediately after the flight is completed; and

(C) precautionary measures to preserve the recordings of flight recorders are taken before leaving the flight crew compartment.

(b) The pilot-in-command shall have the authority to refuse carriage of or disembark any person, baggage or cargo that may represent a potential hazard to the safety of the aircraft or its occupants.

(c) The pilot-in-command shall, as soon as possible, report to the appropriate air traffic services (ATS) unit any hazardous weather or flight conditions encountered that are likely to affect the safety of other aircraft.

(d) Notwithstanding the provision of (a)(6), in a multi-crew operation the pilot-in-command may continue a flight beyond the nearest weather-permissible aerodrome when adequate mitigating procedures are in place.

(e) The pilot-in-command shall, in an emergency situation that requires immediate decision and action, take any action he/she considers necessary in the interest of safety. In such cases he/she may deviate from rules, operational procedures and methods. In the event of any such deviation the pilot-in-command is responsible for notifying the appropriate local authority without delay.

(f) The pilot-in-command shall submit a report of an act of unlawful interference without delay to the Authority and shall inform the designated local authority.

(g) The pilot-in-command shall notify the nearest appropriate authority by the quickest available means of any accident involving the aircraft that results in serious injury or death of any person or substantial damage to the aircraft or property.

NCC.GEN.110 Compliance with laws, regulations and procedures

(a) The pilot-in-command shall comply with the laws, regulations and procedures of those States where operations are conducted.

(b) The pilot-in-command shall be familiar with the laws, regulations and procedures, pertinent to the performance of his/her duties, prescribed for the areas to be traversed, the aerodromes or operating sites to be used and the related air navigation facilities as relating thereto.

NCC.GEN.115 Common language

The operator shall ensure that all crew members can communicate with each other in a common language.

NCC.GEN.119 Taxiing of aircraft

The operator shall establish procedures for taxiing to ensure safe operation and to enhance runway safety.

NCC.GEN.120 Taxiing of aeroplanes

The operator shall ensure that an aeroplane is only taxied on the movement area of an aerodrome if the person at the controls:

(a) is an appropriately qualified pilot; or

(b) has been designated by the operator and:

(1) is trained to taxi the aeroplane;

(2) is trained to use the radio telephone, if radio communications are required;

(3) has received instruction in respect of aerodrome layout, routes, signs, marking, lights, air traffic control (ATC) signals and instructions, phraseology and procedures; and

(4) is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.

NCC.GEN.125 Rotor engagement - helicopters

A helicopter rotor shall only be turned under power for the purpose of flight with a qualified pilot at the controls.

NCC.GEN.130 Portable electronic devices

The operator shall not permit any person to use a portable electronic device (PED) on board an aircraft that could adversely affect the performance of the aircraft's systems and equipment.

NCC.GEN.131 Use of electronic flight bags (EFBs)

(a) Where an EFB is used on board an aircraft, the operator shall ensure that it does not adversely affect the performance of the aircraft systems or equipment, or the ability of the flight crew member to operate the aircraft.

(b) Prior to using a type B EFB application, the operator shall:

(1) conduct a risk assessment related to the use of the EFB device that hosts the application and to the EFB application concerned and its associated function(s), identifying the associated risks

and ensuring that they are appropriately managed and mitigated; the risk assessment shall address the risks associated with the human-machine interface of the EFB device and the EFB application concerned; and

(2) establish an EFB administration system, including procedures and training requirements for the administration and use of the device and the EFB application.

NCC.GEN.135 Information on emergency and survival equipment carried

The operator shall at all times have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board.

NCC.GEN.140 Documents, manuals and information to be carried

(a) The following documents, manuals and information shall be carried on each flight as originals or copies unless otherwise specified:

(1) the AFM, or equivalent document(s);

(2) the original certificate of registration;

(3) the original certificate of airworthiness (CofA);

(4) the noise certificate;

(5) the declaration as specified in Part-ORO, ORO.DEC.100, to this regulation;

(6) the list of specific approvals, if applicable;

(7) the aircraft radio licence, if applicable;

(8) the third party liability insurance certificate(s);

(9) the journey log, or equivalent, for the aircraft;

(10) details of the filed ATS flight plan, if applicable;

(11) current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted

(12) procedures and visual signals information for use by intercepting and intercepted aircraft;

(13) information concerning search and rescue services for the area of the intended flight;

(14) the current parts of the operations manual that are relevant to the duties of the crew members, which shall be easily accessible to the crew members;

(15) the MEL or CDL;

(16) appropriate notices to airmen (NOTAMs) and aeronautical information service (AIS) briefing documentation;

(17) appropriate meteorological information;

(18) cargo and/or passenger manifests, if applicable; and

(19) any other documentation that may be pertinent to the flight or is required by the States concerned with the flight.

(b) In case of loss or theft of documents specified in (a)(2) to (a)(8), the operation may continue until the flight reaches its destination or a place where replacement documents can be provided.

NCC.GEN.145 Handling of flight recorder recordings: preservation, production, protection and use

(a) Following an accident, a serious incident or an occurrence identified by the investigating authority, the operator of an aircraft shall preserve the original recorded data of the flight recorders for a period of 60 days or until otherwise directed by the investigating authority.'.

(b) The operator shall conduct operational checks and evaluations of recordings to ensure the continued serviceability of the flight recorders which are required to be carried.

(c) (c) The operator shall ensure that the recordings of flight parameters and data link communication messages required to be recorded on flight recorders are preserved. However, for the purpose of testing and maintaining those flight recorders, up to 1 hour of the oldest recorded data at the time of testing may be erased.

(d) The operator shall keep and maintain up-to-date documentation that presents the necessary information to convert raw flight data into parameters expressed in engineering units.

(e) The operator shall make available any flight recorder recording that has been preserved, if so determined by the Authority.

(f) Without prejudice to the Libyan regulations on Aircraft Accident and Incident Investigations:

(1) Except for ensuring the flight recorder serviceability, audio recordings from a flight recorder shall not be disclosed or used unless all of the following conditions are fulfilled:

(i) a procedure related to the handling of such audio recordings and of their transcript is in place;

(ii) all crew members and maintenance personnel concerned have given their prior consent;

(iii) such audio recordings are used only for maintaining or improving safety.

(1a) When flight recorder audio recordings are inspected for ensuring flight recorder serviceability, the operator shall ensure protect the privacy of those audio recordings and make sure that they are not disclosed or used for purposes other than ensuring flight recorder serviceability.

(2) Flight parameters or data link messages recorded by a flight recorder shall not be used for purposes other than for the investigation of an accident or an incident which is subject to mandatory reporting, unless such recordings meet any of the following conditions:

(i) are used by the operator for airworthiness or maintenance purposes only; or

(ii) are de-identified; or

(iii) are disclosed under secure procedures.

(3) Except for ensuring flight recorder serviceability, images of the flight crew compartment that are recorded by a flight recorder shall not be disclosed or used unless all the following conditions are fulfilled:

(i) a procedure related to the handling of such image recordings is in place;

(ii) all crew members and maintenance personnel concerned have given their prior consent;

(iii) such image recordings are used only for maintaining or improving safety.

(3a) When images of the flight crew compartment that are recorded by a flight recorder are inspected for ensuring the serviceability of the flight recorder, then:

(i) those images shall not be disclosed or used for purposes other than for ensuring flight recorder serviceability;

(ii) if body parts of crew members are likely to be visible on the images, the operator shall ensure the privacy of those images.

NCC.GEN.150 Transport of dangerous goods

(a) The transport of dangerous goods by air shall be conducted in accordance with Annex 18 to the Chicago
Convention as last amended and amplified by the Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Doc 9284-AN/905), including its supplements and any other addenda or corrigenda.

(b) Dangerous goods shall only be transported by the operator approved in accordance with Part-SPA, Subpart G, to this Regulation except when:

(1) they are not subject to the Technical Instructions in accordance with Part 1 of those Instructions; or

(2) they are carried in accordance with Part 8 of the Technical Instructions by passengers or crew members, or are in baggage that has been separated from its owner during transit or excess baggage carried as cargo as permitted in Technical Instructions.

(c) The operator shall establish procedures to ensure that all reasonable measures are taken to prevent dangerous goods from being carried on board inadvertently.

(d) The operator shall provide personnel with the necessary information enabling them to carry out their responsibilities, as required by the Technical Instructions

(e) The operator shall, in accordance with the Technical Instructions, report without delay to the LYCAA and the appropriate authority of the State of occurrence in the event of any dangerous goods accidents or incidents.

(f) The operator shall ensure that passengers are provided with information about dangerous goods in accordance with the Technical Instructions.

The operator shall ensure that notices giving information about the transport of dangerous goods are provided at acceptance points for cargo as required by the Technical Instructions.

SUBPART B OPERATIONAL PROCEDURES

NCC.OP.100 Use of aerodromes and operating sites

The operator shall only use aerodromes and operating sites that are adequate for the type of aircraft and operation concerned.

NCC.OP.105 Specification of isolated aerodromes - aeroplanes

For the selection of alternate aerodromes and the fuel policy, the operator shall consider an aerodrome as an isolated aerodrome if the flying time to the nearest adequate destination alternate aerodrome is more than:

for aeroplanes with reciprocating engines, 60 minutes; or

for aeroplanes with turbine engines, 90 minutes.

NCC.OP.110 Aerodrome operating minima - general

For instrument flight rules (IFR) flights the operator shall establish aerodrome operating minima for each departure, destination and alternate aerodrome to be used. Such minima shall:

not be lower than those established by the State in which the aerodrome is located, except when specifically approved by that State; and

when undertaking low visibility operations, be approved by the Authority in accordance with Part SPA, Subpart E to this Regulation.

When establishing aerodrome operating minima, the operator shall take the following into account:

the type, performance and handling characteristics of the aircraft;

the composition, competence and experience of the flight crew;

the dimensions and characteristics of the runways and final approach and take-off areas (FATOs) that may be selected for use;

the adequacy and performance of the available visual and non-visual ground aids;

the equipment available on the aircraft for the purpose of navigation and/or control of the flight path, during the take-off, the approach, the flare, the landing, the rollout and the missed approach;

the obstacles in the approach, the missed approach and the climb-out areas necessary for the execution of contingency procedures;

the obstacle clearance altitude/height for the instrument approach procedures;

the means to determine and report meteorological conditions; and

the flight technique to be used during the final approach.

The minima for a specific type of approach and landing procedure shall only be used if all the following conditions are met:

the ground equipment required for the intended procedure is operative;

the aircraft systems required for the type of approach are operative;

the required aircraft performance criteria are met; and

the crew is qualified appropriately.

NCC.OP.111 Aerodrome operating minima - NPA, APV, CAT I operations

The decision height (DH) to be used for a non-precision approach (NPA) flown with the continuous descent final approach (CDFA) technique, approach procedure with vertical guidance (APV) or category I (CAT I) operation shall not be lower than the highest of:

the minimum height to which the approach aid can be used without the required visual reference;

the obstacle clearance height (OCH) for the category of aircraft;

the published approach procedure DH where applicable;

the system minimum specified in Table 1; or

the minimum DH specified in the AFM or equivalent document, if stated.

The minimum descent height (MDH) for an NPA operation flown without the CDFA technique shall not be lower than the highest of:

the OCH for the category of aircraft;

the system minimum specified in Table 1; or

the minimum MDH specified in the AFM, if stated.

Table 1

System

Fa	**Lowest DH/MDH**
Instrument landing system (ILS)	
G navig sat sy GNSS)/Satellite-augmentat sy S La preci ve guidance approach	
GNSS (Lateral Navigation (LNAV))	
GNSS/Baro-vertical navigation (VNAV) (LNAV/VNAV)	
Loca wit dist measu equip	
Surveillance radar approach (SRA) (terminating at ½ NM)	
SRA (terminating at 1 NM)	

SRA (terminating at 2 NM or more)	
VHF omnidirectional radio range (VOR)	
VOR/	
Non-directional beacon (NDB)	
NDB/	
VHF direction finder (VDF)	

NCC.OP.112 Aerodrome operating minima - circling operations with aeroplanes

The MDH for a circling operation with aeroplanes shall not be lower than the highest of:

the published circling OCH for the aeroplane category;

the minimum circling height derived from Table 1; or

the DH/MDH of the preceding instrument approach procedure.

The minimum visibility for a circling operation with aeroplanes shall be the highest of:

the circling visibility for the aeroplane category, if published;

the minimum visibility derived from Table 2; or

the runway visual range/converted meteorological visibility (RVR/CMV) of the preceding instrument approach procedure.

Table 1

MDH and minimum visibility for circling vs. aeroplane category

	Aeroplane			
MD				
Minimum meteorological visibility (m)				

NCC.OP.113 Aerodrome operating minima - onshore circling operations with helicopters

The MDH for an onshore circling operation with helicopters shall not be lower than 250 ft and the meteorological visibility not less than 800 m.

NCC.OP.115 Departure and approach procedures

The pilot-in-command shall use the departure and approach procedures established by the State of the aerodrome, if such procedures have been published for the runway or FATO to be used.

Notwithstanding (a), the pilot-in-command shall only accept an ATC clearance to deviate from a published procedure:

provided that obstacle clearance criteria are observed and full account is taken of the operating conditions; or

when being radar-vectored by an ATC unit.

In any case, the final approach segment shall be flown visually or in accordance with the published approach procedures.

NCC.OP.116 Performance-based navigation - aeroplanes and helicopters

The operator shall ensure that, when PBN is required for the route or procedure to be flown:

the relevant PBN specification is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; and

the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document mentioned above.

NCC.OP.120 Noise abatement procedures

The operator shall develop operating procedures taking into account the need to minimise the effect of aircraft noise while ensuring that safety has priority over noise abatement.

NCC.OP.125 Minimum obstacle clearance altitudes - IFR flights

The operator shall specify a method to establish minimum flight altitudes that provide the required terrain clearance for all route segments to be flown in IFR.

The pilot-in-command shall establish minimum flight altitudes for each flight based on this method. The minimum flight altitudes shall not be lower than that published by the State overflown.

NCC.OP.130 Fuel and oil supply - aeroplanes

The pilot-in-command shall only commence a flight if the aeroplane carries sufficient fuel and oil for the following:

for visual flight rules (VFR) flights:

by day, to fly to the aerodrome of intended landing and thereafter to fly for at least 30 minutes at normal cruising altitude; or

by night, to fly to the aerodrome of intended landing and thereafter to fly for at least 45 minutes at normal cruising altitude;

for IFR flights:

when no destination alternate is required, to fly to the aerodrome of intended landing, and thereafter to fly for at least 45 minutes at normal cruising altitude; or

when a destination alternate is required, to fly to the aerodrome of intended landing, to an alternate aerodrome and thereafter to fly for at least 45 minutes at normal cruising altitude.

In computing the fuel required including to provide for contingency, the following shall be taken into consideration:

forecast meteorological conditions;

anticipated ATC routings and traffic delays;

procedures for loss of pressurisation or failure of one engine while en-route, where applicable; and

any other condition that may delay the landing of the aeroplane or increase fuel and/or oil consumption.

Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is replanned.

NCC.OP.131 Fuel and oil supply - helicopters

The pilot-in-command shall only commence a flight if the helicopter carries sufficient fuel and oil for the following:

for VFR flights, to fly to the aerodrome/operating site of intended landing and thereafter to fly for at least 20 minutes at best-range-speed; and

for IFR flights:

when no alternate is required or no weather-permissible alternate aerodrome is available, to fly to the aerodrome/operating site of intended landing, and thereafter to fly for 30 minutes at holding speed at 450 m (1 500 ft) above the destination aerodrome/operating site under standard temperature conditions and approach and land; or

when an alternate is required, to fly to and execute an approach and a missed approach at the aerodrome/operating site of intended landing, and thereafter:

to fly to the specified alternate; and

to fly for 30 minutes at holding speed at 450 m (1 500 ft) above the alternate aerodrome/ operating site under standard temperature conditions and approach and land.

In computing the fuel required including to provide for contingency, the following shall be taken into consideration:

forecast meteorological conditions;

anticipated ATC routings and traffic delays;

procedures for loss of pressurisation or failure of one engine while en-route, where applicable; and

any other condition that may delay the landing of the aircraft or increase fuel and/or oil consumption.

Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is replanned.

NCC.OP.135 Stowage of baggage and cargo

The operator shall establish procedures to ensure that:

only hand baggage that can be adequately and securely stowed is taken into the passenger compartment; and

all baggage and cargo on board that might cause injury or damage, or obstruct aisles and exits if displaced, is stowed so as to prevent movement.

NCC.OP.140 Passenger briefing

The pilot-in-command shall ensure that:

prior to take-off passengers have been made familiar with the location and use of the following:

seat belts;

emergency exits; and

passenger emergency briefing cards;and if applicable:(4) life-jackets;

oxygen dispensing equipment;

life-rafts; and

other emergency equipment provided for individual passenger use;and

in an emergency during flight, passengers are instructed in such emergency action as may be appropriate to the circumstances.

NCC.OP.145 Flight preparation

Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the space-based facilities, ground and/or water facilities including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.

Before commencing a flight, the pilot-in-command shall be familiar with all available meteorological information appropriate to the intended flight. Preparation for a flight away from the vicinity of the place of departure, and for every flight under IFR, shall include:

a study of available current weather reports and forecasts; and

the planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of weather conditions.

NCC.OP.150 Take-off alternate aerodromes - aeroplanes

For IFR flights, the pilot-in-command shall specify at least one weather-permissible take-off alternate aerodrome in the flight plan if the weather conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or it would not be possible to return to the aerodrome of departure for other reasons.

The take-off alternate aerodrome shall be located within the following distance from the aerodrome of departure:

for aeroplanes having two engines, not more than a distance equivalent to a flight time of 1 hour at the single-engine cruise speed in still air standard conditions; and

for aeroplanes having three or more engines, not more than a distance equivalent to a flight time of 2 hours at the one-engine-inoperative (OEI) cruise speed according to the AFM in still air standard conditions.

For an aerodrome to be selected as a take-off alternate aerodrome the available information shall indicate that, at the estimated time of use, the conditions will be at or above the aerodrome operating minima for that operation.

NCC.OP.151 Destination alternate aerodromes - aeroplanes

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate aerodrome in the flight plan, unless:

the available current meteorological information indicates that, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period, the approach and landing may be made under visual meteorological conditions (VMC); or

the place of intended landing is isolated and:

an instrument approach procedure is prescribed for the aerodrome of intended landing; and

available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival:

a cloud base of at least 300 m (1 000 ft) above the minimum associated with the instrument approach procedure; and

visibility of at least 5,5 km or of 4 km more than the minimum associated with the procedure.

NCC.OP.152 Destination alternate aerodromes - helicopters

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate in the flight plan, unless:

an instrument approach procedure is prescribed for the aerodrome of intended landing and the available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival, or from the actual time of departure to 2 hours after the estimated time of arrival, whichever is the shorter period:

a cloud base of at least 120 m (400 ft) above the minimum associated with the instrument approach procedure; and

visibility of at least 1 500 m more than the minimum associated with the procedure; or

the place of intended landing is isolated and:

an instrument approach procedure is prescribed for the aerodrome of intended landing;

available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival:

the cloud base is at least 120 m (400 ft) above the minimum associated with the instrument approach procedure;

visibility is at least 1 500 m more than the minimum associated with the procedure; and

NCC.OP.153 Destination aerodromes - instrument approach operations

The pilot-in-command shall ensure that sufficient means are available to navigate and land at the destination aerodrome or at any destination alternate aerodrome in the case of loss of capability for the intended approach and landing operation.

NCC.OP.155 Refuelling with passengers embarking, on board or disembarking

The aircraft shall not be refuelled with aviation gasoline (AVGAS) or wide-cut type fuel or a mixture of these types of fuel, when passengers are embarking, on board or disembarking.

For all other types of fuel, necessary precautions shall be taken and the aircraft shall be properly manned by qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

NCC.OP.160 Use of headset

Each flight crew member required to be on duty in the flight crew compartment shall wear a headset with boom microphone or equivalent. The headset shall be used as the primary device for voice communications with ATS:

when on the ground:

when receiving the ATC departure clearance via voice communication; and

when enginesre running;

when in flight:

below transition altitude; or

10 000 ft, whichever is higher;and

whenever deemed necessary by the pilot in command.

In the conditions of (a), the boom microphone or equivalent shall be in a position that permits its use for two-way radio communications.

NCC.OP.165 Carriage of passengers

The operator shall establish procedures to ensure that:

passengers are seated where, in the event that an emergency evacuation is required, they are able to assist and not hinder evacuation of the aircraft;

prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each passenger on board occupies a seat or berth and has his/her safety belt or restraint device properly secured; and

multiple occupancy is only allowed on specified aircraft seats occupied by one adult and one infant properly secured by a supplementary loop belt or other restraint device.

NCC.OP.170 Securing of passenger compartment and galley(s)

The pilot-in-command shall ensure that:

before taxiing, take-off and landing, all exits and escape paths are unobstructed; and

before take-off and landing, and whenever deemed necessary in the interest of safety, all equipment and baggage are properly secured.

NCC.OP.175 Smoking on board

The pilot-in-command shall not allow smoking on board:

whenever considered necessary in the interest of safety;

during refuelling of the aircraft;

while the aircraft is on the surface unless the operator has determined procedures to mitigate the risks during ground operations;

outside designated smoking areas, in the aisle(s) and lavatory(ies);

in cargo compartments and/or other areas where cargo is carried that is not stored in flame-resistant containers or covered by flame-resistant canvas; and

in those areas of the passenger compartments where oxygen is being supplied.

NCC.OP.180 Meteorological conditions

The pilot-in-command shall only commence or continue a VFR flight if the latest available meteorological information indicates that the weather conditions along the route and at the intended destination at the estimated time of use will be at or above the applicable VFR operating minima.

The pilot-in-command shall only commence or continue an IFR flight towards the planned destination aerodrome if the latest available meteorological information indicates that, at the estimated time of arrival, the weather conditions at the destination or at least one destination alternate aerodrome are at or above the applicable aerodrome operating minima.

If a flight contains VFR and IFR segments, the meteorological information referred to in (a) and (b) shall be applicable as far as relevant.

NCC.OP.185 Ice and other contaminants - ground procedures

The operator shall establish procedures to be followed when ground de-icing and anti-icing and related inspections of the aircraft are necessary to allow the safe operation of the aircraft.

The pilot-in-command shall only commence take-off if the aircraft is clear of any deposit that might adversely affect the performance or controllability of the aircraft, except as permitted under the procedures referred to in (a) and in accordance with the AFM.

NCC.OP.190 Ice and other contaminants - flight procedures

The operator shall establish procedures for flights in expected or actual icing conditions.

The pilot-in-command shall only commence a flight or intentionally fly into expected or actual icing conditions if the aircraft is certified and equipped and/or treated to operate safely in such conditions.

If icing exceeds the intensity of icing for which the aircraft is certified or if an aircraft not certified for flight in known icing conditions encounters icing, the pilot-in-command shall exit the icing conditions without delay, by a change of level and/or route, and if necessary by declaring an emergency to ATC.

NCC.OP.195 Take-off conditions

Before commencing take-off, the pilot-in-command shall be satisfied that:

according to the information available, the weather at the aerodrome or operating site and the condition of the runway or FATO intended to be used would not prevent a safe take-off and departure; and

applicable aerodrome operating minima will be complied with.

NCC.OP.200 Simulated situations in flight

The pilot-in-command shall, when carrying passengers or cargo, not simulate:

situations that require the application of abnormal or emergency procedures; or

flight in instrument meteorological conditions (IMC).

Notwithstanding (a), when training flights are conducted by an approved training organisation referred to LYCARs-air crew, such situations may be simulated with student pilots on-board.

NCC.OP.205 In-flight fuel management

The operator shall establish a procedure to ensure that in-flight fuel checks and fuel management are performed.

The pilot-in-command shall check at regular intervals that the amount of usable fuel remaining in flight is not less than the fuel required to proceed to a weather-permissible aerodrome or operating site and the planned reserve fuel as required by NCC.OP.130 or NCC.OP.131.

NCC.OP.210 Use of supplemental oxygen

The pilot-in-command shall ensure that he/she and flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen continuously whenever the cabin altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft.

NCC.OP.215 Ground proximity detection

When undue proximity to the ground is detected by a flight crew member or by a ground proximity warning system, the pilot flying shall take corrective action immediately in order to establish safe flight conditions.

NCC.OP.220 Airborne collision avoidance system (ACAS)

The operator shall establish operational procedures and training programs when ACAS is installed and serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.

NCC.OP.225 Approach and landing conditions - Aeroplanes

Before commencing an approach to land, the pilot-in-command shall be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the runway intended to be used would not prevent a safe approach, landing or missed approach.

NCC.OP.226 Approach and landing conditions - helicopters

Before commencing an approach to land, the pilot-in-command shall be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the final approach and take-off area (FATO) intended to be used would not prevent a safe approach, landing or missed approach.

NCC.OP.230 Commencement and continuation of approach

The pilot-in-command may commence an instrument approach regardless of the reported runway visual range/visibility (RVR/VIS).

If the reported RVR/VIS is less than the applicable minimum the approach shall not be continued:

below 1 000 ft above the aerodrome; or

into the final approach segment in the case where the decision altitude/height (DA/H) or minimum descent altitude/height (MDA/H) is more than 1 000 ft above the aerodrome.

Where the RVR is not available, RVR values may be derived by converting the reported visibility.

If, after passing 1 000 ft above the aerodrome, the reported RVR/VIS falls below the applicable minimum, the approach may be continued to DA/H or MDA/H.

The approach may be continued below DA/H or MDA/H and the landing may be completed provided that the visual reference adequate for the type of approach operation and for the intended runway is established at the DA/H or MDA/H and is maintained.

The touchdown zone RVR shall always be controlling.

SUBPART C AIRCRAFT PERFORMANCE AND OPERATING LIMITATIONS

NCC.POL.100 Operating limitations - all aircraft

During any phase of operation, the loading, the mass and the centre of gravity (CG) position of the aircraft shall comply with any limitation specified in the AFM, or the operations manual, if more restrictive.

Placards, listings, instrument markings, or combinations thereof, containing those operating limitations prescribed by the AFM for visual presentation, shall be displayed in the aircraft.

NCC.POL.105 Mass and balance, loading

The operator shall establish the mass and the CG of any aircraft by actual weighing prior to initial entry into service. The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented. Aircraft shall be reweighed if the effect of modifications on the mass and balance is not accurately known.

The weighing shall be accomplished by the manufacturer of the aircraft or by an approved maintenance organisation.

The operator shall determine the mass of all operating items and crew members included in the aircraft dry operating mass by actual weighing, including any crew baggage, or by using standard masses. The influence of their position on the aircraft's CG shall be determined. When using standard masses the following mass values for crew members shall be used to determine the dry operating mass:

85 kg, including hand baggage, for flight crew/technical crew members; and

75 kg for cabin crew members.

The operator shall establish procedures to enable the pilot-in-command to determine the mass of the traffic load, including any ballast, by:

actual weighing;

determining the mass of the traffic load in accordance with standard passenger and baggage masses; or

calculating passenger mass on the basis of a statement by, or on behalf of, each passenger and adding to it a predetermined mass to account for hand baggage and clothing, when the number of passenger seats available on the aircraft is:

less than 10 for aeroplanes; or

less than six for helicopters.

When using standard masses the following mass values shall be used:

for passengers, those in Tables 1 and 2, where hand baggage and the mass of any infant carried by an adult on one passenger seat are included:

Table 1

Standard masses for passengers - aircraft with a total number of passenger seats of 20 or more.

Passenger	**and**		**and**
	I	**Fe**	**All**
A			
Chil			

Table 2 Standard masses for passengers - aircraft with a total number of passenger seats of 19 or less

Passenger			
Fe			
Chil			

(2) for baggage:

(i) for aeroplanes, when the total number of passenger seats available on the aeroplane is 20 or more, standard mass values for checked baggage in Table 3;

Table 3 Standard masses for baggage - aeroplanes with a total number of passenger seats of 20 or more

Type of	Baggage standard
Dom	
Within the European region	
Intercontine	
All	

(ii) for helicopters, when the total number of passenger seats available on the helicopters is 20 or more, the standard mass value for checked baggage of 13 kg.

For aircraft with 19 passenger seats or less, the actual mass of checked baggage shall be determined:

by weighing; or

by calculation on the basis of a statement by, or on behalf of, each passenger. Where this is impractical, a minimum standard mass of 13 kg shall be used.

The operator shall establish procedures to enable the pilot-in-command to determine the mass of the fuel load by using the actual density or, if not known, the density calculated in accordance with a method specified in the operations manual.

The pilot-in-command shall ensure that the loading of:

the aircraft is performed under the supervision of qualified personnel; and

traffic load is consistent with the data used for the calculation of the aircraft mass and balance.

The operator shall establish procedures to enable the pilot-in-command to comply with additional structural limits such as the floor strength limitations, the maximum load per running metre, the maximum mass per cargo compartment and the maximum seating limit.

The operator shall specify, in the operations manual, the principles and methods involved in the loading and in the mass and balance system that meet the requirements contained in (a) to (i). This system shall cover all types of intended operations.

NCC.POL.110 Mass and balance data and documentation

The operator shall establish mass and balance data and produce mass and balance documentation prior to each flight specifying the load and its distribution in such a way that the mass and balance limits of the aircraft are not exceeded. The mass and balance documentation shall contain the following information:

aircraft registration and type;

flight identification, number and date, as applicable;

name of the pilot-in-command;

name of the person who prepared the document;

dry operating mass and the corresponding CG of the aircraft;

mass of the fuel at take-off and the mass of trip fuel;

mass of consumables other than fuel, if applicable;

load components including passengers, baggage, freight and ballast;

take-off mass, landing mass and zero fuel mass;

applicable aircraft CG positions; and

the limiting mass and CG values.

Where mass and balance data and documentation are generated by a computerised mass and balance system, the operator shall verify the integrity of the output data.

When the loading of the aircraft is not supervised by the pilot-in-command, the person supervising the loading of the aircraft shall confirm by hand signature or equivalent that the load and its distribution are in accordance with the mass and balance documentation established by the pilot-in-command. The pilot-incommand shall indicate his/her acceptance by hand signature or equivalent.

The operator shall specify procedures for last minute changes to the load to ensure that:

any last minute change after the completion of the mass and balance documentation is entered in the flight planning documents containing the mass and balance documentation;

the maximum last minute change allowed in passenger numbers or hold load is specified; and

new mass and balance documentation is prepared if this maximum number is exceeded.

NCC.POL.111 Mass and balance data and documentation - alleviations

Notwithstanding NCC.POL.110 (a)(5), the CG position may not need to be on the mass and balance documentation, if the load distribution is in accordance with a pre-calculated balance table or if it can be shown that for the planned operations a correct balance can be ensured, whatever the real load is.

NCC.POL.115 Performance - general

The pilot-in-command shall only operate the aircraft if the performance is adequate to comply with the applicable rules of the air and any other restrictions applicable to the flight, the airspace or the aerodromes or operating sites used, taking into account the charting accuracy of any charts and maps used.

NCC.POL.120 Take-off mass limitations - aeroplanes

The operator shall ensure that:

the mass of the aeroplane at the start of take-off shall not exceed the mass limitations:

at take-off as required in NCC.POL.125;

en-route with one engine inoperative (OEI) as required in NCC.POL.130; and

at landing as required in NCC.POL.135; allowing for expected reductions in mass as the flight proceeds and for fuel jettisoning;

the mass at the start of take-off shall never exceed the maximum take-off mass specified in the AFM for the pressure altitude appropriate to the elevation of the aerodrome or operating site, and if used as a parameter to determine the maximum take-off mass, any other local atmospheric condition; and

the estimated mass for the expected time of landing at the aerodrome or operating site of intended landing and at any destination alternate aerodrome shall never exceed the maximum landing mass specified in the AFM for the pressure altitude appropriate to the elevation of those aerodromes or operating sites, and if used as a parameter to determine the maximum landing mass, any other local atmospheric condition.

NCC.POL.125 Take-off - aeroplanes

When determining the maximum take-off mass, the pilot-in-command shall take the following into account:

the calculated take-off distance shall not exceed the take-off distance available with a clearway distance not exceeding half of the take-off run available;

the calculated take-off run shall not exceed the take-off run available;

a single value of V1 shall be used for the rejected and continued take-off, where a V1 is specified in the AFM; and

on a wet or contaminated runway, the take-off mass shall not exceed that permitted for a take-off on a dry runway under the same conditions.

Except for an aeroplane equipped with turboprop engines and a maximum take-off mass at or below 5 700 kg, in the event of an engine failure during take-off, the pilot-in-command shall ensure that the aeroplane is able:

to discontinue the take-off and stop within the accelerate-stop distance available or the runway available; or

to continue the take-off and clear all obstacles along the flight path by an adequate margin until the aeroplane is in a position to comply with NCC.POL.130.

NCC.POL.130 En-route - one engine inoperative - aeroplanes

The pilot-in-command shall ensure that in the event of an engine becoming inoperative at any point along the route, a multi-engined aeroplane shall be able to continue the flight to an adequate aerodrome or operating site without flying below the minimum obstacle clearance altitude at any point.

NCC.POL.135 Landing - aeroplanes

The pilot-in-command shall ensure that at any aerodrome or operating site, after clearing all obstacles in the approach path by a safe margin, the aeroplane shall be able to land and stop, or a seaplane to come to a satisfactorily low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.

SUBPART D INSTRUMENTS, DATA AND EQUIPMENT

SECTION 1 Aeroplanes

NCC.IDE.A.100 Instruments and equipment - general

Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements if they are:

used by the flight crew to control the flight path;

used to comply with NCC.IDE.A.245; (3) used to comply with NCC.IDE.A.250; or

(4) installed in the aeroplane.

The following items, when required by this Subpart, do not need an equipment approval:

spare fuses;

independent portable lights;

an accurate time piece;

chart holder;

first-aid kits;

survival and signalling equipment;

sea anchor and equipment for mooring; and

child restraint device.

Instruments and equipment or accessories not required under this Part as well as any other equipment which is not required under this regulation, but is carried on a flight, shall comply with the following requirements:

the information provided by these instruments, equipment or accessories shall not be used by the flight crew members to comply with the applicable airworthiness requirements or NCC.IDE.A.245 and NCC.IDE.A.250;

the instruments and equipment shall not affect the airworthiness of the aeroplane, even in the case of failures or malfunction.

Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.

Those instruments that are used by a flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision which he/she normally assumes when looking forward along the flight path.

All required emergency equipment shall be easily accessible for immediate use.

NCC.IDE.A.105 Minimum equipment for flight

A flight shall not be commenced when any of the aeroplane's instruments, items of equipment, or functions, required for the intended flight are inoperative or missing, unless:

the aeroplane is operated in accordance with the operator's minimum equipment list (MEL);

the operator is approved by the Authority to operate the aeroplane within the constraints of the master minimum equipment list (MMEL) in accordance with ORO.MLR.105(j); or

the aeroplane is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

NCC.IDE.A.110 Spare electrical fuses

Aeroplanes shall be equipped with spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are allowed to be replaced in flight.

NCC.IDE.A.115 Operating lights

Aeroplanes operated at night shall be equipped with:

an anti-collision light system;

navigation/position lights;

a landing light;

lighting supplied from the aeroplane's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aeroplane;

lighting supplied from the aeroplane's electrical system to provide illumination in all passenger compartments;

an independent portable light for each crew member station; and

lights to conform with the International Regulations for Preventing Collisions at Sea if the aeroplane is operated as a seaplane.

NCC.IDE.A.120 Operations under VFR - flight and navigational instruments and associated equipment

Aeroplanes operated under VFR by day shall be equipped with a means of measuring and displaying the following:

magnetic-heading;

time in hours, minutes and seconds;

barometric altitude;

indicated airspeed;

slip; and

Mach number whenever speed limitations are expressed in terms of Mach number.

Aeroplanes operated under visual meteorological conditions (VMC) over water and out of sight of the land, or under VMC at night, or in conditions where the aeroplane cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a), equipped with:

a means of measuring and displaying the following:

turn and slip;

attitude;

vertical speed; and

stabilised heading;

a means of indicating when the supply of power to the gyroscopic instruments is not adequate; and

a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

Whenever two pilots are required for the operation, aeroplanes shall be equipped with an additional separate means of displaying the following:

barometric altitude;

indicated airspeed;

slip, or turn and slip, as applicable;

attitude, if applicable;

vertical speed, if applicable;

stabilised heading, if applicable; and

Mach number whenever speed limitations are expressed in terms of Mach number, if applicable.

NCC.IDE.A.125 Operations under IFR - flight and navigational instruments and associated equipment

Aeroplanes operated under IFR shall be equipped with:

a means of measuring and displaying the following:

magnetic heading;

time in hours, minutes and seconds;

barometric altitude;

indicated airspeed;

vertical speed;

turn and slip;

attitude;

stabilised heading;

outside air temperature; and

Mach number whenever speed limitations are expressed in terms of Mach number;

a means of indicating when the supply of power to the gyroscopic instruments is not adequate;

whenever two pilots are required for the operation, an additional separate means of displaying for the second pilot:

barometric altitude;

indicated airspeed;

vertical speed;

turn and slip;

attitude;

stabilised heading; and

Mach number whenever speed limitations are expressed in terms of Mach number, if applicable;

a means of preventing malfunction of the airspeed indicating systems required in (a)(4) and (c)(2) due to condensation or icing;

an alternate source of static pressure;

a chart holder in an easily readable position that can be illuminated for night operations;

a second independent means of measuring and displaying altitude; and

an emergency power supply, independent of the main electrical generating system, for the purpose of operating and illuminating an attitude indicating system for a minimum period of 30 minutes. The emergency power supply shall be automatically operative after the total failure of the main electrical generating system and clear indication shall be given on the instrument or on the instrument panel that the attitude indicator is being operated by emergency power.

NCC.IDE.A.130 Additional equipment for single-pilot operations under IFR

Aeroplanes operated under IFR with a single pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

NCC.IDE.A.135 Terrain awareness warning system (TAWS)

Turbine-powered aeroplanes with a maximum certified take-off mass (MCTOM) of more than 5 700 kg or a maximum operational passenger seating configuration (MOPSC) of more than nine shall be equipped with a TAWS that meets the requirements for:

class A equipment, as specified in an acceptable standard, in the case of aeroplanes for which the individual certificate of airworthiness (CofA) was first issued after 1 January 2011; or

class B equipment, as specified in an acceptable standard, in the case of aeroplanes for which the individual CofA was first issued on or before 1 January 2011.

NCC.IDE.A.140 Airborne collision avoidance system (ACAS)

Unless otherwise provided for by applicable airworthiness regulations, turbine-powered aeroplanes with an MCTOM of more than 5700 kg or an MOPSC of more than 19 shall be equipped with ACAS II.

NCC.IDE.A.145 Airborne weather detecting equipment

The following aeroplanes shall be equipped with airborne weather detecting equipment when operated at night or in IMC in areas where thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route:

pressurised aeroplanes;

non-pressurised aeroplanes with an MCTOM of more than 5 700 kg; and

non-pressurised aeroplanes with an MOPSC of more than nine.

NCC.IDE.A.150 Additional equipment for operations in icing conditions at night

Aeroplanes operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

The means to illuminate the formation of ice shall not cause glare or reflection that would handicap flight crew members in the performance of their duties.

NCC.IDE.A.155 Flight crew interphone system

Aeroplanes operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

NCC.IDE.A.160 Cockpit voice recorder

The following aeroplanes shall be equipped with a CVR:

aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2016; and

aeroplanes with an MCTOM of more than 2 250 kg:

(i) certified for operation with a minimum crew of at least two pilots; (ii) equipped

with turbojet engine(s) or more than one turboprop engine; and

(iii) for which a type certificate is first issued on or after 1 January 2016.

The CVR shall be capable of retaining data recorded during at least:

the preceding 25 hours for aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2022; or

the preceding 2 hours in all other cases.'.

The CVR shall record with reference to a timescale:

voice communications transmitted from or received in the flight crew compartment by radio;

flight crew members' voice communications using the interphone system and the public address system, if installed;

the aural environment of the flight crew compartment, including, without interruption, the audio signals received from each boom and mask microphone in use; and

voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

The CVR shall start automatically to record prior to the aeroplane moving under its own power and shall continue to record until the termination of the flight when the aeroplane is no longer capable of moving under its own power.

In addition to (d), depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

NCC.IDE.A.165 Flight data recorder

Aeroplanes with an MCTOM of more than 5 700 kg and first issued with an individual CofA on or after 1 January 2016 shall be equipped with an FDR that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available.

The FDR shall record the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power, configuration and operation and be capable of retaining data recorded during at least the preceding 25 hours.

Data shall be obtained from aeroplane sources that enable accurate correlation with information displayed to the flight crew.

The FDR shall start automatically to record the data prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is incapable of moving under its own power.

If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

NCC.IDE.A.170 Data link recording

Aeroplanes first issued with an individual CofA on or after 1 January 2016 that have the capability to operate data link communications and are required to be equipped with a CVR shall record on a recorder, where applicable:

data link communication messages related to ATS communications to and from the aeroplane, including messages applying to the following applications:

data link initiation;

controller-pilot communication;

addressed surveillance;

flight information;

as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

as far as is practicable, given the architecture of the system, aircraft operational control data; and

as far as is practicable, given the architecture of the system, graphics;

information that enables correlation to any associated records related to data link communications and stored separately from the aeroplane; and

information on the time and priority of data link communications messages, taking into account the system's architecture.

The recorder shall use a digital method of recording and storing data and information and a method for readily retrieving that data. The recording method shall allow the data to match the data recorded on the ground.

The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in NCC.IDE.A.160.

If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in NCC.IDE.A.160(d) and (e).

NCC.IDE.A.175 Flight data and cockpit voice combination recorder

Compliance with CVR requirements and FDR requirements may be achieved by:

one flight data and cockpit voice combination recorder if the aeroplane has to be equipped with a CVR or an FDR; or

two flight data and cockpit voice combination recorders if the aeroplane has to be equipped with a CVR and an FDR.

NCC.IDE.A.180 Seats, seat safety belts, restraint systems and child restraint devices

Aeroplanes shall be equipped with:

a seat or berth for each person on board who is aged 24 months or more;

a seat belt on each passenger seat and restraining belts for each berth;

a child restraint device (CRD) for each person on board younger than 24 months;

a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration:

on each flight crew seat and on any seat alongside a pilot's seat; and

on each observer's seat located in the flight crew compartment; and

a seat belt with upper torso restraint system on the seats for the minimum required cabin crew, in the case of aeroplanes first issued with an individual CofA after 31 December 1980.

A seat belt with upper torso restraint system shall have:

a single point release;

on the seats for the minimum required cabin crew members, two shoulder straps and a seat belt that may be used independently; and

on flight crew members seats and on any seat alongside a pilot's seat either of the following:

two shoulder straps and a seat belt that may be used independently; or

a diagonal shoulder strap and a seat belt that may be used independently for the following aeroplanes:

aeroplanes with an MCTOM of 5 700 kg or less and with an MOPSC of less than nine that are compliant with the emergency landing dynamic conditions defined in the applicable certification specification;

aeroplanes with an MCTOM of 5 700 kg or less and with an MOPSC of less than nine that are not compliant with the emergency landing dynamic conditions defined in the applicable certification specification and having an individual CofA first issued before 25 August 2016.

NCC.IDE.A.185 Fasten seat belt and no smoking signs

Aeroplanes in which not all passenger seats are visible from the flight crew seat(s) shall be equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

NCC.IDE.A.190 First-aid kit

(a) Aeroplanes shall be equipped with first-aid kits in accordance with Table 1.

Table 1

Number of first-aid kits required

Number of passenger seats installed	Number of first-aid kits required
-	
101 -	
201 -	
301 -	
401 -	
or	

First-aid kits shall

readily accessible for use; and

kept up-to-date.

NCC.IDE.A.195 Supplemental oxygen - pressurised aeroplanes

Pressurised aeroplanes operated at flight altitudes for which the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

Pressurised aeroplanes operated above flight altitudes at which the pressure altitude in the passenger compartments is above 10 000 ft shall carry enough breathing oxygen to supply:

all crew members and:

100 % of the passengers for any period when the cabin pressure altitude exceeds 15 000 ft, but in no case less than 10 minutes' supply;

at least 30 % of the passengers, for any period when, in the event of loss of pressurisation and taking into account the circumstances of the flight, the pressure altitude in the passenger compartment will be between 14 000 ft and 15 000 ft; and

at least 10 % of the passengers for any period in excess of 30 minutes when the pressure altitude in the passenger compartment will be between 10 000 ft and 14 000 ft;

all the occupants of the passenger compartment for no less than 10 minutes, in the case of aeroplanes operated at pressure altitudes above 25 000 ft, or operated below that altitude, but under conditions that will not allow them to descend safely to a pressure altitude of 13 000 ft within 4 minutes.

Pressurised aeroplanes operated at flight altitudes above 25 000 ft shall, in addition, be equipped with:

a device to provide a warning indication to the flight crew of any loss of pressurisation; and

quick donning masks for flight crew members.

NCC.IDE.A.200 Supplemental oxygen - non-pressurised aeroplanes

Non-pressurised aeroplanes operated at flight altitudes when the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

Non-pressurised aeroplanes operated above flight altitudes at which the pressure altitude in the passenger compartments is above 10 000 ft shall carry enough breathing oxygen to supply:

all crew members and at least 10 % of the passengers for any period in excess of 30 minutes when the pressure altitude in the passenger compartment will be between 10 000 ft and 13 000 ft; and

all crew members and passengers for any period that the pressure altitude in the passenger compartments will be above 13 000 ft.

NCC.IDE.A.205 Hand fire extinguishers

Aeroplanes shall be equipped with at least one hand fire extinguisher:

in the flight crew compartment; and

in each passenger compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

NCC.IDE.A.206 Crash axe and crowbar

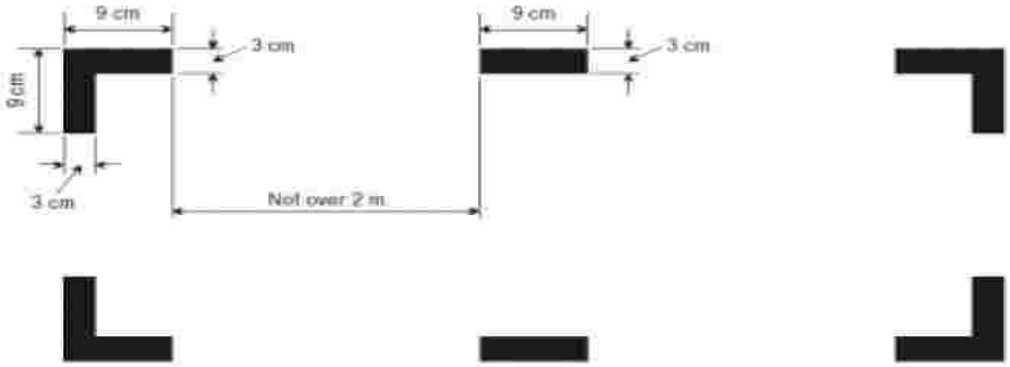
Aeroplanes with an MCTOM of more than 5 700 kg or with an MOPSC of more than nine shall be equipped with at least one crash axe or crowbar located in the flight crew compartment.

In the case of aeroplanes with an MOPSC of more than 200, an additional crash axe or crowbar shall be installed in or near the rearmost galley area.

Crash axes and crowbars located in the passenger compartment shall not be visible to passengers.

NCC.IDE.A.210 Marking of break-in points

If areas of the aeroplane's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.



NCC.IDE.A.215 Emergency locator transmitter (ELT)

Aeroplanes shall be equipped with:

an ELT of any type or an aircraft localisation means meeting the requirement of Part CAT, CAT.GEN.MPA.210, to this Regulation, when first issued with an individual CofA on or before 1 July 2008;

an automatic ELT or an aircraft localisation means meeting the requirement of Part CAT, CAT.GEN.MPA.210, to this Regulation, when first issued with an individual CofA after 1 July 2008.

ELTs of any type shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

NCC.IDE.A.220 Flight over water

The following aeroplanes shall be equipped with a life-jacket for each person on board or equivalent individual floatation device for each person on board younger than 24 months, stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided:

landplanes operated over water at a distance of more than 50 NM from land or taking off or landing at

an aerodrome or operating site where, in the opinion of the pilot-in-command, the take-off or approach path is so disposed over water that there would be a likelihood of a ditching; and

seaplanes operated over water.

Each life-jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

Seaplanes operated over water shall be equipped with:

a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the aeroplane on water, appropriate to its size, weight and handling characteristics; and

equipment for making the sound signals as prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

The pilot-in-command of an aeroplane operated at a distance away from land where an emergency landing is possible greater than that corresponding to 30 minutes at normal cruising speed or 50 NM, whichever is the lesser, shall determine the risks to survival of the occupants of the aeroplane in the event of a ditching, based on which he/she shall determine the carriage of:

equipment for making the distress signals;

life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency; and

life-saving equipment to provide the means of sustaining life, as appropriate to the flight to be undertaken.

NCC.IDE.A.230 Survival equipment

Aeroplanes operated over areas in which search and rescue would be especially difficult shall be equipped with:

signalling equipment to make the distress signals;

at least one survival ELT(S); and

additional survival equipment for the route to be flown taking account of the number of persons on board.

The additional survival equipment specified in (a)(3) does not need to be carried when the aeroplane:

remains within a distance from an area where search and rescue is not especially difficult corresponding to:

120 minutes at one-engine-inoperative (OEI) cruising speed for aeroplanes capable of continuing the flight to an aerodrome with the critical engine(s) becoming inoperative at any point along the route or planned diversion routes; or

30 minutes at cruising speed for all other aeroplanes;or

remains within a distance no greater than that corresponding to 90 minutes at cruising speed from an area suitable for making an emergency landing, for aeroplanes certified in accordance with the applicable airworthiness standard.

NCC.IDE.A.240 Headset

Aeroplanes shall be equipped with a headset with a boom microphone or equivalent for each flight crew member at their assigned station in the flight crew compartment.

Aeroplanes operated under IFR or at night shall be equipped with a transmit button on the manual pitch and roll control for each required flight crew member.

NCC.IDE.A.245 Radio communication equipment

Aeroplanes operated under IFR or at night, or when required by the applicable airspace requirements, shall be equipped with radio communication equipment that, under normal radio propagating conditions, shall be capable of:

conducting two-way communication for aerodrome control purposes;
receiving meteorological information at any time during flight;

conducting two-way communication at any time during flight with those aeronautical stations and on those frequencies prescribed by the appropriate authority; and

providing for communication on the aeronautical emergency frequency 121,5 MHz.

When more than one communication equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

NCC.IDE.A.250 Navigation equipment

Aeroplanes shall be equipped with navigation equipment that will enable them to proceed in accordance with:

the ATS flight plan, if applicable; and

the applicable airspace requirements.

Aeroplanes shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with (a), or an appropriate contingency action, to be completed safely.

Aeroplanes operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed. This equipment shall be capable of providing such guidance for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodromes.

For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

Aeroplanes shall be equipped with surveillance equipment in accordance with the applicable airspace requirements

NCC.IDE.A.255 Transponder

Aeroplanes shall be equipped with a pressure altitude reporting secondary surveillance radar (SSR) transponder and any other SSR transponder capability required for the route being flown.

NCC.IDE.A.260 Management of aeronautical databases

Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

Notwithstanding any other occurrence reporting requirements as defined in LYCARs-Part-19, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

NCC.IDE.A.265 Radiation Indicator

All aeroplanes intended to be operated above 15 000 m (49 000 ft) shall carry equipment to measure and indicate continuously the dose rate of total cosmic radiation being received (i.e. the total of ionizing and neutron radiation of galactic and solar origin) and the cumulative dose on each flight. The display unit of the equipment shall be readily visible to a flight crew member.

SECTION 2 Helicopters

NCC.IDE.H.100 Instruments and equipment - general

Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements if they are:

used by the flight crew to control the flight path;

used to comply with NCC.IDE.H.245; (3) used to comply with NCC.IDE.H.250; or

(4) installed in the helicopter.

The following items, when required by this Subpart, do not need an equipment approval:

independent portable light;

an accurate time piece;

chart holder;

first-aid kit;

survival and signalling equipment;

sea anchor and equipment for mooring; and

child restraint device.

(c) Instruments and equipment or accessories not required under this Part as well as any other equipment which is not required under this regulation, but carried on a flight, shall comply with the following requirements:

the information provided by these instruments, equipment or accessories shall not be used by the flight crew members to comply with the applicable airworthiness requirements or NCC.IDE.H.245 and NCC.IDE.H.250;

the instruments and equipment shall not affect the airworthiness of the helicopter, even in the case of failures or malfunction.

Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.

Those instruments that are used by a flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision which he/she normally assumes when looking forward along the flight path.

All required emergency equipment shall be easily accessible for immediate use.

NCC.IDE.H.105 Minimum equipment for flight

A flight shall not be commenced when any of the helicopter's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

the helicopter is operated in accordance with the operator's minimum equipment list (MEL);

the operator is approved by the Authority to operate the helicopter within the constraints of the master minimum equipment list (MMEL) in accordance with ORO.MLR.105(j) ; or

the helicopter is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

NCC.IDE.H.115 Operating lights

Helicopters operated at night shall be equipped with:

an anti-collision light system;

navigation/position lights;

a landing light;

lighting supplied from the helicopter's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the helicopter;

lighting supplied from the helicopter's electrical system to provide illumination in all passenger compartments;

an independent portable light for each crew member station; and

lights to conform with the International Regulations for Preventing Collisions at Sea if the helicopter is amphibious.

NCC.IDE.H.120 Operations under VFR - flight and navigational instruments and associated equipment

Helicopters operated under VFR by day shall be equipped with a means of measuring and displaying the following:

(1) magnetic heading;

(2) time in hours, minutes and seconds;

(3) barometric altitude;

(4) indicated airspeed; and

(5) slip.

Helicopters operated under VMC over water and out of sight of the land, or under VMC at night, or when the visibility is less than 1 500 m, or in conditions where the helicopter cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be equipped, in addition to (a), with:

a means of measuring and displaying the following:

attitude;

vertical speed; and

stabilised heading;

a means of indicating when the supply of power to the gyroscopic instruments is not adequate; and

a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

Whenever two pilots are required for the operation, helicopters shall be equipped with an additional separate means of displaying the following:

barometric altitude;

indicated airspeed;

slip;

attitude, if applicable;

vertical speed, if applicable; and

stabilised heading, if applicable.

NCC.IDE.H.125 Operations under IFR - flight and navigational instruments and associated equipment

Helicopters operated under IFR shall be equipped with:

a means of measuring and displaying the following:

magnetic heading;

time in hours, minutes and seconds;

barometric altitude;

indicated airspeed;

vertical speed;

slip;

attitude;

stabilised heading; and

outside air temperature;

a means of indicating when the supply of power to the gyroscopic instruments is not adequate;

whenever two pilots are required for the operation, an additional separate means of displaying the following:

barometric altitude;

indicated airspeed;

vertical speed;

slip;

attitude; and

stabilised heading;

a means of preventing malfunction of the airspeed indicating systems required in (a)(4) and (c)(2) due to condensation or icing;

an alternate source of static pressure;

a chart holder in an easily readable position that can be illuminated for night operations; and

an additional means of measuring and displaying attitude as a standby instrument.

NCC.IDE.H.130 Additional equipment for single-pilot operations under IFR

Helicopters operated under IFR with a single pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

NCC.IDE.H.145 Airborne weather detecting equipment

Helicopters with an MOPSC of more than nine and operated under IFR or at night shall be equipped with airborne weather detecting equipment when current weather reports indicate that thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route to be flown.

NCC.IDE.H.150 Additional equipment for operations in icing conditions at night

Helicopters operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

The means to illuminate the formation of ice shall not cause glare or reflection that would handicap flight crew members in the performance of their duties.

NCC.IDE.H.155 Flight crew interphone system

Helicopters operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

NCC.IDE.H.160 Cockpit voice recorder

Helicopters with an MCTOM of more than 7 000 kg and first issued with an individual CofA on or after 1 January 2016 shall be equipped with a CVR.

The CVR shall be capable of retaining data recorded during at least the preceding 2 hours.

The CVR shall record with reference to a timescale:

voice communications transmitted from or received in the flight crew compartment by radio;

flight crew members' voice communications using the interphone system and the public address system, if installed;

the aural environment of the cockpit, including, without interruption, the audio signals received from each crew microphone; and

voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

The CVR shall start automatically to record prior to the helicopter moving under its own power and shall continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power.

In addition to (d), depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

NCC.IDE.H.165 Flight data recorder

Helicopters with an MCTOM of more than 3 175 kg and first issued with an individual CofA on or after 1 January 2016 shall be equipped with an FDR that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available.

The FDR shall record the parameters required to determine accurately the helicopter flight path, speed, attitude, engine power, configuration and operation and be capable of retaining data recorded during at least the preceding 10 hours.

Data shall be obtained from helicopter sources that enable accurate correlation with information displayed to the flight crew.

The FDR shall start automatically to record the data prior to the helicopter being capable of moving under its own power and shall stop automatically after the helicopter is incapable of moving under its own power.

If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter..

NCC.IDE.H.170 Data link recording

Helicopters first issued with an individual CofA on or after 1 January 2016 that have the capability to operate data link communications and are required to be equipped with a CVR shall record on a recorder, where applicable:

data link communication messages related to ATS communications to and from the helicopter, including messages applying to the following applications:

data link initiation;

controller-pilot communication;

addressed surveillance;

flight information;

as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

as far as is practicable, given the architecture of the system, aircraft operational control data; and

as far as is practicable, given the architecture of the system, graphics;

information that enables correlation to any associated records related to data link communications and stored separately from the helicopter; and

information on the time and priority of data link communications messages, taking into account the system's architecture.

The recorder shall use a digital method of recording and storing data and information and a method for readily retrieving that data. The recording method shall allow the data to match the data recorded on the ground.

The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in NCC.IDE.H.160.

If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in NCC.IDE.H.160(d) and (e).

NCC.IDE.H.175 Flight data and cockpit voice combination recorder

Compliance with CVR and FDR requirements may be achieved by one flight data and cockpit voice combination recorder.

NCC.IDE.H.180 Seats, seat safety belts, restraint systems and child restraint devices

Helicopters shall be equipped with:

a seat or berth for each person on board who is aged 24 months or more;

a seat belt on each passenger seat and restraining belts for each berth;

for helicopters first issued with an individual CofA after 31 December 2012, a seat belt with an upper torso restraint system for each passenger who is aged 24 months or more;

a child restraint device (CRD) for each person on board younger than 24 months;

a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration on each flight crew seat; and

a seat belt with upper torso restraint system on the seats for the minimum required cabin crew, in the case of helicopters first issued with an individual CofA after 31 December 1980.

A seat belt with upper torso restraint system shall:

have a single point release; and

on flight crew seats, on any seat alongside a pilot's seat and on the seats for the minimum required cabin crew, include two shoulder straps and a seat belt that may be used independently.

NCC.IDE.H.185 Fasten seat belt and no smoking signs

Helicopters in which not all passenger seats are visible from the flight crew seat(s) shall be equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

NCC.IDE.H.190 First-aid kit

Helicopters shall be equipped with at least one first-aid kit.

The first-aid kit(s) shall be:

readily accessible for use; and

kept up-to-date.

NCC.IDE.H.200 Supplemental oxygen - non-pressurised helicopters

Non-pressurised helicopters operated at flight altitudes when the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

Non-pressurised helicopters operated above flight altitudes at which the pressure altitude in the passenger compartments is above 10 000 ft shall carry enough breathing oxygen to supply:

all crew members and at least 10 % of the passengers for any period in excess of 30 minutes when the pressure altitude in the passenger compartment will be between 10 000 ft and 13 000 ft; and

all crew members and passengers for any period that the pressure altitude in the passenger compartment will be above 13 000 ft.

NCC.IDE.H.205 Hand fire extinguishers

Helicopters shall be equipped with at least one hand fire extinguisher:

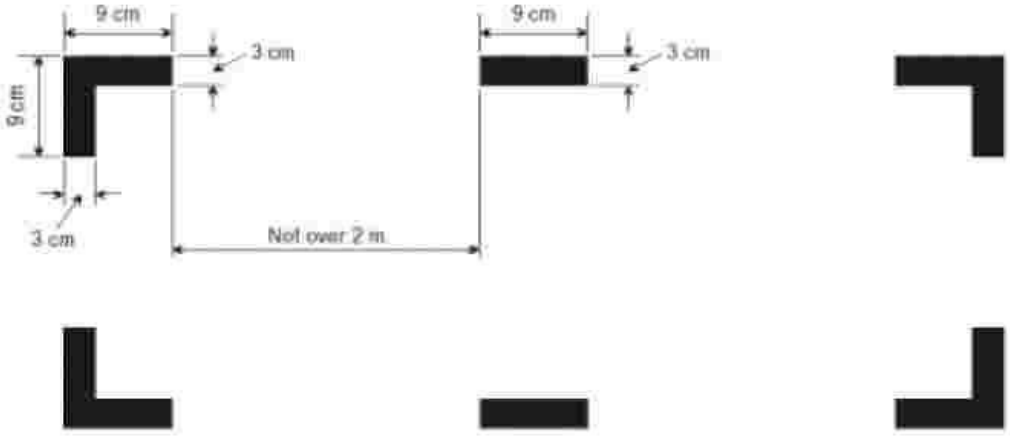
in the flight crew compartment; and

in each passenger compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

NCC.IDE.H.210 Marking of break-in points

If areas of the helicopter's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.



NCC.IDE.H.215 Emergency locator transmitter (ELT)

Helicopters shall be equipped with at least one automatic ELT.

An ELT of any type shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

NCC.IDE.H.225 Life-jackets

Helicopters shall be equipped with a life-jacket for each person on board or equivalent individual floatation device for each person on board younger than 24 months, which shall be worn or stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided, when:

operated on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, where in the case of the critical engine failure, the helicopter is able to sustain level flight;

operated on a flight over water beyond autorotational distance from the land, where in the case of critical engine failure, the helicopter is not able to sustain level flight; or

taking off or landing at an aerodrome or operating site where the take-off or approach path is over water.

Each life-jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

NCC.IDE.H.226 Crew survival suits

Each crew member shall wear a survival suit when so determined by the pilot-in-command based on a risk assessment taking into account the following conditions:

NCC.IDE.H.227 Life-rafts, survival ELTs and survival equipment on extended overwater flights

Helicopters operated:

on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, where in the case of the critical engine failure, the helicopter is able to sustain level flight; or

on a flight over water at a distance corresponding to more than 3 minutes flying time at normal cruising speed, where in the case of the critical engine failure, the helicopter is not able to sustain level flight, and if so determined by the pilot-in-command by means of a risk assessment; shall be equipped with:

in the case of a helicopter carrying less than 12 persons, at least one life-raft with a rated capacity of not less than the maximum number of persons on board, stowed so as to facilitate their ready use in emergency;

in the case of a helicopter carrying more than 11 persons, at least two life-rafts, stowed so as to facilitate their ready use in an emergency, sufficient together to accommodate all persons capable of being carried on board and, if one is lost the remaining life-raft(s) having the overload capacity sufficient to accommodate all persons on the helicopter;

at least one survival ELT (ELT(S)) for each required life-raft; and

life-saving equipment, including means of sustaining life, as appropriate to the flight to be undertaken.

NCC.IDE.H.230 Survival equipment

Helicopters operated over areas in which search and rescue would be especially difficult shall be equipped with:

signalling equipment to make distress signals;

at least one survival ELT (ELT(S)); and

additional survival equipment for the route to be flown taking account of the number of persons on board.

NCC.IDE.H.232 Helicopters certified for operating on water - miscellaneous equipment

Helicopters certified for operating on water shall be equipped with:

a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the helicopter on water, appropriate to its size, weight and handling characteristics; and

equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

NCC.IDE.H.235 All helicopters on flights over water - ditching

Helicopters shall be designed for landing on water or certified for ditching in accordance with the relevant certification specifications or fitted with emergency flotation equipment when operated on a flight over water in a hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed.

NCC.IDE.H.240 Headset

Whenever a radio communication and/or radio navigation system is required, helicopters shall be equipped with a headset with boom microphone or equivalent and a transmit button on the flight controls for each required pilot and/or crew member at his/her assigned station.

NCC.IDE.H.245 Radio communication equipment

Helicopters operated under IFR or at night, or when required by the applicable airspace requirements, shall be equipped with radio communication equipment that, under normal radio propagating conditions, shall be capable of:

conducting two-way communication for aerodrome control purposes;

receiving meteorological information;

conducting two-way communication at any time during flight with those aeronautical stations and on those frequencies prescribed by the appropriate authority; and

providing for communication on the aeronautical emergency frequency 121,5 MHz.

When more than one communications equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

When a radio communication system is required, and in addition to the flight crew interphone system required in NCC.IDE.H.155, helicopters shall be equipped with a transmit button on the flight controls for each required pilot and crew member at his/her assigned station.

NCC.IDE.H.250 Navigation equipment

Helicopters shall be equipped with navigation equipment that will enable them to proceed in accordance with:

the ATS flight plan, if applicable; and

the applicable airspace requirements.

Helicopters shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance

with (a), or an appropriate contingency action, to be completed safely.

Helicopters operated on flights in which it is intended to land in IMC shall be equipped with navigation equipment capable of providing guidance to a point from which a visual landing can be performed. This equipment shall be capable of providing such guidance for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodromes.

When PBN is required the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

Helicopters shall be equipped with surveillance equipment in accordance with the applicable airspace requirements.

NCC.IDE.H.255 Transponder

Helicopters shall be equipped with a pressure altitude reporting secondary surveillance radar (SSR) transponder and any other SSR transponder capability required for the route being flown

NCC.IDE.H.260 Management of aeronautical databases

Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

Notwithstanding any other occurrence reporting requirements as defined in LYCARs-Part-19 the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used."

PART NCO NON-COMMERCIAL AIR OPERATIONS WITH OTHER-THAN-COMPLEX MOTOR-POWERED AIRCRAFT

SUBPART A GENERAL REQUIREMENTS

H. Libyan Civil Aviation Regulation 5 of 2020 on Air operations is amended by the replacement of Part Non-Commercial Air Operations with Other-Than Complex Motor-Powered Aircraft - Part NCO as follows:

"PART NON-COMMERCIAL AIR OPERATIONS WITH OTHER-THAN COMPLEX MOTORPOWERED AIRCRAFT [PART-NCO]

SUBPART A GENERAL REQUIREMENTS

NCO.GEN.100 Competent Authority

The competent authority shall be the authority designated by the State in which the operator has its principal place of business, is established or is residing.

NCO.GEN.101 Means of compliance

Alternative means of compliance to those issued by the Authority may be used by an operator to establish compliance with the Civil Aviation Law and its Regulations if approved by the Authority.

NCO.GEN.103 Introductory flights

Introductory flights referred to in Article 6.4a(c) of this Regulation when conducted in accordance with this Part, shall:

a) start and end at the same aerodrome or operating site;

b) be operated under VFR by day;

c) be overseen by a nominated person responsible for their safety; and

d) comply with any other conditions stipulated by the Authority.

NCO.GEN.104 Use of aircraft included in an AOC by an NCO operator

An NCO operator may use other than complex motor-powered aircraft listed on an operator's AOC to conduct non-commercial operations in accordance with this Annex.

The NCO operator using the aircraft in accordance with point (a) shall establish a procedure:

clearly describing how operational control of the aircraft is transferred between the AOC holder and the NCO operator, as referred to in point ORO.GEN.310 of Part-ORO;

describing the handover procedure of the aircraft upon its return to the AOC holder.

That procedure shall be included in a contract between the AOC holder and the NCO operator.

The NCO operator shall ensure that the procedure is communicated to the relevant personnel.

The continuing airworthiness of the aircraft used pursuant to point (a) shall be managed by organisation responsible for the continuing airworthiness for the aircraft included in the AOC, in accordance with LYCARs- continuing airworthiness.

The NCO operator using the aircraft in accordance with point (a) shall ensure the following:

that every flight conducted under its operational control is recorded in the aircraft technical log system;

that no changes to the aircraft systems or configuration are made;

that any defect or technical malfunction occurring while the aircraft is under its operational control is reported to the organisation referred to in point (c) immediately after the flight;

that the AOC holder receives a copy of any occurrence report related to the flights performed with the aircraft, completed in accordance with LYCAR-Part -19.

NCO.GEN.105 Pilot-in-command responsibilities and authority

The pilot-in-command shall be responsible for:

the safety of the aircraft and of all crew members, passengers and cargo on board during aircraft operations;

the initiation, continuation, termination or diversion of a flight in the interest of safety;

ensuring that all operational procedures and checklists are complied with.

only commencing a flight if he/she is satisfied that all operational limitations are complied with, as follows :

the aircraft is airworthy;

the aircraft is duly registered;

instruments and equipment required for the execution of that flight are installed in the aircraft and are operative, unless operation with inoperative equipment is permitted by the minimum equipment list (MEL) or equivalent document, if applicable, as provided for in NCO.IDE.A.105, or NCO.IDE.H.105;

the mass of the aircraft and, the centre of gravity location are such that the flight can be conducted within limits prescribed in the airworthiness documentation;

all equipment, baggage and cargo are properly loaded and secured and an emergency evacuation remains possible; and

the aircraft operating limitations as specified in the aircraft flight manual (AFM) will not be exceeded at any time during the flight;

any navigational database required for PBN is suitable and current;

not commencing a flight if he/she is incapacitated from performing duties by any cause such as injury, sickness, fatigue or the effects of any psychoactive substance;

not continuing a flight beyond the nearest weather-permissible aerodrome or operating site when his/ her capacity to perform duties is significantly reduced from causes such as fatigue, sickness or lack of oxygen;

deciding on acceptance of the aircraft with unserviceabilities in accordance with the configuration deviation list (CDL) or minimum equipment list (MEL), as applicable; and

recording utilisation data and all known or suspected defects in the aircraft at the termination of the flight, or series of flights, in the aircraft technical log or journey log for the aircraft.

The pilot-in-command shall ensure that during critical phases of flight or whenever deemed necessary in the interest of safety, all crew members are seated at their assigned stations and do not perform any activities other than those required for the safe operation of the aircraft.

The pilot-in-command shall have the authority to refuse carriage of or disembark any person, baggage or cargo that may represent a potential hazard to the safety of the aircraft or its occupants.

The pilot-in-command shall, as soon as possible, report to the appropriate air traffic services (ATS) unit any hazardous weather or flight conditions encountered that are likely to affect the safety of other aircraft.

The pilot-in-command shall, in an emergency situation that requires immediate decision and action, take any action he/she considers necessary in the interest of safety. In such cases he/she may deviate from rules, operational procedures and methods. In the event of any such deviation the pilot-in-command is responsible for notifying the appropriate local authority without delay.

During flight, the pilot-in-command shall:

keep his/her safety belt fastened while at his/her station; and

remain at the controls of the aircraft at all times except if another pilot is taking the controls.

The pilot-in-command shall submit a report of an act of unlawful interference without delay to the Authority and shall inform the designated local authority.

The pilot-in-command shall notify the nearest appropriate authority by the quickest available means of any accident involving the aircraft that results in serious injury or death of any person or substantial damage to the aircraft or property.

NCO.GEN.110 Compliance with laws, regulations and procedure

The pilot-in-command shall comply with the laws, regulations and procedures of those States where operations are conducted.

The pilot-in-command shall be familiar with the laws, regulations and procedures, pertinent to the performance of his/her duties, prescribed for the areas to be traversed, the aerodromes or operating sites to be used and the related air navigation facilities as relating thereto.

NCO.GEN.115 Taxiing of aeroplanes

An aeroplane shall only be taxied on the movement area of an aerodrome if the person at the controls:

is an appropriately qualified pilot; or

has been designated by the operator and:

is trained to taxi the aeroplane;

is trained to use the radio telephone, if radio communications are required;

has received instruction in respect of aerodrome layout, routes, signs, marking, lights, air traffic control (ATC) signals and instructions, phraseology and procedures; and

is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.

NCO.GEN.120 Rotor engagement - helicopters

A helicopter rotor shall only be turned under power for the purpose of flight with a qualified pilot at the controls.

NCO.GEN.125 Portable electronic devices

The pilot-in-command shall not permit any person to use a portable electronic device (PED) on board an aircraft, including an electronic flight bag (EFB), that could adversely affect the performance of the aircraft's systems and equipment.

NCO.GEN.130 Information on emergency and survival equipment carried

Except for aircraft taking-off and landing at the same aerodrome/operating site, the operator shall, at all times, have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board.

NCO.GEN.135 Documents, manuals and information to be carried

The following documents, manuals and information shall be carried on each flight as originals or copies unless otherwise specified:

the AFM, or equivalent document(s);

the original certificate of registration;

the original certificate of airworthiness (CofA);

the noise certificate, if applicable;

the list of specific approvals, if applicable;

the aircraft radio licence, if applicable;

the third party liability insurance certificate(s);

the journey log, or equivalent, for the aircraft

details of the filed ATS flight plan, if applicable;

current and suitable aeronautical charts for the route area of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

procedures and visual signals information for use by intercepting and intercepted aircraft;

the MEL or CDL, if applicable; and

any other documentation that may be pertinent to the flight or is required by the States concerned with the flight.

Notwithstanding (a), on flights:

intending to take off and land at the same aerodrome/operating site; or

remaining within a distance or area determined by the Authority the documents and information in (a)(2) to (a)(8) may be retained at the aerodrome or operating site.

The pilot-in-command shall make available within a reasonable time of being requested to do so by the Authority, the documentation required to be carried on board.

NCO.GEN.140 Transport of dangerous goods

The transport of dangerous goods by air shall be conducted in accordance with Annex 18 to the Chicago Convention as last amended and amplified by the Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Doc 9284-AN/905), including its supplements and any other addenda or corrigenda.

Dangerous goods shall only be transported by the operator approved in accordance with Part-SPA, Subpart G, to this Regulation except when:

they are not subject to the Technical Instructions in accordance with Part 1 of those Instructions; or

they are carried by passengers or the pilot-in-command, or are in baggage, in accordance with Part 8 of the Technical Instructions;

they are carried by operators of ELA2 aircraft.

The pilot-in-command shall take all reasonable measures to prevent dangerous goods from being carried on board inadvertently.

The pilot-in-command shall, in accordance with the Technical Instructions, report without delay to the Authority and the appropriate authority of the State of occurrence in the event of any dangerous goods accidents or incidents.

The pilot-in-command shall ensure that passengers are provided with information about dangerous goods in accordance with the Technical Instructions.

Reasonable quantities of articles and substances that would otherwise be classified as dangerous goods and that are used to facilitate flight safety, where carriage aboard the aircraft is advisable to ensure their timely availability for operational purposes, shall be considered authorised under paragraph 1;2.2.1(a) of the Technical Instructions. This is regardless of whether or not such articles and substances are required to be carried or intended to be used in connection with a particular flight.

The packing and loading on board of the above-mentioned articles and substances shall be performed, under the responsibility of the pilot in command, in such a way as to minimise the risks posed to crew members, passengers, cargo or the aircraft during aircraft operations.

NCO.GEN.145 Immediate reaction to a safety problem

The operator shall implement:

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

any relevant mandatory safety information issued by the Authority, including airworthiness directives.

NCO.GEN.150 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.

NCO.GEN.155 Minimum equipment list

An MEL may be established taking into account the following:

the document shall provide for the operation of the aircraft, under specified conditions, with particular instruments, items of equipment or functions inoperative at the commencement of the flight;

the document shall be prepared for each individual aircraft, taking account of the operator's relevant operational and maintenance conditions; and

the MEL shall be based on the relevant Master Minimum Equipment List (MMEL), as defined in the applicable operational suitability data, and shall not be less restrictive than the MMEL.

The MEL and any amendment thereto shall be notified to the Authority.

SUBPART B OPERATIONAL PROCEDURES

NCO.OP.100 Use of aerodromes and operating sites

The pilot-in-command shall only use aerodromes and operating sites that are adequate for the type of aircraft and operation concerned.

NCO.OP.105 Specification of isolated aerodromes - aeroplanes

For the selection of alternate aerodromes and the fuel policy, the pilot-in-command shall consider an aerodrome as an isolated aerodrome if the flying time to the nearest adequate destination alternate aerodrome is more than:

for aeroplanes with reciprocating engines, 60 minutes; or

for aeroplanes with turbine engines, 90 minutes.

NCO.OP.110 Aerodrome operating minima - aeroplanes and helicopters

For instrument flight rules (IFR) flights, the pilot-in-command shall select and use aerodrome operating minima for each departure, destination and alternate aerodrome. Such minima shall:

not be lower than those established by the State in which the aerodrome is located, except when specifically approved by that State; and

when undertaking low visibility operations, be approved by the Authority in accordance with Part-SPA, Subpart E to this Regulation.

When selecting the aerodrome operating minima, the pilot-in-command shall take the following into account:

the type, performance and handling characteristics of the aircraft;

his/her competence and experience;

the dimensions and characteristics of the runways and final approach and take-off areas (FATOs) that may be selected for use;

the adequacy and performance of the available visual and non-visual ground aids;

the equipment available on the aircraft for the purpose of navigation and/or control of the flight path, during the take-off, the approach, the flare, the landing, the rollout and the missed approach;

the obstacles in the approach, the missed approach and the climb-out areas necessary for the execution of contingency procedures;

the obstacle clearance altitude/height for the instrument approach procedures;

the means to determine and report meteorological conditions; and

the flight technique to be used during the final approach.

The minima for a specific type of approach and landing procedure shall only be used if:

the ground equipment required for the intended procedure is operative;

the aircraft systems required for the type of approach are operative;

the required aircraft performance criteria are met; and

the pilot is qualified appropriately.

NCO.OP.111 Aerodrome operating minima - NPA, APV, CAT I operations

The decision height (DH) to be used for a non-precision approach (NPA) flown with the continuous descent final approach (CDFA) technique, approach procedure with vertical guidance (APV) or category I (CAT I) operation shall not be lower than the highest of:

the minimum height to which the approach aid can be used without the required visual reference;

the obstacle clearance height (OCH) for the category of aircraft;

the published approach procedure DH where applicable;(4) the system minimum specified in Table 1; or

(5) the minimum DH specified in the AFM or equivalent document, if stated.

The minimum descent height (MDH) for an NPA operation flown without the CDFA technique shall not be lower than the highest of:

the OCH for the category of aircraft;

the system minimum specified in Table 1; or

the minimum MDH specified in the AFM, if stated.

Table 1

System

Fa	**Lowest DH/MDH**
Instrument landing system (ILS)	
G navig sat sy GNSS)/Satellite-augmentat sy S La preci ve guidance approach	
GNSS (Lateral Navigation (LNAV))	
GNSS/Baro-vertical navigation (VNAV) (LNAV/VNAV)	
Loca wit dist measu equip |	
Surveillance radar approach (SRA) (terminating at ½ NM)	
SRA (terminating at 1 NM)	

SRA (terminating at 2 NM or more)	
VHF omnidirectional radio range (VOR)	
VOR/	
Non-directional beacon (NDB)	
NDB/	
VHF direction finder (VDF)	

NCO.OP.112 Aerodrome operating minima - circling operations with aeroplanes

The MDH for a circling operation with aeroplanes shall not be lower than the highest of:

the published circling OCH for the aeroplane category;

the minimum circling height derived from Table 1; or

the DH/MDH of the preceding instrument approach procedure.

The minimum visibility for a circling operation with aeroplanes shall be the highest of:

the circling visibility for the aeroplane category, if published;

the minimum visibility derived from Table 2; or

the runway visual range/converted meteorological visibility (RVR/CMV) of the preceding instrument approach procedure.

Table 1 MDH and minimum visibility for circling vs. aeroplane category

	Aeroplane			
MD				
Minimum meteorological visibility (m)				

NCO.OP.113 Aerodrome operating minima - onshore circling operations with helicopters

The MDH for an onshore circling operation with helicopters shall not be lower than 250 ft and the meteorological visibility not less than 800 m.

NCO.OP.115 Departure and approach procedures - aeroplanes and helicopters

The pilot-in-command shall use the departure and approach procedures established by the State of the aerodrome, if such procedures have been published for the runway or FATO to be used.

The pilot-in-command may deviate from a published departure route, arrival route or approach procedure:

provided obstacle clearance criteria can be observed, full account is taken of the operating conditions and any ATC clearance is adhered to; or

when being radar-vectored by an ATC unit.

NCO.OP.116 Performance-based navigation - aeroplanes and helicopters

The pilot-in-command shall ensure that, when PBN is required for the route or procedure to be flown:

the relevant PBN navigation specification is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; and

the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document mentioned above.

NCO.OP.120 Noise abatement procedures - aeroplanes, helicopters and powered sailplanes

The pilot-in-command shall take into account published noise abatement procedures to minimise the effect of aircraft noise while ensuring that safety has priority over noise abatement.

NCO.OP.125 Fuel and oil supply - aeroplanes

The pilot-in-command shall only commence a flight if the aeroplane carries sufficient fuel and oil for the following:

for visual flight rules (VFR) flights:(i) by day, taking-off and landing at the same aerodrome/landing site and always remaining in sight of that aerodrome/landing site, to fly the intended route and thereafter for at least 10 minutes at normal cruising altitude;

by day, to fly to the aerodrome of intended landing and thereafter to fly for at least 30 minutes at normal cruising altitude; or

by night, to fly to the aerodrome of intended landing and thereafter to fly for at least 45 minutes at normal cruising altitude;

for IFR flights:

when no destination alternate is required, to fly to the aerodrome of intended landing and thereafter to fly for at least 45 minutes at normal cruising altitude; or

when a destination alternate is required, to fly to the aerodrome of intended landing, to an alternate aerodrome and thereafter to fly for at least 45 minutes at normal cruising altitude.

In computing the fuel required including to provide for contingency, the following shall be taken into consideration:

forecast meteorological conditions;

anticipated ATC routings and traffic delays;

procedures for loss of pressurisation or failure of one engine while en-route, where applicable; and

any other condition that may delay the landing of the aeroplane or increase fuel and/or oil consumption.

Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is replanned.

NCO.OP.126 Fuel and oil supply - helicopters

The pilot-in-command shall only commence a flight if the helicopter carries sufficient fuel and oil for the following:

for VFR flights, to fly to the aerodrome/operating site of intended landing and thereafter to fly for at least 20 minutes at best-range-speed; and

for IFR flights:

when no alternate is required or no weather-permissible alternate aerodrome is available, to fly to the aerodrome/operating site of intended landing, and thereafter to fly for 30 minutes at holding speed at 450 m (1 500 ft) above the destination aerodrome/operating site under standard temperature conditions and approach and land; or

when an alternate is required, to fly to and execute an approach and a missed approach at the aerodrome/operating site of intended landing, and thereafter:

to fly to the specified alternate; and

to fly for 30 minutes at holding speed at 450 m (1 500 ft) above the alternate aerodrome/ operating site under standard temperature conditions and approach and land.

In computing the fuel required including to provide for contingency, the following shall be taken into consideration:

forecast meteorological conditions;

anticipated ATC routings and traffic delays;

procedures for loss of pressurisation or failure of one engine while en-route, where applicable; and

any other condition that may delay the landing of the aircraft or increase fuel and/or oil consumption.

Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is replanned.

NCO.OP.130 Passenger briefing

The pilot-in-command shall ensure that before or, where appropriate, during the flight, passengers are given a briefing on emergency equipment and procedures.

NCO.OP.135 Flight preparation

Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the space-based facillities, ground and/or water facilities including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.

Before commencing a flight, the pilot-in-command shall be familiar with all available meteorological information appropriate to the intended flight. Preparation for a flight away from the vicinity of the place of departure, and for every flight under IFR, shall include:

a study of available current weather reports and forecasts; and

the planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of weather conditions.

NCO.OP.140 Destination alternate aerodromes - aeroplanes

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate aerodrome in the flight plan, unless:

the available current meteorological information indicates that, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period, the approach and landing may be made under visual meteorological conditions (VMC); or

the place of intended landing is isolated and:

an instrument approach procedure is prescribed for the aerodrome of intended landing; and

available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival:

a cloud base of at least 300 m (1 000 ft) above the minimum associated with the instrument approach procedure; and

visibility of at least 5,5 km or of 4 km more than the minimum associated with the procedure.

NCO.OP.141 Destination alternate aerodromes - helicopters

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate aerodrome in the flight plan, unless:

an instrument approach procedure is prescribed for the aerodrome of intended landing and the available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival, or from the actual time of departure to 2 hours after the estimated time of arrival, whichever is the shorter period:

a cloud base of at least 120 m (400 ft) above the minimum associated with the instrument approach procedure; and

visibility of at least 1 500 m more than the minimum associated with the procedure; or

the place of intended landing is isolated and:

an instrument approach procedure is prescribed for the aerodrome of intended landing;

available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival:

the cloud base is at least 120 m (400 ft) above the minimum associated with the instrument approach procedure;

visibility is at least 1 500 m more than the minimum associated with the procedure; and

a point of no return (PNR) is determined in case of an offshore destination.

NCO.OP.142 Destination aerodromes - instrument approach operations

The pilot-in-command shall ensure that sufficient means are available to navigate and land at the destination aerodrome or at any destination alternate aerodrome in the case of loss of capability for the intended approach and landing operation.

NCO.OP.145 Refueling with passengers embarking, on board or disembarking

The aircraft shall not be refuelled with aviation gasoline (AVGAS) or wide-cut type fuel or a mixture of these types of fuel, when passengers are embarking, on board or disembarking.

For all other types of fuel, the aircraft shall not be refuelled when passengers are embarking, on board or disembarking, unless it is attended by the pilot-in-command or other qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

NCO.OP.150 Carriage of passengers

The pilot-in-command shall ensure that, prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety, each passenger on board occupies a seat or berth and has his/her safety belt or restraint device properly secured.

NCO.OP.155 Smoking on board - aeroplanes and helicopters

The pilot-in-command shall not allow smoking on board:

whenever considered necessary in the interest of safety; and

during refuelling of the aircraft.

NCO.OP.160 Meteorological conditions

The pilot-in-command shall only commence or continue a VFR flight if the latest available meteorological information indicates that the weather conditions along the route and at the intended destination at the estimated time of use will be at or above the applicable VFR operating minima.

The pilot-in-command shall only commence or continue an IFR flight towards the planned destination aerodrome if the latest available meteorological information indicates that, at the estimated time of arrival, the weather conditions at the destination or at least one destination alternate aerodrome are at or above the applicable aerodrome operating minima.

If a flight contains VFR and IFR segments, the meteorological information referred to in (a) and (b) shall be applicable as far as relevant.

NCO.OP.165 Ice and other contaminants - ground procedures

The pilot-in-command shall only commence take-off if the aircraft is clear of any deposit that might adversely affect the performance or controllability of the aircraft, except as permitted in the AFM.

NCO.OP.170 Ice and other contaminants - flight procedures

The pilot-in-command shall only commence a flight or intentionally fly into expected or actual icing conditions if the aircraft is certified, and equipped to cope with such conditions.

If icing exceeds the intensity of icing for which the aircraft is certified or if an aircraft not certified for flight in known icing conditions encounters icing, the pilot-in-command shall exit the icing conditions without delay, by a change of level and/or route, and if necessary by declaring an emergency to ATC.

NCO.OP.175 Take-off conditions - aeroplanes and helicopters

Before commencing take-off, the pilot-in-command shall be satisfied that:

according to the information available, the weather at the aerodrome or operating site and the condition of the runway or FATO intended to be used would not prevent a safe take-off and departure; and

applicable aerodrome operating minima will be complied with.

NCO.OP.180 Simulated situations in flight

The pilot-in-command shall, when carrying passengers or cargo, not simulate:

situations that require the application of abnormal or emergency procedures; or

flight in instrument meteorological conditions (IMC).

Notwithstanding (a), when training flights are conducted by an approved training organisation, such situations may be simulated with student pilots on-board.

NCO.OP.185 In-flight fuel management

The pilot-in-command shall check at regular intervals that the amount of usable fuel remaining in flight is not less than the fuel required to proceed to a weather-permissible aerodrome or operating site and the planned reserve fuel as required by NCO.OP.125 or NCO.OP.126.

NCO.OP.190 Use of supplemental oxygen

The pilot-in-command shall ensure that all flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen continuously whenever he/she determines that at the altitude of the intended flight the lack of oxygen might result in impairment of the faculties of crew members, and shall ensure that supplemental oxygen is available to passengers when lack of oxygen might harmfully affect passengers.

In any other case when the pilot-in-command cannot determine how the lack of oxygen might affect all occupants on board, he/she shall ensure that:

all crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen for any period in excess of 30 minutes when the pressure altitude in the the passenger compartment will be between 10 000 ft and 13 000 ft; and

all occupants use supplemental oxygen for any period that the pressure altitude in the the passenger compartment will be above 13 000 ft.

NCO.OP.195 Ground proximity detection

When undue proximity to the ground is detected by the pilot-in-command or by a ground proximity warning system, the pilot-in-command shall take corrective action immediately in order to establish safe flight conditions.

NCO.OP.200 Airborne collision avoidance system (ACAS II)

When ACAS II is used, such procedures and training shall ensure:

ACAS II shall be used during flight except as provided in the minimum equipment list, in a mode that enables RA indications to be produced for the flight crew when undue proximity to another aircraft is detected, unless inhibition of RA indication mode (using TA indication only or equivalent) is called for by an abnormal procedure or due to performance limiting conditions.

When an RA indication is produced by ACAS II:

the pilot flying shall immediately conform to the indications of the RA indication, even if this conflicts with an air traffic control (ATC) instruction, unless doing so would jeopardise the safety of the aircraft;

the flight crew, as soon as permitted by workload, shall notify the appropriate ATC unit of any RA which requires a deviation from the current ATC instruction or clearance;

when the conflict is resolved the aircraft shall:

be promptly returned to the terms of the acknowledged ATC instruction or clearance and ATC notified of the manoeuvre or

comply with any amended ATC clearance or instruction issued.

NCO.OP.205 Approach and landing conditions - aeroplanes

Before commencing an approach to land, the pilot-in-command shall be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the runway or FATO intended to be used would not prevent a safe approach, landing or missed approach.

NCO.OP.206 Approach and landing conditions - helicopters

Before commencing an approach to land, the pilot-in-command shall be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the final approach and take-off area (FATO) intended to be used do not prevent a safe approach, landing or missed approach.

NCO.OP.210 Commencement and continuation of approach - aeroplanes and helicopters

The pilot-in-command may commence an instrument approach regardless of the reported runway visual range/visibility (RVR/VIS).

If the reported RVR/VIS is less than the applicable minimum, the approach shall not be continued:

below 1 000 ft above the aerodrome; or

into the final approach segment in the case where the decision altitude/height (DA/H) or minimum descent altitude/height (MDA/H) is more than 1 000 ft above the aerodrome.

Where the RVR is not available, RVR values may be derived by converting the reported visibility.

If, after passing 1 000 ft above the aerodrome, the reported RVR/VIS falls below the applicable minimum, the approach may be continued to DA/H or MDA/H.

The approach may be continued below DA/H or MDA/H and the landing may be completed provided that the visual reference adequate for the type of approach operation and for the intended runway is established at the DA/H or MDA/H and is maintained.

The touchdown zone RVR shall always be controlling.

SUBPART C AIRCRAFT PERFORMANCE AND OPERATING LIMITATIONS

NCO.POL.100 Operating limitations - all aircraft

During any phase of operation, the loading, the mass and the centre of gravity (CG) position of the aircraft shall comply with any limitation specified in the AFM, or equivalent document.

Placards, listings, instrument markings, or combinations thereof, containing those operating limitations prescribed by the AFM for visual presentation, shall be displayed in the aircraft.

NCO.POL.105 Weighing

The operator shall ensure that the mass and the CG of the aircraft have been established by actual weighing prior to initial entry into service of the aircraft. The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented. Such information shall be made available to the pilot-in-command. The aircraft shall be reweighed if the effect of modifications on the mass and balance is not accurately known.

The weighing shall be accomplished:

NCO.POL.110 Performance - general

The pilot-in-command shall only operate the aircraft if the performance is adequate to comply with the applicable rules of the air and any other restrictions applicable to the flight, the airspace or the aerodromes or operating sites used, taking into account the charting accuracy of any charts and maps used.

SUBPART D INSTRUMENTS, DATA AND EQUIPMENT

SECTION 1 Aeroplanes

NCO.IDE.A.100 Instruments and equipment - general

Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements if they are:

used by the flight crew to control the flight path;

used to comply with NCO.IDE.A.190; (3) used to comply with NCO.IDE.A.195; or

(4) installed in the aeroplane.

The following items, when required under this Subpart, do not need an equipment approval:

spare fuses;

independent portable lights;

an accurate time piece;

first-aid kit;

survival and signalling equipment; (6) sea anchor and equipment for mooring;

child restraint device.

a simple PCDS used by a task specialist as a restraint device

Instruments and equipment not required under Part-NCO as well as any other equipment that is not required under this Regulation but is carried on a flight, shall comply with the following Requirements:

the information provided by these instruments or equipment shall not be used by the flight crew members to comply with the applicable airworthiness requirements or NCO.IDE.A.190 and NCO.IDE.A.195;

the instruments and equipment shall not affect the airworthiness of the aeroplane, even in the case of failures or malfunction.

Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.

All required emergency equipment shall be easily accessible for immediate use.

NCO.IDE.A.105 Minimum equipment for flight

A flight shall not be commenced when any of the aeroplane instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

the aeroplane is operated in accordance with the MEL, if established; or

the aeroplane is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

NCO.IDE.A.110 Spare electrical fuses

Aeroplanes shall be equipped with spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are allowed to be replaced in flight.

NCO.IDE.A.115 Operating lights

Aeroplanes operated at night shall be equipped with:

an anti-collision light system;

navigation/position lights;

a landing light;

lighting supplied from the aeroplane's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aeroplane;

lighting supplied from the aeroplane's electrical system to provide illumination in all passenger compartments;

an independent portable light for each crew member station; and

lights to conform with the International Regulations for Preventing Collisions at Sea if the aeroplane is operated as a seaplane.

NCO.IDE.A.120 Operations under VFR - flight and navigational instruments and associated equipment

Aeroplanes operated under VFR by day shall be equipped with a means of measuring and displaying the following:

magnetic heading;

time, in hours, minutes and seconds;

barometric altitude;

indicated airspeed; and

Mach number, whenever speed limitations are expressed in terms of Mach number.

Aeroplanes operated under visual meteorological conditions (VMC) at night, or in conditions where the aeroplane cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a), equipped with:

a means of measuring and displaying the following:

turn and slip;

attitude;

vertical speed; and

stabilised heading;and

a means of indicating when the supply of power to the gyroscopic instruments is not adequate.

Aeroplanes operated in conditions where they cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a) and (b), equipped with a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

NCO.IDE.A.125 Operations under IFR - flight and navigational instruments and associated equipment

Aeroplanes operated under IFR shall be equipped with:

a means of measuring and displaying the following:

magnetic heading;

time in hours, minutes and seconds;

barometric altitude;

indicated airspeed;

vertical speed;

turn and slip;

attitude;

stabilised heading;

outside air temperature; and

Mach number, whenever speed limitations are expressed in terms of Mach number;

a means of indicating when the supply of power to the gyroscopic instruments is not adequate; and

a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

NCO.IDE.A.130 Terrain awareness warning system (TAWS)

Turbine-powered aeroplanes certified for a maximum passenger seating configuration of more than nine shall be equipped with a TAWS that meets the requirements for:

class A equipment, as specified in an acceptable standard, in the case of aeroplanes for which the individual certificate of airworthiness (CofA) was first issued after 1 January 2011; or

class B equipment, as specified in an acceptable standard, in the case of aeroplanes for which the individual CofA was first issued on or before 1 January 2011.

NCO.IDE.A.135 Flight crew interphone system

Aeroplanes operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

NCO.IDE.A.140 Seats, seat safety belts, restraint systems and child restraint devices

(a) Aeroplanes shall be equipped with:

a seat or berth for each person on board who is aged 24 months or more;

a seat belt on each seat and restraining belts for each berth;

a child restraint device (CRD) for each person on board younger than 24 months; and

a seat belt with upper torso restraint system on each flight crew seat, having a single point release.

NCO.IDE.A.145 First-aid kit

Aeroplanes shall be equipped with a first-aid kit.

The first-aid kit shall be:

readily accessible for use; and

kept up-to-date.

NCO.IDE.A.150 Supplemental oxygen - pressurised aeroplanes

Pressurised aeroplanes operated at flight altitudes for which the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

Pressurised aeroplanes operated above flight altitudes at which the pressure altitude in the passenger compartments is above 10 000 ft shall carry enough breathing oxygen to supply:

all crew members and:

100 % of the passengers for any period when the cabin pressure altitude exceeds 15 000 ft, but in no case less than 10 minutes' supply;

at least 30 % of the passengers, for any period when, in the event of loss of pressurisation and taking into account the circumstances of the flight, the pressure altitude in the passenger compartment will be between 14 000 ft and 15 000 ft; and

at least 10 % of the passengers for any period in excess of 30 minutes when the pressure altitude in the passenger compartment will be between 10 000 ft and 14 000 ft;and

all the occupants of the passenger compartment for no less than 10 minutes, in the case of aeroplanes operated at pressure altitudes above 25 000 ft, or operated below that altitude but under conditions that will not allow them to descend safely to a pressure altitude of 13 000 ft within 4 minutes.

Pressurised aeroplanes operated at flight altitudes above 25 000 ft shall, in addition, be equipped with a device to provide a warning indication to the flight crew of any loss of pressurisation.

NCO.IDE.A.155 Supplemental oxygen - non-pressurised aeroplanes

Non-pressurised aeroplanes operated when an oxygen supply is required in accordance with NCO.OP.190 shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

NCO.IDE.A.160 Hand fire extinguishers

Aeroplanes, except ELA1 aeroplanes, shall be equipped with at least one hand fire extinguisher:

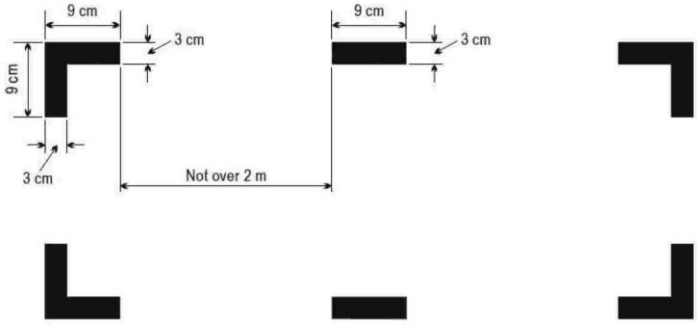
in the flight crew compartment; and

in each passenger compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

NCO.IDE.A.165 Marking of break-in points

If areas of the aeroplane's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.



NCO.IDE.A.170 Emergency locator transmitter (ELT)

Aeroplanes shall be equipped with:

an ELT of any type, when first issued with an individual CofA on or before 1 July 2008;

an automatic ELT, when first issued with an individual CofA after 1 July 2008; or

a survival ELT (ELT(S)) or a personal locator beacon (PLB), carried by a crew member or a passenger, when certified for a maximum passenger seating configuration of six or less.

ELTs of any type and PLBs shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

NCO.IDE.A.175 Flight over water

(a) The following aeroplanes shall be equipped with a life-jacket for each person on board, or equivalent individual floatation device for each person on board younger than 24 months, that shall be worn or stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided:

single-engined landplanes when:

flying over water beyond gliding distance from land; or

taking off or landing at an aerodrome or operating site where, in the opinion of the pilot-incommand, the take-off or approach path is so disposed over water that there would be a likelihood of a ditching;

seaplanes operated over water; and

aeroplanes operated at a distance away from land where an emergency landing is possible greater

than that corresponding to 30 minutes at normal cruising speed or 50 NM, whichever is less. (b) Seaplanes

operated over water shall be equipped with

one anchor;

one sea anchor (drogue), when necessary to assist in manoeuvring; and

equipment for making the sound signals, as prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

(c) The pilot-in-command of an aeroplane operated at a distance away from land where an emergency landing is possible greater than that corresponding to 30 minutes at normal cruising speed or 50 NM, whichever is the lesser, shall determine the risks to survival of the occupants of the aeroplane in the event of a ditching, based on which he/she shall determine the carriage of:

equipment for making the distress signals;

life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency; and

life-saving equipment, to provide the means of sustaining life, as appropriate to the flight to be undertaken.

NCO.IDE.A.180 Survival equipment

Aeroplanes operated over areas in which search and rescue would be especially difficult shall be equipped with such signalling devices and life-saving equipment, including means of sustaining life, as may be appropriate to the area overflown.

NCO.IDE.A.190 Radio communication equipment

Where required by the airspace being flown aeroplanes shall be equipped with radio communication equipment capable of conducting two-way communication with those aeronautical stations and on those frequencies to meet airspace requirements.

Radio communication equipment, if required by (a), shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

When more than one communication equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

NCO.IDE.A.195 Navigation equipment

Aeroplanes operated over routes that cannot be navigated by reference to visual landmarks shall be equipped with any navigation equipment necessary to enable them to proceed in accordance with:

the ATS flight plan; if applicable; and

the applicable airspace requirements.

Aeroplanes shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with (a), or an appropriate contingency action, to be completed safely.

Aeroplanes operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed. This equipment shall

be capable of providing such guidance for each aerodrome at t which it is intended to land in IMC and for any designated alternate aerodromes.

For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

Aeroplanes shall be equipped with surveillance equipment in accordance with the applicable airspace requirements.

NCO.IDE.A.200 Transponder

Where required by the airspace being flown, aeroplanes shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

NCO.IDE.A.205 Management of aeronautical databases

Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

The pilot-in-command shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to the aircraft that require them.

Notwithstanding any other occurrence reporting requirements as defined in LYCARs-Part-19, the pilot in-command shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight. In such cases, the pilot-in-command shall not use the affected data.

SECTION 2 Helicopters

NCO.IDE.H.100 Instruments and equipment - general

Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements if they are:

used by the flight crew to control the flight path;

used to comply with NCO.IDE.H.190; (3) used to comply with NCO.IDE.H.195; or

(4) installed in the helicopter.

The following items, when required by this Subpart, do not need an equipment approval:

independent portable lights;

an accurate time piece;

first-aid kit;

survival and signalling equipment;

sea anchor and equipment for mooring; and

child restraint device.

a simple PCDS used by a task specialist as a restraint device

(c) Instruments and equipment or accessories not required under Part-NCO, as well as any other equipment that is not required under this Regulation, but carried on a flight, shall comply with the following requirements:

the information provided by these instruments, equipment or accessories shall not be used by the flight crew members to comply with the applicable airworthiness requirements or NCO.IDE.H.190 and NCO.IDE.H.195;

the instruments and equipment or accessories shall not affect the airworthiness of the helicopter, even in the case of failures or malfunction.

Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.

All required emergency equipment shall be easily accessible for immediate use.

NCO.IDE.H.105 Minimum equipment for flight

A flight shall not be commenced when any of the helicopter's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

the helicopter is operated in accordance with the MEL, if established; or

the helicopter is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

NCO.IDE.H.115 Operating lights

Helicopters operated at night shall be equipped with:

an anti-collision light system;

navigation/position lights;

a landing light;

lighting supplied from the helicopter's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the helicopter;

lighting supplied from the helicopter's electrical system to provide illumination in all passenger compartments;

an independent portable light for each crew member station; and

lights to conform with the International Regulations for Preventing Collisions at Sea if the helicopter is amphibious.

NCO.IDE.H.120 Operations under VFR - flight and navigational instruments and associated equipment

Helicopters operated under VFR by day shall be equipped with a means of measuring and displaying the following:

(1) magnetic heading;

(2) time in hours, minutes and seconds;

(3) barometric altitude;

(4) indicated airspeed; and

(5) slip.

Helicopters operated under VMC at night, or when the visibility is less than 1 500 m, or in conditions where the helicopter cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a), equipped with:

a means of measuring and displaying the following:

attitude;

vertical speed; and

stabilised heading; and

a means of indicating when the supply of power to the gyroscopic instruments is not adequate

Helicopters operated when the visibility is less than 1 500 m, or in conditions where the helicopter cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a) and (b), equipped with a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

NCO.IDE.H.125 Operations under IFR - flight and navigational instruments and associated equipment

Helicopters operated under IFR shall be equipped with:

a means of measuring and displaying the following:

magnetic heading;

time in hours, minutes and seconds;

barometric altitude;

indicated airspeed;

vertical speed;

slip;

attitude;

stabilised heading; and

outside air temperature;

a means of indicating when the supply of power to the gyroscopic instruments is not adequate;

a means of preventing malfunction of the airspeed indicating system required by (a)(4) due to condensation or icing; and

an additional means of measuring and displaying attitude as a standby instrument.

NCO.IDE.H.126 Additional equipment for single pilot operations under IFR

Helicopters operated under IFR with a single pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

NCO.IDE.H.135 Flight crew interphone system

Helicopters operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

NCO.IDE.H.140 Seats, seat safety belts, restraint systems and child restraint devices

Helicopters shall be equipped with:

a seat or berth for each person on board who is aged 24 months or more or a station for each crew member or task specialist on board;

a seat belt on each passenger seat and restraining belts for each berth and restraint devices for each station;

for helicopters first issued with an individual CofA after 31 December 2012, a seat belt with an upper torso restraint system for each passenger who is aged 24 months or more;

a child restraint device for each person on board younger than 24 months; and

a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration on each flight crew seat.

A seat belt with upper torso restraint system shall have a single point release.

NCO.IDE.H.145 First-aid kit

Helicopters shall be equipped with a first-aid kit.

The first-aid kit shall be:

readily accessible for use; and

kept up-to-date.

NCO.IDE.H.155 Supplemental oxygen - non-pressurised helicopters

Non-pressurised helicopters operated when an oxygen supply is required in accordance with NCO.OP.190 shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

NCO.IDE.H.160 Hand fire extinguishers

Helicopters, except ELA2 helicopters, shall be equipped with at least one hand fire extinguisher:

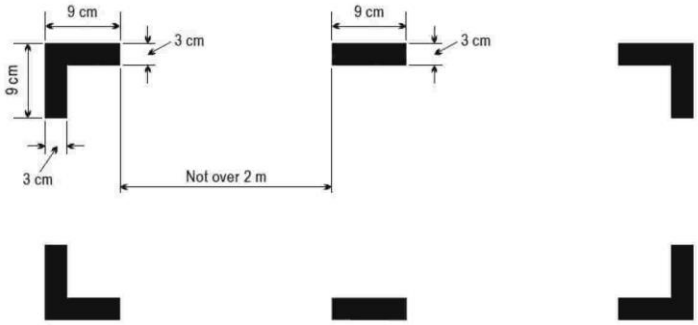
in the flight crew compartment; and

in each passenger compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

NCO.IDE.H.165 Marking of break-in points

If areas of the helicopter's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.



NCO.IDE.H.170 Emergency locator transmitter (ELT)

Helicopters certified for a maximum passenger seating configuration above six shall be equipped with:

an automatic ELT; and

one survival ELT (ELT(S)) in a life-raft or life-jacket when the helicopter is operated at a distance from land corresponding to more than 3 minutes flying time at normal cruising speed.

Helicopters certified for a maximum passenger seating configuration of six or less shall be equipped with an ELT(S) or a personal locator beacon (PLB), carried by a crew member or a passenger.

ELTs of any type and PLBs shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

NCO.IDE.H.175 Flight over water

Helicopters shall be equipped with a life-jacket for each person on board or equivalent individual flotation device for each person on board younger than 24 months, which shall be worn or stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided, when:

flying over water beyond autorotational distance from land where in case of the critical engine failure, the helicopter is not able to sustain level flight; or

flying over water at a distance of land corresponding to more than 10 minutes flying at normal cruising speed, where in case of the critical engine failure, the helicopter is able to sustain level flight; or

taking off or landing at an aerodrome/operating site where the take-off or approach path is over water.

Each life-jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

The pilot-in-command of a helicopter operated on a flight over water at a distance from land corresponding to more than 30 minutes flying time at normal cruising speed or 50 NM, whichever is less, shall determine the risks to survival of the occupants of the helicopter in the event of a ditching, based on which he/she shall determine the carriage of:

equipment for making the distress signals;

life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency; and

life-saving equipment, to provide the means of sustaining life, as appropriate to the flight to be undertaken.

The pilot-in-command shall determine the risks to survival of the occupants of the helicopter in the event of a ditching, when deciding if the life-jackets required in (a) shall be worn by all occupants.

NCO.IDE.H.180 Survival equipment

Helicopters, operated over areas in which search and rescue would be especially difficult, shall be equipped with such signalling devices and life-saving equipment, including means of sustaining life, as may be appropriate to the area overflown.

NCO.IDE.H.185 All helicopters on flights over water - ditching

Helicopters flying over water in a hostile environment beyond a distance of 50 NM from land shall be either of the following:

designed for landing on water in accordance with the relevant certification specifications;

certified for ditching in accordance with the relevant certification specifications;

fitted with emergency flotation equipment.

NCO.IDE.H.190 Radio communication equipment

Where required by the airspace being flown helicopters shall be equipped with radio communication equipment capable of conducting two-way communication with those aeronautical stations and on those frequencies to meet airspace requirements.

Radio communication equipment, if required by (a), shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

When more than one communications equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

When a radio communication system is required, and in addition to the flight crew interphone system required in NCO.IDE.H.135, helicopters shall be equipped with a transmit button on the flight controls for each required pilot and/or crew member at his/her working station.

NCO.IDE.H.195 Navigation equipment

Helicopters operated over routes that cannot be navigated by reference to visual landmarks shall be equipped with navigation equipment that will enable them to proceed in accordance with:

the ATS flight plan, if applicable; and

the applicable airspace requirements.

Helicopters shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with (a), or an appropriate contingency action, to be completed safely.

Helicopters operated on flights in which it is intended to land in IMC shall be equipped with navigation equipment capable of providing guidance to a point from which a visual landing can be performed. This equipment shall be capable of providing such guidance for each aerodrome at which is intended to land in IMC and for any designated alternate aerodromes.

For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

Helicopters shall be equipped with surveillance equipment in accordance with the applicable airspace requirements

NCO.IDE.H.200 Transponder

Where required by the airspace being flown, helicopters shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

NCO.IDE.H.205 Management of aeronautical databases

Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

The pilot-in-command shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to the aircraft that require them.

Notwithstanding any other occurrence reporting requirements as defined in LYCARs-Part-19, the pilot in-command shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.
In such cases, the pilot-in-command shall not use the affected data.

SUBPART E SPECIFIC REQUIREMENTS

SECTION 1 General

NCO.SPEC.100 Scope

This subpart establishes specific requirements to be followed by a pilot-in-command conducting non-commercial specialised operations with other-than complex motor-powered aircraft.

NCO.SPEC.105 Checklist

Before commencing a specialised operation, the pilot-in-command shall conduct a risk assessment, assessing the complexity of the activity to determine the hazards and associated risks inherent in the operation and establish mitigating measures.

A specialised operation shall be performed in accordance with a checklist. Based on the risk assessment, the pilot-in-command shall establish such checklist appropriate to the specialised activity and aircraft used, taking account of any section of this subpart.

The checklist that is relevant to the duties of the pilot-in-command, crew members and task specialists shall be readily accessible on each flight.(d) The checklist shall be regularly reviewed and updated, as appropriate.

NCO.SPEC.110 Pilot-in-command responsibilities and authority

Whenever crew members or task specialists are involved in the operation, the pilot-in-command shall

ensure compliance of crew members and task specialists with NCO.SPEC.115 and NCO.SPEC.120;

not commence a flight if any crew member or task specialist is incapacitated from performing duties by any cause such as injury, sickness, fatigue or the effects of any psychoactive substance;

not continue a flight beyond the nearest weather-permissible aerodrome or operating site when any crew member or task specialist's capacity to perform duties is significantly reduced from causes such as fatigue, sickness or lack of oxygen;

ensure that crew members and task specialists comply with the laws, regulations and procedures of those States where operations are conducted;

ensure that all crew members and task specialists are able to communicate with each other in a common language; and

ensure that task specialists and crew members use supplemental oxygen continuously whenever he/she determines that at the altitude of the intended flight the lack of oxygen might result in impairment of the faculties of crew members or harmfully affect task specialists. If the pilot-in-command cannot determine how the lack of oxygen might affect the occupants on board, he/she shall ensure that task specialists and crew members use supplemental oxygen continuously whenever the cabin altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft.

NCO.SPEC.115 Crew responsibilities

The crew member shall be responsible for the proper execution of his/her duties. Crew duties shall be specified in the checklist.

During critical phases of the flight or whenever deemed necessary by the pilot-in-command in the interest of safety, the crew member shall be restrained at his/her assigned station unless otherwise specified in the checklist

During flight, the flight crew member shall keep his/her safety belt fastened while at his/her station.

During flight, at least one qualified flight crew member shall remain at the controls of the aircraft at all times.

The crew member shall not undertake duties on an aircraft:

if he/she knows or suspects that he/she is suffering from fatigue if he/she knows or suspects that he/she is suffering from fatigue or feels otherwise unfit such that his/her task achievement/decision making has deteriorated to the extent that the flight may be endangered.; or

when under the influence of psychoactive substances or when unfit due to injury, fatigue, medication, sickness or other similar causes;.

The crew member who undertakes duties for more than one operator shall:

maintain his/her individual records regarding flight and duty times and rest periods as referred to in applicable FTL requirements; and

provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements.

The crew member shall report to the pilot-in-command:

any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

any incident that was endangering, or could endanger, the safety of the operation.

NCO.SPEC.120 Task specialists responsibilities

The task specialist shall be responsible for the proper execution of his/her duties. Task specialists' duties shall be specified in the checklist.

During critical phases of the flight or whenever deemed necessary by the pilot-in-command in the interest of safety, the task specialist shall be restrained at his/her assigned station unless otherwise specified in the checklist.

The task specialist shall ensure that he/she is restrained when carrying out specialised tasks with external doors opened or removed

The task specialist shall report to the pilot-in-command:

any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

any incident that was endangering, or could endanger, the safety of the operation.

NCO.SPEC.125 Safety briefing

Before take-off, the pilot-in-command shall brief task specialists on:

emergency equipment and procedures;

operational procedures associated with the specialised task before each flight or series of flights

The briefing referred to in (a)(2) may not be required if task specialists have been instructed on the operational procedures before the start of the operating season in that calendar year.

NCO.SPEC.130 Minimum obstacle clearance altitudes - IFR flights

The pilot-in-command shall establish minimum flight altitudes for each flight providing the required terrain clearance for all route segments to be flown in IFR. The minimum flight altitudes shall not be lower than those published by the State overflown.

NCO.SPEC.135 Fuel and oil supply - aeroplanes

NCO.OP.125(a)(1)(i) does not apply to sailplane-towing, flying display, aerobatic flights or competition flights.

NCO.SPEC.140 Fuel and oil supply - helicopters

Notwithstanding NCO.OP.126(a)(1), the pilot-in-command of a helicopter may only commence a VFR flight by day remaining within 25 NM of the aerodrome/operating site of departure with reserve fuel of not less than 10 minutes at best-range-speed.

NCO.SPEC.145 Simulated situations in flight

Unless a task specialist is on-board the aircraft for training, the pilot-in-command shall, when carrying task specialists, not simulate:

situations that require the application of abnormal or emergency procedures; or

flight in instrument meteorological conditions (IMC).

NCO.SPEC.150 Ground proximity detection

If installed, the ground proximity warning system may be disabled during those specialised tasks, which by their nature require the aircraft to be operated within a distance from the ground below that which would trigger the ground proximity warning system.

NCO.SPEC.155 Airborne collision avoidance system (ACAS II)

Notwithstanding NCO.OP.200, the ACAS II may be disabled during those specialised tasks, which by their nature require the aircraft to be operated within a distance from each other below that which would trigger the ACAS.

NCO.SPEC.160 Release of dangerous goods

The pilot-in-command shall not operate an aircraft over congested areas of cities, towns or settlements or over an open-air assembly of persons when releasing dangerous goods.

NCO.SPEC.165 Carriage and use of weapons

The pilot-in-command shall ensure that, when weapons are carried on a flight for the purpose of a specialised task, these are secured when not in use.

The task specialist using the weapon shall take all necessary measures to prevent the aircraft and persons on board or on the ground from being endangered.

NCO.SPEC.170 Performance and operating criteria - aeroplanes

When operating an aeroplane at a height of less than 150 m (500 ft) above a non-congested area, for operations of aeroplanes that are not able to sustain level flight in the event of a critical engine failure, the pilot-in-command shall have:

established operational procedures to minimise the consequences of an engine failure; and

briefed all crew members and task specialists on board on the procedures to be carried out in the event of a forced landing.

NCO.SPEC.175 Performance and operating criteria - helicopters

The pilot-in-command may operate an aircraft over congested areas provided that:

the helicopter is certified in category A or B; and

safety measures are established to prevent undue hazard to persons or property on the ground

The pilot-in-command shall have:

established operational procedures to minimise the consequences of an engine failure; and

briefed all crew members and task specialists on board on the procedures to be carried out in the event of a forced landing.

The pilot-in-command shall ensure that the mass at take-off, landing or hover shall not exceed the maximum mass specified for:

a hover out of ground effect (HOGE) with all engines operating at the appropriate power rating; or

if conditions prevail that a HOGE is not likely to be established, the helicopter mass shall not exceed the maximum mass specified for a hover in ground effect (HIGE) with all engines operating at the appropriate power rating, provided prevailing conditions allow a hover in ground effect at the maximum specified mass.

SECTION 2 Helicopter external sling load operations (HESLO)

NCO.SPEC.HESLO.100 Checklist

The checklist for HESLO shall contain:

(a) normal, abnormal and emergency procedures;

(b) relevant performance data;

(c) required equipment;

(d) any limitations; and

(e) responsibilities and duties of the pilot-in-command, and, if applicable, crew members and task specialists.

NCO.SPEC.HESLO.105 Specific HESLO equipment

The helicopter shall be equipped with at least:

one cargo safety mirror or alternative means to see the hook(s)/load; and

one load meter, unless there is another method of determining the weight of the load.

NCO.SPEC.HESLO.110 Transportation of dangerous goods

The operator transporting dangerous goods to or from unmanned sites or remote locations shall apply to the Authority for an exemption from the provisions of the Technical Instructions if they intend not to comply with the requirements of those Instructions.

SECTION 3 Human external cargo operations (HEC)

NCO.SPEC.HEC.100 Checklist

The checklist for HEC shall contain:

normal, abnormal and emergency procedures;

relevant performance data;

required equipment; (d) any limitations; and

(e) responsibilities and duties of the pilot-in-command, and, if applicable, crew members and task specialists.

NCO.SPEC.HEC.105 Specific HEC equipment

The helicopter shall be equipped with:

hoist operations equipment or cargo hook;

one cargo safety mirror or alternative means to see the hook; and

one load meter, unless there is another method of determining the weight of the load.

The installation of all hoist and cargo hook equipment other than a simple PCDS and any subsequent modifications shall have an airworthiness approval appropriate to the intended function.

SECTION 4 Parachute operations (PAR)

NCO.SPEC.PAR.100 Checklist

The checklist for PAR shall contain:

normal, abnormal and emergency procedures;

relevant performance data;

required equipment; (d) any limitations; and

(e) responsibilities and duties of the pilot-in-command, and, if applicable, crew members and task specialists.

NCO.SPEC.PAR.105 Carriage of crew members and task specialists

The requirement laid down in NCO.SPEC.120(c) shall not be applicable for task specialists performing parachute jumping.

NCO.SPEC.PAR.110 Seats

Notwithstanding NCO.IDE.A.140(a)(1) and NCO.IDE.H.140(a)(1), the floor of the aircraft may be used as a seat, provided means are available for the task specialist to hold or strap on.

NCO.SPEC.PAR.115 Supplemental oxygen

Notwithstanding NCO.SPEC.110(f), the requirement to use supplemental oxygen shall not be applicable for crew members other than the pilot-in-command and for task specialists carrying out duties essential to the specialised task, whenever the cabin altitude:

exceeds 13 000 ft, for a period of not more than 6 minutes;, or

exceeds 15 000 ft, for a period of not more 3 minutes.

NCO.SPEC.PAR.120 Release of dangerous goods

Notwithstanding NCO.SPEC.160, parachutists may carry smoke trail devices and exit the aircraft for the purpose of parachute display over congested areas of cities, towns or settlements or over an open-air assembly of persons provided those devices are manufactured for that purpose.

SECTION 5 Aerobatic flights (ABF)

NCO.SPEC.ABF.100 Checklist

The checklist for ABF shall contain:

normal, abnormal and emergency procedures;

relevant performance data

required equipment; (d) any limitations; and

(e) responsibilities and duties of the pilot-in-command, and, if applicable, crew members and task specialists.

NCO.SPEC.ABF.105 Documents and information

The following documents and information listed in NCO.GEN.135(a) need not be carried during aerobatic flights:

details of the filed ATS flight plan, if applicable;

current and suitable aeronautical charts for the route/area of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted; and

procedures and visual signals information for use by intercepting and intercepted aircraft.

NCO.SPEC.ABF.110 Equipment

The following equipment requirements need not be applicable to aerobatic flights:

first-aids kit as laid down in NCO.IDE.A.145 and NCO.IDE.H.145;

hand-fire extinguishers as laid down in NCO.IDE.A.160 and NCO.IDE.H.180; and

emergency locator transmitters or personal locator beacons as laid down in NCO.IDE.A.170 and NCO.IDE.H.170.

SECTION 6 Maintenance check flights (MCFs)

NCO.SPEC.MCF.100 Levels of maintenance check flights

Before conducting a maintenance check flight, the operator shall determine the applicable level of the maintenance check flight as follows:

a “Level A” maintenance check flight for a flight where the use of abnormal or emergency procedures, as defined in the aircraft flight manual, is expected, or where a flight is required to prove the functioning of a backup system or other safety devices;

a “Level B” maintenance check flight for any maintenance check flight other than a “Level A” maintenance check flight.

NCO.SPEC.MCF.110 Operational limitations

By way of derogation from point NCO.GEN.105(a)(4) of this Part, a maintenance check flight may be conducted with an aircraft that has been released to service with incomplete maintenance in accordance with applicable airworthiness requirements.

By way of derogation from point NCO.IDE.A.105 or NCO.IDE.H.105, the pilot-in-command may conduct a flight with inoperative or missing items of equipment or functions required for the flight if those inoperative or missing items of equipment or functions have been identified in the checklist referred to in point NCO.SPEC.MCF.110.

NCO.SPEC.MCF.110 Checklist and safety briefing

The checklist referred to in point NCO.SPEC.105 shall be updated as needed before each maintenance check flight and shall consider the operating procedures that are planned to be followed during the particular maintenance check flight.;

Notwithstanding point NCO.SPEC.125(b), a safety briefing of the task specialist shall be required before each maintenance check flight.

NCO.SPEC.MCF.120 Flight crew requirements

When selecting a flight crew member for a maintenance check flight, the operator shall consider the aircraft complexity and the level of the maintenance check flight as defined in point NCO.SPEC.MCF.100.

NCO.SPEC.MCF.125 Crew composition and persons on board

The pilot-in-command shall identify the need for additional crew members or task specialists, or both, before each intended maintenance check flight, taking into consideration the expected flight crew member or task specialist workload and the risk assessment.

The pilot-in-command shall not allow persons on board other than those required under point (a) during a “Level A” maintenance check flight.

NCO.SPEC.MCF.130 Simulated abnormal or emergency procedures in flight

By way of derogation from NCO.SPEC.145, a pilot-in-command may simulate situations that require the application of abnormal or emergency procedures with a task specialist on board if the simulation is required to meet the intention of the flight and if it has been identified in the check list referred to in NCO.SPEC.MCF.110 or in operating procedures.

NCO.SPEC.MCF.140 Systems and equipment

When a maintenance check flight is intended to check the proper functioning of a system or equipment, that system or equipment shall be identified as potentially unreliable, and appropriate mitigation measures shall be agreed prior to the flight in order to minimise risks to flight safety."

I. Libyan Civil Aviation Regulation 5 of 2020 on Air operations is amended by the replacement of Part Specialised Operations - Part SPO as follows:

"PART SPECIALISED OPERATIONS

[PART-SPO]

SPO.GEN.005 Scope

This Part applies to any specialised operation where the aircraft is used for specialised activities such as agriculture, construction, photography, surveying, observation and patrol, aerial advertisement or maintenance check flights.

Notwithstanding (a), non-commercial specialised operations with other-than complex motor-powered aircraft shall comply with Part-NCO.

Notwithstanding point (a), the following operations with other-than complex motor-powered aircraft may be conducted in accordance with Part-NCO:

competition flights or flying displays, on the condition that the remuneration or any valuable consideration given for such flights is limited to recovery of direct costs and a proportionate contribution to annual costs, as well as prizes of no more than a value specified by the competent authority.

parachute dropping, sailplane towing or aerobatic flights performed either by a training organisation approved in accordance with LYCARs 5 of 2021 on Aircrew Licensing, or by an organisation created with the aim of promoting aerial sport or leisure aviation, on the condition that the aircraft is operated by the organisation on the basis of ownership or dry lease, that the flight does not generate profits distributed outside of the organisation, and that whenever non-members of the organisation are involved, such flights represent only a marginal activity of the organisation.

SUBPART A GENERAL REQUIREMENTS

SPO.GEN.100 Competent Authority

The competent authority shall be the authority designated by the State in which the operator has its principal place of business, is established or is residing.

SPO.GEN.101 Means of compliance

Alternative means of compliance to those issued by the Authority may be used by an operator to establish compliance with the Civil Aviation Law and Regulations if such Alternative Means of Compliance are first approved by the Authority.

SPO.GEN.105 Crew responsibilities

The crew member shall be responsible for the proper execution of his/her duties. Crew duties shall be specified in the standard operating procedures (SOP) and, where appropriate, in the operations manual.

During critical phases of the flight or whenever deemed necessary by the pilot-in-command in the interest of safety, the crew member shall be restrained at his/her assigned station unless otherwise specified in the SOP.

During flight, the flight crew member shall keep his/her safety belt fastened while at his/her station.

During flight, at least one qualified flight crew member shall remain at the controls of the aircraft at all times. (e) The crew member shall not undertake duties on an aircraft:

if he/she knows or suspects that he/she is suffering from fatigue if he/she knows or suspects that he/she is suffering from fatigue or feels otherwise unfit such that his/her task achievement/decision making has deteriorated to the extent that the flight may be endangered.; or

when under the influence of psychoactive substances or when unfit due to injury, fatigue, medication, sickness or other similar causes;

The crew member who undertakes duties for more than one operator shall:

maintain his/her individual records regarding flight and duty times and rest periods as referred to in applicable FTL requirements; if applicable; and

provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements.

The crew member shall report to the pilot-in-command:

any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

any incident that was endangering, or could endanger, the safety of the operation.

SPO.GEN.106 Task specialists responsibilities

The task specialist shall be responsible for the proper execution of his/her duties. Task specialists' duties shall be specified in the SOP.

During critical phases of flight or whenever deemed necessary by the pilot-in-command in the interest of safety, the task specialist shall be restrained at his/her assigned station unless otherwise specified in the SOP.

The task specialist shall ensure that he/she is restrained when carrying out specialised tasks with external doors opened or removed.

The task specialist shall report to the pilot-in-command:

any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

any incident that was endangering, or could endanger, the safety of the operation.

SPO.GEN.107 Pilot-in-command responsibilities and authority

The pilot-in-command shall be responsible for:

the safety of the aircraft and of all crew members, task specialists and cargo on board during aircraft operations;

the initiation, continuation, termination or diversion of a flight in the interest of safety;

ensuring that all operational procedures and checklists are complied with in accordance with the appropriate manual;

only commencing a flight if he/she is satisfied that all operational limitations are complied with, as follows:

the aircraft is airworthy;

the aircraft is duly registered;

instruments and equipment required for the execution of that flight are installed in the aircraft and are operative, unless operation with inoperative equipment is permitted by the minimum equipment list (MEL) or equivalent document, if applicable, as required in SPO.IDE.A.105, or SPO.IDE.H.105;

the mass of the aircraft and the centre of gravity location are such that the flight can be conducted within limits prescribed in the airworthiness documentation;

all equipment and baggage is properly loaded and secured; and

the aircraft operating limitations as specified in the aircraft flight manual (AFM) will not be exceeded at any time during the flight;

any navigational database required for PBN is suitable and current;

not commencing a flight if he/she, or any other crew member or task specialist is incapacitated from performing duties by any cause such as injury, sickness, fatigue or the effects of any psychoactive substance;

not continuing a flight beyond the nearest weather-permissible aerodrome or operating site when his/ her or any other crew member or task specialist's capacity to perform duties is significantly reduced from causes such as fatigue, sickness or lack of oxygen;

deciding on acceptance of the aircraft with unserviceabilities in accordance with the configuration deviation list (CDL) or MEL, if applicable;

recording utilisation data and all known or suspected defects in the aircraft at the termination of the flight, or series of flights, in the aircraft technical log or journey log for the aircraft; and

ensuring that:

flight recorders are not disabled or switched off during flight;

in the event of an occurrence other than an accident or a serious incident that shall be reported according to ORO.GEN.160(a), flight recorders' recordings are not intentionally erased; and

in the event of an accident or a serious incident, or if preservation of recordings of flight recorders is directed by the investigating authority:

flight recorders' recordings are not intentionally erased;

flight recorders are deactivated immediately after the flight is completed; and

precautionary measures to preserve the recordings of flight recorders are taken before leaving the flight crew compartment.

The pilot-in-command shall have the authority to refuse carriage of or disembark any person or cargo that may represent a potential hazard to the safety of the aircraft or its occupants.

The pilot-in-command shall, as soon as possible, report to the appropriate air traffic services (ATS) unit any hazardous weather or flight conditions encountered that are likely to affect the safety of other aircraft.

Notwithstanding the provision of (a)(6), in a multi-crew operation the pilot-in-command may continue a flight beyond the nearest weather-permissible aerodrome when adequate mitigating procedures are in place.

The pilot-in-command shall, in an emergency situation that requires immediate decision and action, take any action he/she considers necessary in the interest of safety. In such cases he/she may deviate from rules, operational procedures and methods. In the event of any such deviation the pilot-in-command is responsible for notifying the appropriate local authority without delay.

The pilot-in-command shall submit a report of an act of unlawful interference without delay to the Authority and shall inform the designated local authority.

The pilot-in-command shall notify the nearest appropriate authority by the quickest available means of any accident involving the aircraft that results in serious injury or death of any person or substantial damage to the aircraft or property.

SPO.GEN.110 Compliance with laws, regulations and procedures

The pilot-in-command, crew members and task specialists shall comply with the laws, regulations and procedures of those States where operations are conducted.

SPO.GEN.115 Common language

The operator shall ensure that all crew members and task specialists are able to communicate with each other in a common language.

SPO.GEN.119 Taxiing of aircraft

The operator shall establish procedures for taxiing of aircraft in order to ensure safe operation and in order to enhance runway safety.

SPO.GEN.120 Taxiing of aeroplanes

The operator shall ensure that an aeroplane is only taxied on the movement area of an aerodrome if the person at the controls:

is an appropriately qualified pilot; or

has been designated by the operator and:

is trained to taxi the aeroplane;

is trained to use the radio telephone, if radio communications are required;

has received instruction in respect of aerodrome layout, routes, signs, marking, lights, air traffic control (ATC) signals and instructions, phraseology and procedures; and

is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.

SPO.GEN.125 Rotor engagement

A helicopter rotor shall only be turned under power for the purpose of flight with a qualified pilot at the controls.

SPO.GEN.130 Portable electronic devices

The operator shall not permit any person to use a portable electronic device (PED) on board an aircraft that could adversely affect the performance of the aircraft's systems and equipment.

SPO.GEN.131 Use of electronic flight bags (EFBs)

Where an EFB is used on board an aircraft, the operator shall ensure that it does not adversely affect the performance of the aircraft systems or equipment, or the ability of the flight crew member to operate the aircraft.

Prior to using a type B EFB application, the operator shall:

conduct a risk assessment related to the use of the EFB device that hosts the application, to the EFB application concerned and its associated function(s), identifying the associated risks and ensuring that they are appropriately mitigated; the risk assessment shall address the risks associated with the human- machine interface of the EFB device and the EFB application concerned; and

establish an EFB administration system, including procedures and training requirements for the administration and use of the EFB device and the EFB application.

SPO.GEN.135 Information on emergency and survival equipment carried

The operator shall, at all times, have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board.

SPO.GEN.140 Documents, manuals and information to be carried

The following documents, manuals and information shall be carried on each flight as originals or copies unless otherwise specified below:

the AFM, or equivalent document(s);

the original certificate of registration;

the original certificate of airworthiness (CofA);

the noise certificate, if applicable;

a copy of the declaration as specified in ORO.DEC.100 and, if applicable, a copy of the authorisation as specified in ORO.SPO.110;

the list of specific approvals, if applicable;

the aircraft radio licence, if applicable;

the third party liability insurance certificate(s);

the journey log, or equivalent, for the aircraft;

the aircraft technical log, in accordance with Part-M to LYCAR if applicable;

details of the filed ATS flight plan, if applicable;

current and suitable aeronautical charts for the route/area of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

procedures and visual signals information for use by intercepting and intercepted aircraft;

information concerning search and rescue services for the area of the intended flight;

the current parts of the operations manual and/or SOP or AFM that are relevant to the duties of crew members and task specialists, which shall be easily accessible to them;

the MEL or CDL, if applicable;

appropriate notices to airmen (NOTAMs) and aeronautical information service (AIS) briefing documentation;

appropriate meteorological information, if applicable;

cargo manifests, if applicable; and

any other documentation that may be pertinent to the flight or is required by the States concerned with the flight.

Notwithstanding (a), the documents and information in (a)(2) to (a)(11) and (a)(14), (a)(17), (a)(18) and (a)(19) may be retained at the aerodrome or operating site on flights:

intending to take off and land at the same aerodrome or operating site; or

remaining within a distance or area determined by the Authority in accordance with ARO.OPS.210.

In case of loss or theft of documents specified in (a)(2) to (a)(8), the operation may continue until the flight reaches its destination or a place where replacement documents can be provided.

The operator shall make available, within a reasonable time of being requested to do so by the Authority, the documentation required to be carried on board.

SPO.GEN.145 Handling of flight recorder recordings: preservation, production, protection and use

Following an accident, a serious incident or an occurrence identified by the investigating authority, the operator of an aircraft shall preserve the original recorded data of the flight recorders for a period of 60 days or until otherwise directed by the investigating authority.

The operator shall conduct operational checks and evaluations of recordings to ensure the continued serviceability of the flight recorders which are required to be carried.

The operator shall ensure that the recordings of flight parameters and data link communication messages required to be recorded on flight recorders are preserved. However, for the purpose of testing and maintaining those flight recorders, up to 1 hour of the oldest recorded data at the time of testing may be erased.

The operator shall keep and maintain up-to-date documentation that presents the necessary information to convert raw flight data into flight parameters expressed in engineering units.

The operator shall make available any flight recorder recordings that has have been preserved, if so determined by the Authority.

Without prejudice to the Libyan Aircraft Accident and Incident Investigations Regulations and except for ensuring flight recorder serviceability,

audio recordings from a flight recorder shall not be disclosed or used unless all the following conditions are fulfilled:,

a procedure related to the handling of such audio recordings and of their transcript is in place;

all crew members and maintenance personnel concerned have given their prior consent;

such audio recordings are used only for maintaining or improving safety

(1a) When flight recorder audio recordings are inspected for ensuring the flight recorder serviceability, the operator shall protect the privacy of those audio recordings and make sure that they are not disclosed or used for other purposes than ensuring flight recorder serviceability.

Flight parameters or data link messages recorded by a flight recorder shall not be used for purposes other than for the investigation of an accident or an incident that is subject to mandatory reporting. That limitation shall not apply, unless such recordings meet any of the following conditions:

are used by the operator for airworthiness or maintenance purposes only;

are de-identified;

are disclosed under secure procedures.

Except for ensuring flight recorder serviceability, images of the flight crew compartment that are recorded by a flight recorder shall not be disclosed or used unless all of the following conditions are fulfilled:

a procedure related to the handling of such image recordings is in place;

all crew members and maintenance personnel concerned have given their prior consent;

such image recordings are used only for maintaining or improving safety.

(3a) When images of the flight crew compartment that are recorded by a flight recorder are inspected for ensuring the serviceability of the flight recorder, then:

those images shall not be disclosed or used for purposes other than ensuring flight recorder serviceability;

if body parts of crew members are likely to be visible on the images, the operator shall ensure the privacy of those images.

SPO.GEN.150 Transport of dangerous goods

The transport of dangerous goods by air shall be conducted in accordance with Annex 18 to the Chicago Convention as last amended and amplified by the Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Doc 9284-AN/905), including its attachments, supplements and any other addenda or corrigenda.

Dangerous goods shall only be transported by an operator approved in accordance with Part-SPA), subpart G, to this Regulation except when:

they are not subject to the Technical Instructions in accordance with Part 1 of those Instructions;

they are carried by task specialists or crew members or are in baggage which has been separated from its owner, in accordance with Part 8 of the Technical Instructions;

required on board the aircraft for specialised purposes in accordance with the Technical Instructions;

they are carried on board the aircraft in connection with specialized purposes in accordance with the Technical Instructions where carriage aboard the aircraft is reasonable to ensure their timely availability for operational purposes, whether or not such articles and substances are required to be carried or intended to be used in connection with a particular flight.

The operator shall establish procedures to ensure that all reasonable measures are taken to prevent dangerous goods from being carried on board inadvertently.

The operator shall provide personnel with the necessary information enabling them to carry out their responsibilities, as required by the Technical Instructions.

The operator shall, in accordance with the Technical Instructions, report without delay to the LYCAA and the appropriate authority of the State of occurrence in the event of:

any dangerous good accident or incidents;

the finding of dangerous goods carried by task specialists or crew, or in their baggage, when not in accordance with Part 8 of the Technical Instructions.

The operator shall ensure that task specialists are provided with information about dangerous goods.

The operator shall ensure that notices giving information about the transport of dangerous goods are provided at acceptance points for cargo as required by the Technical Instructions.

SPO.GEN.155 Release of dangerous goods

The operator shall not operate an aircraft over congested areas of cities, towns or settlements or over an open air assembly of persons when releasing dangerous goods.

SPO.GEN.160 Carriage and use of weapons

The operator shall ensure that, when weapons are carried on a flight for the purpose of a specialised task, these are secured when not in use.

The task specialist using the weapon shall take all necessary measures to prevent the aircraft and persons on board or on the ground from being endangered.

SPO.GEN.165 Admission to the flight crew compartment

The pilot-in-command shall make the final decision regarding the admission to the flight crew compartment and shall ensure that:

admission to the flight crew compartment does not cause distraction or interference with the operation of the flight; and

all persons carried in the flight crew compartment are made familiar with the relevant safety procedures.

SUBPART B OPERATIONAL PROCEDURES

SPO.OP.100 Use of aerodromes and operating sites

The operator shall only use aerodromes and operating sites that are adequate for the type of aircraft and operation concerned.

SPO.OP.105 Specification of isolated aerodromes - aeroplanes

For the selection of alternate aerodromes and the fuel policy, the operator shall consider an aerodrome as an isolated aerodrome if the flying time to the nearest adequate destination alternate aerodrome is more than:

for aeroplanes with reciprocating engines, 60 minutes; or

for aeroplanes with turbine engines, 90 minutes.

SPO.OP.110 Aerodrome operating minima - aeroplanes and helicopters

For instrument flight rules (IFR) flights, the operator or the pilot-in-command shall specify aerodrome operating minima for each departure, destination and alternate aerodrome to be used. Such minima shall:

not be lower than those established by the State in which the aerodrome is located, except when specifically approved by that State; and

when undertaking low visibility operations, be approved by the Authority in accordance with Part-SPA, Subpart E to this Regulation.

When specifying the aerodrome operating minima, the operator or the pilot-in-command shall take the following into account:

the type, performance and handling characteristics of the aircraft;

the competence and experience of the flight crew and, if applicable, its composition;

the dimensions and characteristics of the runways and final approach and take-off areas (FATOs) that may be selected for use;

the adequacy and performance of the available visual and non-visual ground aids;

the equipment available on the aircraft for the purpose of navigation and/or control of the flight path, during the take-off, the approach, the flare, the landing, the rollout and the missed approach;

the obstacles in the approach, the missed approach and the climb-out areas required for the execution of contingency procedures;

the obstacle clearance altitude/height for the instrument approach procedures;

the means to determine and report meteorological conditions; and

the flight technique to be used during the final approach.

The minima for a specific type of approach and landing procedure shall only be used if:

the ground equipment required for the intended procedure is operative;

the aircraft systems required for the type of approach are operative;

the required aircraft performance criteria are met; and

the flight crew is qualified appropriately.

SPO.OP.111 Aerodrome operating minima - NPA, APV, CAT I operations

The decision height (DH) to be used for a non-precision approach (NPA) flown with the continuous descent final approach (CDFA) technique, approach procedure with vertical guidance (APV) or category I (CAT I) operation shall not be lower than the highest of:

the minimum height to which the approach aid can be used without the required visual reference;

the obstacle clearance height (OCH) for the category of aircraft;

the published approach procedure DH where applicable;

the system minimum specified in Table 1; or

the minimum DH specified in the AFM or equivalent document, if stated.

The minimum descent height (MDH) for an NPA operation flown without the CDFA technique shall not be lower than the highest of:

the OCH for the category of aircraft;

the system minimum specified in Table 1; or

the minimum MDH specified in the AFM, if stated.

Table 1

System

F	Lowest
Instrument landing system	
G navi sa s GNSS)/satellite-augment s S l pre ' v guidance approach	
GNSS (lateral navigation	
GNSS/Baro-vertical navigation (VNAV)	
Loc without dis meas equip	
Surveillance radar approach (SRA) (terminating at ½	
SRA (terminating at 1	

SRA (terminating at 2 NM or more)	
VHF omnidirectional radio range (VOR)	
VOR/	
Non-directional beacon (NDB)	
NDB/	
VHF direction finder (VDF)	

SPO.OP.112 Aerodrome operating minima - circling operations with aeroplanes

The MDH for a circling operation with aeroplanes shall not be lower than the highest of:

the published circling OCH for the aeroplane category;

the minimum circling height derived from Table 1; or

the DH/MDH of the preceding instrument approach procedure.

The minimum visibility for a circling operation with aeroplanes shall be the highest of:

the circling visibility for the aeroplane category, if published;

the minimum visibility derived from Table 2; or

the runway visual range/converted meteorological visibility (RVR/CMV) of the preceding instrument approach procedure.

Table 1 MDH and minimum visibility for circling vs. aeroplane category

	Aeroplane			
MD				
Minimum meteorological visibility (m)				

SPO.OP.113 Aerodrome operating minima - onshore circling operations with helicopters

The MDH for an onshore circling operation with helicopters shall not be lower than 250 ft and the meteorological visibility not less than 800 m.

SPO.OP.115 Departure and approach procedures - aeroplanes and helicopters

The pilot-in-command shall use the departure and approach procedures established by the State of the aerodrome, if such procedures have been published for the runway or FATO to be used.

The pilot-in-command may deviate from a published departure route, arrival route or approach procedure:

provided obstacle clearance criteria can be observed, full account is taken of the operating conditions and any ATC clearance is adhered to; or

when being radar-vectored by an ATC unit.

In the case of operations with complex motor-powered aircraft, the final approach segment shall be flown visually or in accordance with the published approach procedures.

SPO.OP.116 Performance-based navigation - aeroplanes and helicopters

The operator shall ensure that, when PBN is required for the route or procedure to be flown:

the relevant PBN specification is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; and

the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document mentioned above.

SPO.OP.120 Noise abatement procedures

The pilot-in-command shall take into account published noise abatement procedures to minimise the effect of aircraft noise while ensuring that safety has priority over noise abatement.

SPO.OP.125 Minimum obstacle clearance altitudes - IFR flights

The operator shall specify a method to establish minimum flight altitudes that provide the required terrain clearance for all route segments to be flown in IFR.

The pilot-in-command shall establish minimum flight altitudes for each flight based on this method. The minimum flight altitudes shall not be lower than those published by the State overflown.

SPO.OP.130 Fuel and oil supply - aeroplanes

The pilot-in-command shall only commence a flight if the aeroplane carries sufficient fuel and oil for the following:

for visual flight rules (VFR) flights:

by day, to fly to the aerodrome of intended landing and thereafter to fly for at least 30 minutes at normal cruising altitude; or

by night, to fly to the aerodrome of intended landing and thereafter to fly for at least 45 minutes at normal cruising altitude;

for IFR flights:

when no destination alternate is required, to fly to the aerodrome of intended landing and thereafter to fly for at least 45 minutes at normal cruising altitude; or

when a destination alternate is required, to fly to the aerodrome of intended landing, to an alternate aerodrome and thereafter to fly for at least 45 minutes at normal cruising altitude.

In computing the fuel required, including providing for contingency, the following shall be taken into consideration:

forecast meteorological conditions;

anticipated ATC routings and traffic delays;

procedures for loss of pressurisation or failure of one engine while en-route, where applicable; and

any other condition that may delay the landing of the aeroplane or increase fuel and/or oil consumption.

Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is replanned.

SPO.OP.131 Fuel and oil supply - helicopters

The pilot-in-command shall only commence a flight if the helicopter carries sufficient fuel and oil for the following:

for VFR flights:

to fly to the aerodrome/operating site of intended landing and thereafter to fly for at least 20 minutes at best-range-speed; or

for VFR flights by day, a reserve fuel of 10 minutes at best-range-speed provided the he/she remains within 25 NM of the aerodrome/operating site of departure; and

for IFR flights:

when no alternate is required or no weather-permissible alternate aerodrome is available, to fly to the aerodrome/operating site of intended landing, and thereafter to fly for 30 minutes at normal cruising speed at 450 m (1 500 ft) above the destination aerodrome/operating site under standard temperature conditions and approach and land; or

when an alternate is required, to fly to and execute an approach and a missed approach at the aerodrome/operating site of intended landing, and thereafter:

to fly to the specified alternate; and

to fly for 30 minutes at normal holding speed at 450 m (1 500 ft) above the alternate aerodrome/operating site under standard temperature conditions and approach and land.

In computing the fuel required, including providing for contingency, the following shall be taken into consideration:

forecast meteorological conditions;

anticipated ATC routings and traffic delays;

failure of one engine while en-route, where applicable; and

any other condition that may delay the landing of the aircraft or increase fuel and/or oil consumption.

Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is replanned.

SPO.OP.135 Safety briefing

The operator shall ensure that, prior to take-off task specialists are given a briefing on:

emergency equipment and procedures;

operational procedures associated with the specialised task before each flight or series of flights

The briefing referred to in (a)(2) may be replaced by an initial and recurrent training programme. In such case the operator shall also define recency requirements.

SPO.OP.140 Flight preparation

Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the space-based facilities, ground and/or water facilities including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.

Before commencing a flight, the pilot-in-command shall be familiar with all available meteorological information appropriate to the intended flight. Preparation for a flight away from the vicinity of the place of departure, and for every flight under IFR, shall include:

a study of available current weather reports and forecasts; and

the planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of weather conditions.

SPO.OP.145 Take-off alternate aerodromes - complex motor-powered aeroplanes

For IFR flights, the pilot-in-command shall specify at least one weather-permissible take-off alternate aerodrome in the flight plan if the weather conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or it would not be possible to return to the aerodrome of departure for other reasons.

The take-off alternate aerodrome shall be located within the following distance from the aerodrome of departure:

for aeroplanes having two engines, not more than a distance equivalent to a flight time of 1 hour at the single-engine cruise speed in still air standard conditions; and

for aeroplanes having three or more engines, not more than a distance equivalent to a flight time of 2 hours at the one-engine-inoperative (OEI) cruise speed according to the AFM in still air standard conditions.

For an aerodrome to be selected as a take-off alternate aerodrome the available information shall indicate that, at the estimated time of use, the conditions will be at or above the aerodrome operating minima for that operation.

SPO.OP.150 Destination alternate aerodromes - aeroplanes

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate aerodrome in the flight plan, unless:

the available current meteorological information indicates that, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period, the approach and landing may be made under visual meteorological conditions (VMC); or

the place of intended landing is isolated and:

an instrument approach procedure is prescribed for the aerodrome of intended landing; and

available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival, or from the actual time of departure to 2 hours after the estimated time of arrival whichever is the shorter period:

a cloud base of at least 300 m (1 000 ft) above the minimum associated with the instrument approach procedure; and

visibility of at least 5,5 km or of 4 km more than the minimum associated with the procedure.

SPO.OP.151 Destination alternate aerodromes - helicopters

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate aerodrome in the flight plan, unless:

an instrument approach procedure is prescribed for the aerodrome of intended landing and the available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival, or from the actual time of departure to 2 hours after the estimated time of arrival, whichever is the shorter period:

a cloud base of at least 120 m (400 ft) above the minimum associated with the instrument approach procedure; and

visibility of at least 1 500 m more than the minimum associated with the procedure; or

the place of intended landing is isolated and:

an instrument approach procedure is prescribed for the aerodrome of intended landing;

available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival:

the cloud base is at least 120 m (400 ft) above the minimum associated with the instrument approach procedure;

visibility is at least 1 500 m more than the minimum associated with the procedure; and

SPO.OP.152 Destination aerodromes - instrument approach operations

The pilot-in-command shall ensure that sufficient means are available to navigate and land at the destination aerodrome or at any destination alternate aerodrome in the case of loss of capability for the intended approach and landing operation.

SPO.OP.155 Refuelling with persons embarking, on board or disembarking

The aircraft shall not be refuelled with aviation gasoline (AVGAS) or wide-cut type fuel or a mixture of these types of fuel, when persons are embarking, on board or disembarking.

For all other types of fuel, necessary precautions shall be taken and the aircraft shall be properly manned by qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

SPO.OP.160 Use of headset

Each flight crew member required to be on duty in the flight crew compartment shall wear a headset with boom microphone, or equivalent, and use it as the primary device to communicate with ATS, other crew members and task specialists.

SPO.OP.165 Smoking

The pilot-in-command shall not allow smoking on board or during refuelling or defuelling of the aircraft.

SPO.OP.170 Meteorological conditions

The pilot-in-command shall only commence or continue a VFR flight if the latest available meteorological information indicates that the weather conditions along the route and at the intended destination at the estimated time of use will be at or above the applicable VFR operating minima.

The pilot-in-command shall only commence or continue an IFR flight towards the planned destination aerodrome if the latest available meteorological information indicates that, at the estimated time of arrival, the weather conditions at the destination or at least one destination alternate aerodrome are at or above the applicable aerodrome operating minima.

If a flight contains VFR and IFR segments, the meteorological information referred to in (a) and (b) shall be applicable as far as relevant.

SPO.OP.175 Ice and other contaminants - ground procedures

The pilot-in-command shall only commence take-off if the aircraft is clear of any deposit that might adversely affect the performance or controllability of the aircraft, except as permitted in the AFM.

In the case of operations with complex motor-powered aircraft, the operator shall establish procedures to be followed when ground de-icing and anti-icing and related inspections of the aircraft are necessary to allow the safe operation of the aircraft.

SPO.OP.176 Ice and other contaminants - flight procedures

The pilot-in-command shall only commence a flight or intentionally fly into expected or actual icing conditions if the aircraft is certified and equipped and/or treated to operate safely in such conditions..

If icing exceeds the intensity of icing for which the aircraft is certified or if an aircraft not certified for flight in known icing conditions encounters icing, the pilot-in-command shall exit the icing conditions without delay, by a change of level and/or route, and if necessary by declaring an emergency to ATC.

In the case of operations with complex motor-powered aircraft, the operator shall establish procedures for flights in expected or actual icing conditions.

SPO.OP.180 Take-off conditions - aeroplanes and helicopters

Before commencing take-off, the pilot-in-command shall be satisfied that:

according to the information available, the weather at the aerodrome or operating site and the condition of the runway or FATO intended to be used would not prevent a safe take-off and departure; and

applicable aerodrome operating minima will be complied with.

SPO.OP.185 Simulated situations in flight

Unless a task specialist is on-board the aircraft for training, the pilot-in-command shall, when carrying task specialists, not simulate:

situations that require the application of abnormal or emergency procedures; or

flight in instrument meteorological conditions (IMC).

SPO.OP.190 In-flight fuel management

The operator of a complex motor-powered aircraft shall ensure that in-flight fuel checks and fuel management are performed.

The pilot-in-command shall check at regular intervals that the amount of usable fuel remaining in flight is not less than the fuel required to proceed to a weather-permissible aerodrome or operating site and the planned reserve fuel as required by SPO.OP.130 and SPO.OP.131.

SPO.OP.195 Use of supplemental oxygen

The operator shall ensure that task specialists and crew members use supplemental oxygen continuously whenever the cabin altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft, unless otherwise approved by the Authority and in accordance with SOPs.

Notwithstanding (a) and except for parachute operations, short excursions of a specified duration above 13 000 ft without using supplemental oxygen on other-than-complex aeroplanes and helicopters may be undertaken with a prior approval of the LYCAA based on the consideration of the following:

the duration of the excursion above 13 000 ft is not more than 10 minutes or, if needed for a longer period, the time strictly necessary to the accomplishment of the specialised task;

the flight is not conducted above 16 000 ft;

the safety briefing in accordance with SPO.OP.135 includes adequate information to crew members and tasks specialists on the effects of hypoxia;

SOPs for the concerned operation reflecting (1), (2) and (3);

the previous experience of the operator in conducting operations above 13 000 ft without using supplemental oxygen;

the individual experience of crew members and task specialists and their physiological adaptation to high altitudes; and

the altitude of the base where the operator is established or the operations are conducted from.

SPO.OP.200 Ground proximity detection

When undue proximity to the ground is detected by a flight crew member or by a ground proximity warning system, the pilot flying shall take corrective action immediately in order to establish safe flight conditions.

The ground proximity warning system may be disabled during those specialised tasks, which by their nature require the aircraft to be operated within a distance from the ground below that which would trigger the ground proximity warning system.

SPO.OP.205 Airborne collision avoidance system (ACAS)

The operator shall establish operational procedures and training programmes when ACAS is installed and serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment

When ACAS II is used, such procedures and training shall ensure:

ACAS II shall be used during flight except as provided in the minimum equipment list, in a mode that enables RA indications to be produced for the flight crew when undue proximity to another aircraft is detected, unless inhibition of RA indication mode (using TA indication only or equivalent) is called for by an abnormal procedure or due to performance limiting conditions.

When an RA indication is produced by ACAS II:

the pilot flying shall immediately conform to the indications of the RA indication, even if this conflicts with an air traffic control (ATC) instruction, unless doing so would jeopardise the safety of the aircraft;

the flight crew, as soon as permitted by workload, shall notify the appropriate ATC unit of any RA which requires a deviation from the current ATC instruction or clearance;

when the conflict is resolved the aircraft shall:

be promptly returned to the terms of the acknowledged ATC instruction or clearance and ATC notified of the manoeuvre or

comply with any amended ATC clearance or instruction issued.

The ACAS II may be disabled during those specialised tasks, which by their nature require the aircraft to be operated within a distance from each other below that which would trigger the ACAS.

SPO.OP.210 Approach and landing conditions - aeroplanes and helicopters

Before commencing an approach to land, the pilot-in-command shall be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the runway or FATO intended to be used would not prevent a safe approach, landing or missed approach.

SPO.OP.211 Approach and landing conditions - helicopters

Before commencing an approach to land, the pilot-in-command shall be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the final approach and take-off area (FATO) intended to be used would not prevent a safe approach, landing or missed approach.

SPO.OP.215 Commencement and continuation of approach - aeroplanes and helicopters

The pilot-in-command may commence an instrument approach regardless of the reported runway visual range/visibility (RVR/VIS).

If the reported RVR/VIS is less than the applicable minimum, the approach shall not be continued:

below 1 000 ft above the aerodrome; or

into the final approach segment in the case where the decision altitude/height (DA/H) or minimum descent altitude/height (MDA/H) is more than 1 000 ft above the aerodrome,

Where the RVR is not available, RVR values may be derived by converting the reported visibility.

If, after passing 1 000 ft above the aerodrome, the reported RVR/VIS falls below the applicable minimum, the approach may be continued to DA/H or MDA/H.

The approach may be continued below DA/H or MDA/H and the landing may be completed provided that the visual reference adequate for the type of approach operation and for the intended runway is established at the DA/H or MDA/H and is maintained.

The touchdown zone RVR shall always be controlling.

SPO.OP.230 Standard operating procedures

Before commencing a specialised operation, the operator shall conduct a risk assessment, assessing the complexity of the activity to determine the hazards and associated risks inherent in the operation and establish mitigating measures.

Based on the risk assessment, the operator shall establish standard operating procedures (SOP) appropriate to the specialised activity and aircraft used taking account of the requirements of subpart E. The SOP shall be part of the operations manual or a separate document. SOP shall be regularly reviewed and updated, as appropriate.

The operator shall ensure that specialised operations are performed in accordance with SOP.

SUBPART C AIRCRAFT PERFORMANCE AND OPERATING LIMITATIONS

SPO.POL.100 Operating limitations - all aircraft

During any phase of operation, the loading, the mass and the centre of gravity (CG) position of the aircraft shall comply with any limitation specified in the appropriate manual.

Placards, listings, instrument markings, or combinations thereof, containing those operating limitations prescribed by the AFM for visual presentation, shall be displayed in the aircraft.

SPO.POL.105 Mass and balance

The operator shall ensure that the mass and the CG of the aircraft have been established by actual weighing prior to initial entry into service. The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented. Such information shall be made available to the pilot-in-command. The aircraft shall be reweighed if the effect of modifications on the mass and balance is not accurately known.

The weighing shall be accomplished by the manufacturer of the aircraft or by an approved maintenance organisation;

SPO.POL.110 Mass and balance system - commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft

The operator shall establish a mass and balance system in order to determine for each flight or series of flights the following:

aircraft dry operating mass;

mass of the traffic load;

mass of the fuel load;

aircraft load and load distribution;

take-off mass, landing mass and zero fuel mass;

applicable aircraft CG positions.

The flight crew shall be provided with a means of replicating and verifying any mass and balance computation based on electronic calculations.

The operator shall establish procedures to enable the pilot-in-command to determine the mass of the fuel load by using the actual density or, if not known, the density calculated in accordance with a method specified in the operations manual.

The pilot-in-command shall ensure that the loading of:

the aircraft is performed under the supervision of qualified personnel; and

traffic load is consistent with the data used for the calculation of the aircraft mass and balance.

The operator shall specify, in the operations manual, the principles and methods involved in the loading and in the mass and balance system that meet the requirements contained in (a) to (d). This system shall cover all types of intended operations.

SPO.POL.115 Mass and balance data and documentation - commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft

The operator shall establish mass and balance data and produce mass and balance documentation prior to each flight, or series of flights, specifying the load and its distribution in such a way that the mass and balance limits of the aircraft are not exceeded. The mass and balance documentation shall contain the following information:

aircraft registration and type;

flight identification, number and date, as applicable;

name of the pilot-in-command;

name of the person who prepared the document;

dry operating mass and the corresponding CG of the aircraft;

mass of the fuel at take-off and the mass of trip fuel;

mass of consumables other than fuel, if applicable;

load components;

take-off mass, landing mass and zero fuel mass;

applicable aircraft CG positions; and

the limiting mass and CG values.

Where mass and balance data and documentation is generated by a computerised mass and balance system, the operator shall verify the integrity of the output data.

SPO.POL.116 Mass and balance data and documentation - alleviations

Notwithstanding SPO.POL.115(a)(5), the CG position may not need not be on the mass and balance documentation, if the load distribution is in accordance with a pre-calculated balance table or if it can be shown that for the planned operations a correct balance can be ensured, whatever the real load is.

SPO.POL.120 Performance - general

The pilot-in-command shall only operate the aircraft if the performance is adequate to comply with the applicable rules of the air and any other restrictions applicable to the flight, the airspace or the aerodromes or operating sites used, taking into account the charting accuracy of any charts and maps used.

SPO.POL.125 Take-off mass limitations - complex motor-powered aeroplanes

The operator shall ensure that:

the mass of the aeroplane at the start of take-off shall not exceed the mass limitations:

at take-off, as required in SPO.POL.130;

en-route with one engine inoperative (OEI), as required in SPO.POL.135; and

at landing, as required in SPO.POL.140,allowing for expected reductions in mass as the flight proceeds, and for fuel jettisoning;

the mass at the start of take-off shall never exceed the maximum take-off mass specified in the AFM for the pressure altitude appropriate to the elevation of the aerodrome or operating site, and if used as a parameter to determine the maximum take-off mass, any other local atmospheric condition; and

the estimated mass for the expected time of landing at the aerodrome or operating site of intended landing and at any destination alternate aerodrome shall never exceed the maximum landing mass specified in the AFM for the pressure altitude appropriate to the elevation of those aerodromes or operating sites and if used as a parameter to determine the maximum landing mass, any other local atmospheric condition.

SPO.POL.130 Take-off - complex motor-powered aeroplanes

When determining the maximum take-off mass, the pilot-in-command shall take the following into account:

the calculated take-off distance shall not exceed the take-off distance available with a clearway distance not exceeding half of the take-off run available;

the calculated take-off run shall not exceed the take-off run available

a single value of V1 shall be used for the rejected and continued take-off, where a V1 is specified in the AFM; and

on a wet or contaminated runway, the take-off mass shall not exceed that permitted for a take-off on a dry runway under the same conditions.

Except for an aeroplane equipped with turboprop engines and a maximum take-off mass at or below 5 700 kg, in the event of an engine failure during take-off, the pilot-in-command shall ensure that the aeroplane is able:

to discontinue the take-off and stop within the accelerate-stop distance available or the runway available; or

to continue the take-off and clear all obstacles along the flight path by an adequate margin until the aeroplane is in a position to comply with SPO.POL.135.

SPO.POL.135 En-route - one engine inoperative - complex motor-powered aeroplanes

The pilot-in-command shall ensure that in the event of an engine becoming inoperative at any point along the route, a multi-engined aeroplane shall be able to continue the flight to an adequate aerodrome or operating site without flying below the minimum obstacle clearance altitude at any point.

SPO.POL.140 Landing - complex motor-powered aeroplanes

The pilot-in-command shall ensure that at any aerodrome or operating site, after clearing all obstacles in the approach path by a safe margin, the aeroplane shall be able to land and stop, or a seaplane to come to a satisfactory low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.

SPO.POL.145 Performance and operating criteria - aeroplanes

When operating an aeroplane at a height of less than 150 m (500 ft) above a non-congested area, for operations of aeroplanes that are not able to sustain level flight in the event of a critical engine failure, the operator shall:

establish operational procedures to minimise the consequences of an engine failure;

establish a training programme for crew members; and

ensure that all crew members and task specialists on board are briefed on the procedures to be carried out in the event of a forced landing.

SPO.POL.146 Performance and operating criteria - helicopters

The pilot-in-command may operate an aircraft over congested areas provided that:

the helicopter is certified in category A or B; and

safety measures are established to prevent undue hazard to persons or property on the ground and the operation and its SOP is authorised.

The operator shall:

establish operational procedures to minimise the consequences of an engine failure;

establish a training programme for crew members; and

ensure that all crew members and task specialists on board are briefed on the procedures to be carried out in the event of a forced landing.

The operator shall ensure that the mass at take-off, landing or hover shall not exceed the maximum mass specified for:

a hover out of ground effect (HOGE) with all engines operating at the appropriate power rating; or

if conditions prevail that a HOGE is not likely to be established, the helicopter mass shall not exceed the maximum mass specified for a hover in ground effect (HIGE) with all engines operating at the appropriate power rating, provided prevailing conditions allow a hover in ground effect at the maximum specified mass.

SUBPART D INSTRUMENTS, DATA AND EQUIPMENT

SECTION 1 Aeroplanes

SPO.IDE.A.100 Instruments and equipment - general

Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements if they are:

used by the flight crew to control the flight path;

used to comply with SPO.IDE.A.215; (3) used to comply with SPO.IDE.A.220; or

(4) installed in the aeroplane.

The following items, when required by this Subpart, do not need an equipment approval:

spare fuses,

independent portable lights,

an accurate time piece,

chart holder,

first-aid kits,

survival and signalling equipment,

sea anchor and equipment for mooring.

a simple PCDS used by a task specialist as a restraint device.

Instruments equipment or accessories not required under this Part-SPO as well as any other equipment which is not required under this Regulation, but is carried on a flight, shall comply with the following requirements:

the information provided by these instruments, equipment or accessories shall not be used by the flight crew members to comply with the applicable airworthiness requirements or SPO.IDE.A.215 and SPO.IDE.A.220;

the instruments equipment or accessories shall not affect the airworthiness of the aeroplane, even in the case of failures or malfunction.

Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.

Those instruments that are used by a flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision which he/she normally assumes when looking forward along the flight path.

All required emergency equipment shall be easily accessible for immediate use.

SPO.IDE.A.105 Minimum equipment for flight

A flight shall not be commenced when any of the aeroplane's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless either of the following conditions is fulfilled:

the aeroplane is operated in accordance with the minimum equipment list (MEL);

for complex-motor-powered aeroplanes and for any aeroplane used in commercial operations, the operator is approved by the Authority to operate the aeroplane within the constraints of the master minimum equipment list (MMEL) in accordance with point ORO.MLR.105(j) of Part ORO;

the aeroplane is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

SPO.IDE.A.110 Spare electrical fuses

Aeroplanes shall be equipped with spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are allowed to be replaced in flight.

SPO.IDE.A.115 Operating lights

Aeroplanes operated at night shall be equipped with:

an anti-collision light system;

navigation/position lights;

a landing light;

lighting supplied from the aeroplane's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aeroplane;

lighting supplied from the aeroplane's electrical system to provide illumination in all cabin compartments;

an independent portable light for each crew member station; and

lights to conform with the International Regulations for Preventing Collisions at Sea if the aeroplane is operated as a seaplane.

SPO.IDE.A.120 Operations under VFR - flight and navigational instruments and associated equipment

Aeroplanes operated under VFR by day shall be equipped with a means of measuring and displaying the following:

magnetic heading,

time in hours, minutes and seconds,

barometric altitude,

indicated airspeed,

Mach number whenever speed limitations are expressed in terms of Mach number, and

slip for complex motor-powered aeroplanes.

Aeroplanes operating under VMC at night shall be, in addition to (a), equipped with:

a means of measuring and displaying the following:

turn and slip,

attitude,

vertical speed, and (iv) stabilised heading;

a means of indicating when the supply of power to the gyroscopic instruments is not adequate.

Complex motor-powered aeroplanes operating under VMC over water and out of sight of the land shall be, in addition to (a) and (b), equipped with a means of preventing malfunction of the airspeed indicating system due to condensation or icing.

Aeroplanes operated in conditions where they cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a) and (b), equipped with a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

Whenever two pilots are required for the operation, aeroplanes shall be equipped with an additional separate means of displaying the following:

barometric altitude,

indicated airspeed,

slip, or turn and slip, as applicable,

attitude, if applicable,

vertical speed, if applicable

stabilised heading, if applicable, and

Mach number whenever speed limitations are expressed in terms of Mach number, if applicable.

SPO.IDE.A.125 Operations under IFR - flight and navigational instruments and associated equipment

Aeroplanes operated under IFR shall be equipped with:

a means of measuring and displaying the following:

magnetic heading,

time in hours, minutes and seconds,

barometric altitude,

indicated airspeed,

vertical speed,

turn and slip,

attitude,

stabilised heading,

outside air temperature, and

Mach number, whenever speed limitations are expressed in terms of Mach number;

a means of indicating when the supply of power to the gyroscopic instruments is not adequate.

whenever two pilots are required for the operation, an additional separate means of displaying for the second pilot:

barometric altitude,

indicated airspeed,

vertical speed,

turn and slip,

attitude,

stabilised heading, and

Mach number whenever speed limitations are expressed in terms of Mach number, if applicable;

a means of preventing malfunction of the airspeed indicating system required in (a)(4) and (c)(2) due to condensation or icing; and

complex motor-powered aeroplanes when operated under IFR shall, in addition to (a), (b), (c) and (d), be equipped with:

an alternate source of static pressure;

a chart holder in an easily readable position that can be illuminated for night operations;

a second independent means of measuring and displaying altitude unless already installed to comply with (e)(1); and

an emergency power supply, independent of the main electrical generating system, for the purpose of operating and illuminating an attitude indicating system for a minimum period of 30 minutes. The emergency power supply shall be automatically operative after the total failure of the main electrical generating system and clear indication shall be given on the instrument or on the instrument panel that the attitude indicator is being operated by emergency power.

SPO.IDE.A.126 Additional equipment for single-pilot operation under IFR

Complex motor-powered aeroplanes operated under IFR with a single pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

SPO.IDE.A.130 Terrain awareness warning system (TAWS)

Turbine-powered aeroplanes with a maximum certified take-off mass (MCTOM) of more than 5 700 kg or an MOPSC of more than nine shall be equipped with a TAWS that meets the requirements for:

class A equipment, as specified in an acceptable standard, in the case of aeroplanes for which the individual certificate of airworthiness (CofA) was first issued after 1 January 2011; or

class B equipment, as specified in an acceptable standard, in the case of aeroplanes for which the individual CofA was first issued on or before 1 January 2011.

When used in commercial operations, turbine-powered aeroplanes for which the individual CofA was first issued after 1 January 2019 and having an MCTOM of 5 700 kg or less and an MOPSC of six to nine shall be equipped with a TAWS that meets the requirements for class B equipment, as specified in an acceptable standard.

SPO.IDE.A.131 Airborne collision avoidance system (ACAS II)

Turbine-powered aeroplanes with an MCTOM of more than 5 700 kg shall be equipped with ACAS II.

SPO.IDE.A.132 Airborne weather detecting equipment - complex motor-powered aeroplanes

The following aeroplanes shall be equipped with airborne weather detecting equipment when operated at night or in IMC in areas where thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route:

pressurised aeroplanes;

non-pressurised aeroplanes with an MCTOM of more than 5 700 kg.

SPO.IDE.A.133 Additional equipment for operations in icing conditions at night - complex motorpowered aeroplanes

Aeroplanes operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

The means to illuminate the formation of ice shall not cause glare or reflection that would handicap flight crew members in the performance of their duties.

SPO.IDE.A.135 Flight crew interphone system

Aeroplanes operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

SPO.IDE.A.140 Cockpit voice recorder

The following aeroplanes shall be equipped with a CVR:

aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2016; and

aeroplanes with an MCTOM of more than 2 250 kg:

(i) certified for operation with a minimum crew of at least two pilots; (ii) equipped

with turbojet engine(s) or more than one turboprop engine; and

(iii) for which a type certificate is first issued on or after 1 January 2016.

The CVR shall be capable of retaining data recorded during at least:

the preceding 25 hours for aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2022; or

the preceding 2 hours in all other cases.

The CVR shall record with reference to a timescale:

voice communications transmitted from or received in the flight crew compartment by radio;

flight crew members' voice communications using the interphone system and the public address system, if installed;

the aural environment of the flight crew compartment, including, without interruption, the audio signals received from each boom and mask microphone in use; and

voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

The CVR shall start automatically to record prior to the aeroplane moving under its own power and shall continue to record until the termination of the flight when the aeroplane is no longer capable of moving under its own power.

In addition to (d), depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter..

SPO.IDE.A.145 Flight data recorder

Aeroplanes with an MCTOM of more than 5 700 kg and first issued with an individual CofA on or after 1 January 2016 shall be equipped with an FDR that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available.

The FDR shall record the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power, configuration and operation and be capable of retaining data recorded during at least the preceding 25 hours.

Data shall be obtained from aeroplane sources that enable accurate correlation with information displayed to the flight crew.(d) The FDR shall start automatically to record the data prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is incapable of moving under its own power.

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter..

SPO.IDE.A.146 Lightweight flight recorder

Turbine-engined aeroplanes with an MCTOM of 2 250 kg or more and aeroplanes with an MOPSC of more than 9 shall be equipped with a flight recorder if all the following conditions are met:

they are not within the scope of point SPO.IDE.A.145(a);

they are used for commercial operations;

they are first issued with an individual CofA on or after 5 September 2022.

The flight recorder shall record, by means of flight data or images, information that is sufficient to determine the flight path and aircraft speed.

The flight recorder shall be capable of retaining the flight data and the images recorded during at least the preceding 5 hours.

The flight recorder shall automatically start to record prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is no longer capable of moving under its own power

If the flight recorder records images or audio of the flight crew compartment, then a function shall be provided which can be operated by the pilot-in-command and which modifies image and audio recordings made before the operation of that function, so that those recordings cannot be retrieved using normal replay or copying techniques

SPO.IDE.A.150 Data link recording

Aeroplanes first issued with an individual CofA on or after 1 January 2016 that have the capability to operate data link communications and are required to be equipped with a CVR shall record on a recorder, where applicable:

data link communication messages related to ATS communications to and from the aeroplane, including messages applying to the following applications:

data link initiation;

controller-pilot communication;

addressed surveillance;

flight information;

as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

as far as is practicable, given the architecture of the system, aircraft operational control data; and(vii) as far as is practicable, given the architecture of the system, graphics;

information that enables correlation to any associated records related to data link communications and stored separately from the aeroplane; and

information on the time and priority of data link communications messages, taking into account the system's architecture.

The recorder shall use a digital method of recording and storing data and information and a method for readily retrieving that data. The recording method shall allow the data to match the data recorded on the ground.

The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in SPO.IDE.A.140.

If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter..

The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in SPO.IDE.A.140 (d) and (e).

SPO.IDE.A.155 Flight data and cockpit voice combination recorder

Compliance with CVR requirements and FDR requirements may be achieved by:

one flight data and cockpit voice combination recorder if the aeroplane has to be equipped with a CVR or an FDR; or

two flight data and cockpit voice combination recorders if the aeroplane has to be equipped with a CVR and an FDR.

SPO.IDE.A.160 Seats, seat safety belts and restraint systems

Aeroplanes shall be equipped with:

a seat or station for each crew member or task specialist on board;

a seat belt on each seat, and restraint devices for each station;

for other-than-complex motor-powered aeroplanes, a seat belt with upper torso restraint system on each flight crew seat, having a single point release for aeroplanes having a CofA first issued on or after 25 August 2016;

for complex motor-powered aeroplanes, a seat belt with upper torso restraint system, incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration:

on each flight crew seat and on any seat alongside a pilot's seat; and

on each observer's seat located in the flight crew compartment.

The seat belt with upper torso restraint system required under point (d) shall have:

a single point release;

on flight crew members seats and on any seat alongside a pilot's seat, either of the following:

two shoulder straps and a seat belt that may be used independently;

a diagonal shoulder strap and a seat belt that may be used independently for the following aeroplanes:

aeroplanes with an MCTOM of 5 700 kg or less and with an MOPSC of nine or less that are compliant with the emergency landing dynamic conditions defined in the applicable certification specification;

aeroplanes with an MCTOM of 5 700 kg or less and with an MOPSC of nine or less that are not compliant with the emergency landing dynamic conditions defined in the applicable certification specification and having an individual CofA first issued before 25 August 2016.

SPO.IDE.A.165 First-aid kit

Aeroplanes shall be equipped with a first-aid kit.

The first-aid kit shall be:

readily accessible for use; and

kept up-to-date.

SPO.IDE.A.170 Supplemental oxygen - pressurised aeroplanes

Pressurised aeroplanes operated at flight altitudes for which the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

Pressurised aeroplanes operated above flight altitudes at which the pressure altitude in the cabin compartments is above 10 000 ft shall carry enough breathing oxygen to supply all crew members and task specialists at least:

for any period when the cabin pressure altitude exceeds 15 000 ft, but in no case less than 10 minutes' supply;

for any period when, in the event of loss of pressurisation and taking into account the circumstances of the flight, the pressure altitude in the flight crew and cabin compartment will be between 14 000 ft and 15 000 ft;

for any period in excess of 30 minutes when the pressure altitude in the flight crew and cabin compartment will be between 10 000 ft and 14 000 ft; and

for no less than 10 minutes, in the case of aeroplanes operated at pressure altitudes above 25 000 ft, or operated below that altitude, but under conditions that will not allow them to descend safely to a pressure altitude of 13 000 ft within 4 minutes.

Pressurised aeroplanes operated at flight altitudes above 25 000 ft shall, in addition, be equipped with:

a device to provide a warning indication to the flight crew of any loss of pressurisation; and

in the case of complex motor-powered aeroplanes, quick donning masks for flight crew members.

SPO.IDE.A.175 Supplemental oxygen - non-pressurised aeroplanes

Non-pressurised aeroplanes operated at flight altitudes when the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

Non-pressurised aeroplanes operated above flight altitudes at which the pressure altitude in the cabin compartments is above 10 000 ft shall carry enough breathing oxygen to supply:

all crew members for any period in excess of 30 minutes when the pressure altitude in the cabin compartment will be between 10 000 ft and 13 000 ft; and

all persons on board for any period that the pressure altitude in the cabin compartment will be above 13 000 ft.

Notwithstanding (b), excursions of a specified duration between 13 000 ft and 16 000 ft may be undertaken without oxygen supplies, in accordance with SPO.OP.195(b).

SPO.IDE.A.180 Hand fire extinguishers

Aeroplanes, except ELA1 aeroplanes, shall be equipped with at least one hand fire extinguisher:

in the flight crew compartment; and

in each cabin compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

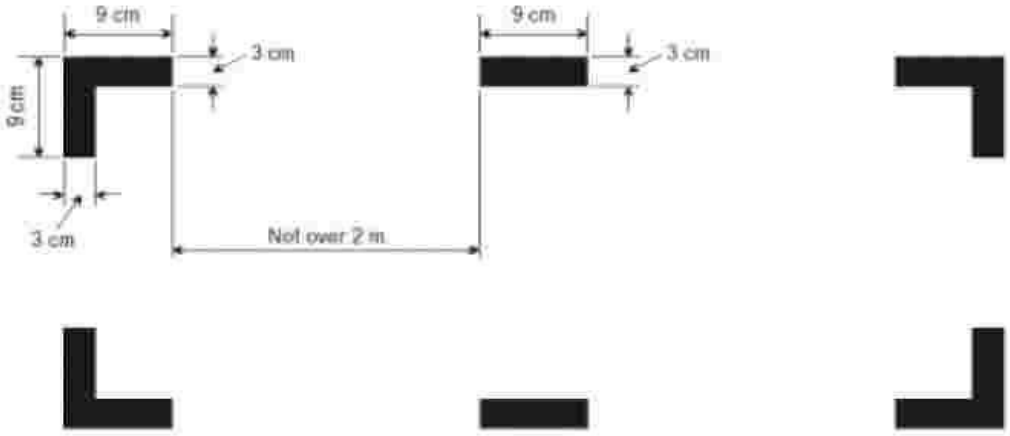
The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

SPO.IDE.A.181 Crash axe and crowbar

Aeroplanes with an MCTOM of more than 5 700 kg shall be equipped with at least one crash axe or crowbar located in the flight crew compartment.

SPO.IDE.A.185 Marking of break-in points

If areas of the aeroplane's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.



SPO.IDE.A.190 Emergency locator transmitter (ELT)

Aeroplanes shall be equipped with:

an ELT of any type or an aircraft localisation means meeting the requirement of Part CAT, CAT.GEN.MPA.210, to this regulation, when first issued with an individual CofA on or before 1 July 2008;

an automatic ELT or an aircraft localisation means meeting the requirement of Part CAT, CAT.GEN.MPA.210, to to this regulation, when first issued with an individual CofA after 1 July 2008; or

a survival ELT (ELT(S)) or a personal locator beacon (PLB), carried by a crew member or a task specialist, when certified for a maximum seating configuration of six or less.

ELTs of any type and PLBs shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

SPO.IDE.A.195 Flight over water

The following aeroplanes shall be equipped with a life-jacket for each person on board, that shall be worn or stowed in a position that is readily accessible from the seat or station of the person for whose use it is provided:

single-engine landplanes when:

flying over water beyond gliding distance from land; or

taking off or landing at an aerodrome or operating site where, in the opinion of the pilot-incommand, the take-off or approach path is so disposed over water that there would be a likelihood of a ditching;

seaplanes operated over water; and

aeroplanes operated at a distance away from land where an emergency landing is possible greater than that corresponding to 30 minutes at normal cruising speed or 50 NM, whichever is less.

Each life-jacket shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

Seaplanes operated over water shall be equipped with:

a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the aeroplane on water, appropriate to its size, weight and handling characteristics; and

equipment for making the sound signals as prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

The pilot-in-command of an aeroplane operated at a distance away from land where an emergency landing is possible greater than that corresponding to 30 minutes at normal cruising speed or 50 NM, whichever is the lesser, shall determine the risks to survival of the occupants of the aeroplane in the event of a ditching, based on which he/she shall determine the carriage of:

equipment for making the distress signals;

life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency; and

life-saving equipment, to provide the means of sustaining life, as appropriate to the flight to be undertaken.

SPO.IDE.A.200 Survival equipment

Aeroplanes operated over areas in which search and rescue would be especially difficult shall be equipped with:

signalling equipment to make the distress signals;

at least one survival ELT (ELT(S)); and

additional survival equipment for the route to be flown taking account of the number of persons on board.

The additional survival equipment specified in (a)(3) does not need to be carried when the aeroplane:

remains within a distance from an area where search and rescue is not especially difficult corresponding to:

120 minutes at one-engine-inoperative (OEI) cruising speed for aeroplanes capable of continuing the flight to an aerodrome with the critical engine(s) becoming inoperative at any point along the route or planned diversion routes; or

30 minutes at cruising speed for all other aeroplanes; or

remains within a distance no greater than that corresponding to 90 minutes at cruising speed from

an area suitable for making an emergency landing, for aeroplanes certified in accordance with the applicable airworthiness standard

SPO.IDE.A.205 Individual protective equipment

Each person on board shall wear individual protective equipment that is adequate for the type of operation being undertaken.

SPO.IDE.A.210 Headset

Aeroplanes shall be equipped with a headset with a boom microphone or equivalent for each flight crew member at their assigned station in the flight crew compartment.

Aeroplanes operated under IFR or at night shall be equipped with a transmit button on the manual pitch and roll control for each required flight crew member.

SPO.IDE.A.215 Radio communication equipment

Aeroplanes operated under IFR or at night, or when required by the applicable airspace requirements, shall be equipped with radio communication equipment that, under normal radio propagating conditions, shall be capable of:

conducting two-way communication for aerodrome control purposes;

receiving meteorological information at any time during flight;

conducting two-way communication at any time during flight with those aeronautical stations and on those frequencies prescribed by the appropriate authority; and

providing for communication on the aeronautical emergency frequency 121,5 MHz.

When more than one communication equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

SPO.IDE.A.220 Navigation equipment

Aeroplanes shall be equipped with navigation equipment that will enable them to proceed in accordance with:

the ATS flight plan, if applicable; and

the applicable airspace requirements.

Aeroplanes shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with (a), or an appropriate contingency action to be completed safely.

Aeroplanes operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed. This equipment shall be capable of providing such guidance for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodromes.

For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

Aeroplanes shall be equipped with surveillance equipment in accordance with the applicable airspace requirements.

SPO.IDE.A.225 Transponder

Where required by the airspace being flown, aeroplanes shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

SPO.IDE.A.230 Management of aeronautical databases

Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.
In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.

SPO.IDE.A.235 Radiation Indicator

All aeroplanes intended to be operated above 15 000 m (49 000 ft) shall carry equipment to measure and indicate continuously the dose rate of total cosmic radiation being received (i.e. the total of ionizing and neutron radiation

of galactic and solar origin) and the cumulative dose on each flight. The display unit of the equipment shall be readily visible to a flight crew member.

SECTION 2 Helicopters

SPO.IDE.H.100 Instruments and equipment - general

Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements if they are:

used by the flight crew to control the flight path;

used to comply with SPO.IDE.H.215; (3) used to comply with SPO.IDE.H.220; or

(4) installed in the helicopter.

The following items, when required by this Subpart, do not need an equipment approval:

independent portable light,

an accurate time piece,

chart holder,

first-aid kit,

survival and signalling equipment, and

sea anchor and equipment for mooring.

Instruments equipment or accessories not required under this Part-SPO as well as any other equipment which is not required under this Regulation, but is carried on a flight, shall comply with the following requirements:

the information provided by these instruments, equipment or accessories shall not be used by the flight crew members to comply with the applicable airworthiness requirements or SPO.IDE.H.215 and SPO.IDE.H.220;

the instruments and equipment shall not affect the airworthiness of the helicopter, even in the case of failures or malfunction.

Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.

Those instruments that are used by a flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision which he/she normally assumes when looking forward along the flight path.

All required emergency equipment shall be easily accessible for immediate use.

SPO.IDE.H.105 Minimum equipment for flight

A flight shall not be commenced when any of the helicopter's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless either of the following conditions is fulfilled:

the helicopter is operated in accordance with the minimum equipment list (MEL);

for complex motor-powered helicopters, and for any helicopter used in commercial operations, the operator is approved by the Authority to operate the helicopter within the constraints of the master minimum equipment list (MMEL) in accordance with ORO.MLR.105(j) of Part ARO.

the helicopter is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

SPO.IDE.H.115 Operating lights

Helicopters operated at night shall be equipped with:

an anti-collision light system;

navigation/position lights;

a landing light;

lighting supplied from the helicopter's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the helicopter;

lighting supplied from the helicopter's electrical system to provide illumination in all cabin compartments;

an independent portable light for each crew member station; and

lights to conform with the International Regulations for Preventing Collisions at Sea if the helicopter is amphibious.

SPO.IDE.H.120 Operations under VFR - flight and navigational instruments and associated equipment

Helicopters operated under VFR by day shall be equipped with a means of measuring and displaying the following:

magnetic heading,

time in hours, minutes and seconds,

barometric altitude, (4) indicated airspeed, and

(5) slip.

Helicopters operated under VMC overwater and out of sight of the land or under VMC at night, shall be, in addition to (a), equipped with:

a means of measuring and displaying:

attitude,

vertical speed, and

stabilised heading;

a means of indicating when the supply of power to the gyroscopic instruments is not adequate; and

for complex motor-powered helicopters, a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

Helicopters operated when the visibility is less than 1 500 m, or in conditions where they cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a)

and (b), equipped with a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

Whenever two pilots are required for the operation, helicopters shall be equipped with an additional separate means of displaying:

barometric altitude,

indicated airspeed,

slip,

attitude, if applicable,

vertical speed, if applicable, and

stabilised heading, if applicable.

SPO.IDE.H.125 Operations under IFR - flight and navigational instruments and associated equipment

Helicopters operated under IFR shall be equipped with:

a means of measuring and displaying:

magnetic heading,

time in hours, minutes and seconds,

barometric altitude,

indicated airspeed,

vertical speed,

slip,

attitude,

stabilised heading , and

outside air temperature;

a means of indicating when the supply of power to the gyroscopic instruments is not adequate;

whenever two pilots are required for the operation, an additional separate means of displaying:

barometric altitude,

indicated airspeed,

vertical speed,

slip,

attitude, and

stabilised heading;

a means of preventing malfunction of the airspeed indicating system required by (a)(4) and (c)(2) due to condensation or icing;

an additional means of measuring and displaying attitude as a standby instrument; and(f) the following for complex motor-powered helicopters:

an alternate source of static pressure; and

a chart holder in an easily readable position that can be illuminated for night operations.

SPO.IDE.H.126 Additional equipment for single-pilot operation under IFR

Helicopters operated under IFR with a single pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

SPO.IDE.H.132 Airborne weather detecting equipment - complex motor-powered helicopters

Helicopters operated under IFR or at night shall be equipped with airborne weather detecting equipment when current weather reports indicate that thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route to be flown.

SPO.IDE.H.133 Additional equipment for operations in icing conditions at night - complex motor-powered helicopters

Helicopters operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

The means to illuminate the formation of ice shall not cause glare or reflection that would handicap flight crew members in the performance of their duties.

SPO.IDE.H.135 Flight crew interphone system

Helicopters operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

SPO.IDE.H.140 Cockpit voice recorder

Helicopters with an MCTOM of more than 7 000 kg and first issued with an individual CofA on or after 1 January 2016 shall be equipped with a CVR.

The CVR shall be capable of retaining data recorded during at least the preceding 2 hours.

The CVR shall record with reference to a timescale:

voice communications transmitted from or received in the flight crew compartment by radio;

flight crew members' voice communications using the interphone system and the public address system, if installed;

the aural environment of the cockpit, including, without interruption, the audio signals received from each crew microphone; and

voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

The CVR shall start automatically to record prior to the helicopter moving under its own power and shall continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power.

In addition to (d), depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter..

SPO.IDE.H.145 Flight data recorder

Helicopters with an MCTOM of more than 3 175 kg and first issued with an individual CofA on or after 1 January 2016 shall be equipped with an FDR that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available.

The FDR shall record the parameters required to determine accurately the helicopter flight path, speed, attitude, engine power, configuration and operation and be capable of retaining data recorded during at least the preceding 10 hours.

Data shall be obtained from helicopter sources that enable accurate correlation with information displayed to the flight crew.(d) The FDR shall start automatically to record the data prior to the helicopter being capable of moving under its own power and shall stop automatically after the helicopter is incapable of moving under its own power.

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter..

SPO.IDE.H.146 Lightweight flight recorder

Turbine-engined helicopters with an MCTOM of 2 250 kg or more shall be equipped with a flight recorder if all the following conditions are met:

they are within the scope of point SPO.IDE.H.145(a);

they are used for commercial operations;

they are first issued with an individual CofA on or after 5 September 2022.

The flight recorder shall record, by means of flight data or images, information that is sufficient to determine the flight path and aircraft speed.

The flight recorder shall be capable of retaining the flight data and the images recorded during at least the preceding 5 hours.

The flight recorder shall automatically start to record prior to the helicopter being capable of moving under its own power and shall stop automatically after the helicopter is no longer capable of moving under its own power.

If the flight recorder records images or audio of the flight crew compartment, then a function shall be provided which can be operated by the pilot-in-command and which modifies image and audio recordings made before the operation of that function, so that those recordings cannot be retrieved using normal replay or copying techniques.

SPO.IDE.H.150 Data link recording

Helicopters first issued with an individual CofA on or after 1 January 2016 that have the capability to operate data link communications and are required to be equipped with a CVR shall record on a recorder, where applicable:

data link communication messages related to ATS communications to and from the helicopter, including messages applying to the following applications:

data link initiation;

controller-pilot communication;

addressed surveillance;

flight information;

as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

as far as is practicable, given the architecture of the system, aircraft operational control data; and

as far as is practicable, given the architecture of the system, graphics;

information that enables correlation to any associated records related to data link communications and stored separately from the helicopter; and

information on the time and priority of data link communications messages, taking into account the system's architecture.

The recorder shall use a digital method of recording and storing data and information and a method for readily retrieving that data. The recording method shall allow the data to match the data recorded on the ground.

The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in SPO.IDE.H.140.

If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter..

The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in SPO.IDE.H.140 (d) and (e).

SPO.IDE.H.155 Flight data and cockpit voice combination recorder

Compliance with CVR and FDR requirements may be achieved by one flight data and cockpit voice combination recorder.

SPO.IDE.H.160 Seats, seat safety belts and restraint systems

Helicopters shall be equipped with:

a seat or station for each crew member or task specialist on board;

a seat belt on each seat, and restraint devices for each station;

for helicopters first issued with an individual CofA after 31 December 2012, a seat belt with an upper torso restraint system for each seat; and

a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration on each flight crew seat.

A seat belt with upper torso restraint system shall have a single point release.

SPO.IDE.H.165 First-aid kit

Helicopters shall be equipped with a first-aid kit.

The first-aid kit shall be:

readily accessible for use; and

kept up-to-date.

SPO.IDE.H.175 Supplemental oxygen - non-pressurised helicopters

Non-pressurised helicopters operated at flight altitudes when the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

Non-pressurised helicopters operated above flight altitudes at which the pressure altitude in the cabin compartments is above 10 000 ft shall carry enough breathing oxygen to supply:

all crew members for any period in excess of 30 minutes when the pressure altitude in the cabin compartment will be between 10 000 ft and 13 000 ft; and

all crew members and task specialists for any period that the pressure altitude in the cabin compartment will be above 13 000 ft.

Notwithstanding (b), excursions of a specified duration between 13 000 ft and 16 000 ft may be undertaken without oxygen supplies, -in accordance with SPO.OP.195(b).

SPO.IDE.H.180 Hand fire extinguishers

Helicopters, except ELA2 helicopters, shall be equipped with at least one hand fire extinguisher:

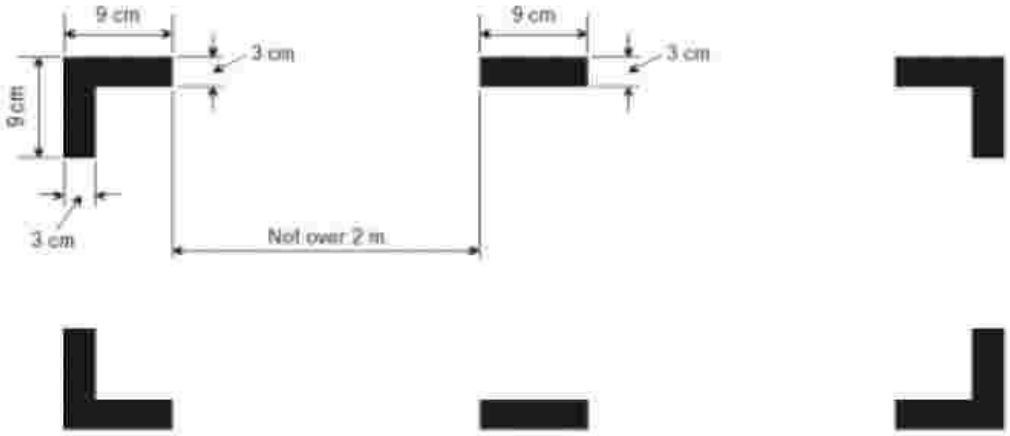
in the flight crew compartment; and

in each cabin compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

SPO.IDE.H.185 Marking of break-in points

If areas of the helicopter's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.



SPO.IDE.H.190 Emergency locator transmitter (ELT)

Helicopters certified for a maximum seating configuration above six shall be equipped with:

an automatic ELT; and

one survival ELT (ELT(S)) in a life-raft or life-jacket when the helicopter is operated at a distance from land corresponding to more than 3 minutes flying time at normal cruising speed.

Helicopters certified for a maximum seating configuration of six or less shall be equipped with an ELT(S) or a personal locator beacon (PLB), carried by a crew member or a task specialist.

ELTs of any type and PLBs shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

SPO.IDE.H.195 Flight over water - other-than complex motor-powered helicopters ?

Helicopters shall be equipped with a life-jacket for each person on board, that shall be worn or stowed in a position that is readily accessible from the seat or station of the person for whose use it is provided, when:

flying over water beyond autorotational distance from the land where in case of the critical engine failure, the helicopter is not able to sustain level flight; or

flying over water at a distance of land corresponding to more than 10 minutes flying at normal cruising speed, where in case of the critical engine failure, the helicopter is able to sustain level flight; or

taking off or landing at an aerodrome/operating site where the take-off or approach path is over water.

Each life-jacket shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

The pilot-in-command of a helicopter operated on a flight over water at a distance from land corresponding to more than 30 minutes flying time at normal cruising speed or 50 NM, whichever is less, shall determine the risks to survival of the occupants of the helicopter in the event of a ditching, based on which he/she shall determine the carriage of:

equipment for making the distress signals;

life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency; and

life-saving equipment to provide the means of sustaining life, as appropriate to the flight to be undertaken.

The pilot-in-command shall determine the risks to survival of the occupants of the helicopter in the event of a ditching, when deciding if the life-jackets required in (a) shall be worn by all occupants.

SPO.IDE.H.197 Life-jackets - complex motor-powered helicopters

Helicopters shall be equipped with a life-jacket for each person on board, that shall be worn or stowed in a position that is readily accessible from the seat or station of the person for whose use it is provided, when:

operated on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, where in the case of the critical engine failure, the helicopter is able to sustain level flight;

operated on a flight over water beyond auto-rotational distance from the land, where in the case of the critical engine failure, the helicopter is not able to sustain level flight; or

taking off or landing at an aerodrome or operating site where the take-off or approach path is so disposed over water that in the event of a mishap there would be the likelihood of a ditching.

Each life-jacket shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

SPO.IDE.H.198 Survival suits - complex motor-powered helicopters

Each person on board shall wear a survival suit when operating so determined by the pilot-in-command based on a risk assessment taking into account the following conditions:
flights over water beyond autorotational distance or safe forced-landing distance from land, where, in the case of a critical engine failure, the helicopter is not able to sustain level flight; and

the weather report or forecasts available to the pilot-in-command indicate that the sea temperature will be less than plus 10 °C during the flight.

SPO.IDE.H.199 Life-rafts, survival ELTs and survival equipment on extended overwater flights complex motor-powered helicopters Helicopters operated:

on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed where in the case of the critical engine failure, the helicopter is able to sustain level flight; or

on a flight over water at a distance corresponding to more than 3 minutes flying time at normal cruising speed, where in the case of the critical engine failure, the helicopter is not able to sustain level flight, and if so determined by the pilot-in-command by means of a risk assessment, shall be equipped with:

at least one life-raft with a rated capacity of not less than the maximum number of persons on board, stowed so as to facilitate their ready use in emergency;

at least one survival ELT (ELT(S)) for each required life-raft; and

life-saving equipment, including means of sustaining life, as appropriate to the flight to be undertaken.

SPO.IDE.H.200 Survival equipment

Helicopters operated over areas in which search and rescue would be especially difficult shall be equipped with:

signalling equipment to make distress signals;

at least one survival ELT (ELT(S)); and

additional survival equipment for the route to be flown taking account of the number of persons on board.

SPO.IDE.H.202 Helicopters certified for operating on water - miscellaneous equipment

Helicopters certified for operating on water shall be equipped with:

a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the helicopter on water, appropriate to its size, weight and handling characteristics; and

equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

SPO.IDE.H.203 All helicopters on flights over water - ditching

Complex motor-powered helicopters operated on a flight over water in a hostile environment at a distance from land corresponding to more than 10 minutes' flying time at normal cruising speed and other-than complex motor powered helicopters flying over water in a hostile environment beyond a distance of 50 NM from land shall be:

designed for landing on water in accordance with the relevant airworthiness code;
certified for ditching in accordance with the relevant airworthiness code; or

fitted with emergency flotation equipment.

SPO.IDE.H.205 Individual protective equipment

Each person on board shall wear individual protective equipment that is adequate for the type of operation being undertaken.

SPO.IDE.H.210 Headset

Whenever a radio communication and/or radio navigation system is required, helicopters shall be equipped with a headset with boom microphone or equivalent and a transmit button on the flight controls for each required pilot, crew member and/or task specialist at his/her assigned station.

SPO.IDE.H.215 Radio communication equipment

Helicopters operated under IFR or at night, or when required by the applicable airspace requirements, shall be equipped with radio communication equipment that, under normal radio propagating conditions, shall be capable of:

conducting two-way communication for aerodrome control purposes;

receiving meteorological information;

conducting two-way communication at any time during flight with those aeronautical stations and on those frequencies prescribed by the appropriate authority; and

providing for communication on the aeronautical emergency frequency 121,5 MHz.

When more than one communications equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

When a radio communication system is required, and in addition to the flight crew interphone system required in SPO.IDE.H.135, helicopters shall be equipped with a transmit button on the flight controls for each required pilot and crew member at his/her assigned station.

SPO.IDE.H.220 Navigation equipment

Helicopters shall be equipped with navigation equipment that will enable them to proceed in accordance with:

the ATS flight plan, if applicable; and

the applicable airspace requirements.

Helicopters shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with (a), or an appropriate contingency action to be completed safely.

Helicopters operated on flights in which it is intended to land in IMC shall be equipped with navigation equipment capable of providing guidance to a point from which a visual landing can be performed. This equipment shall be capable of providing such guidance for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodromes.

For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

Helicopters shall be equipped with surveillance equipment in accordance with the applicable airspace requirements.

SPO.IDE.H.225 Transponder

Where required by the airspace being flown, helicopters shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

SPO.IDE.H.230 Management of aeronautical databases

Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

Notwithstanding any other occurrence reporting requirements as defined in LYCARs-part 19, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

SUBPART E SPECIFIC REQUIREMENTS

SECTION 1 Helicopter external sling load operations (HESLO)

SPO.SPEC.HESLO.100 Standard operating procedures

The standard operating procedures for HESLO shall specify:

the equipment to be carried, including its operating limitations and appropriate entries in the MEL, as applicable;

crew composition and experience requirements of crew members and task specialists;

the relevant theoretical and practical training for crew members to perform their tasks, the relevant training for task specialists to perform their tasks and the qualification and nomination of persons providing such training to crew members and task specialists;

responsibilities and duties of crew members and task specialists;

helicopter performance criteria necessary to be met to conduct HESLO operations;

normal, abnormal and emergency procedures.

SPO.SPEC.HESLO.105 Specific HESLO equipment

The helicopter shall be equipped with at least:

one cargo safety mirror or alternative means to see the hook(s)/load; and

one load meter, unless there is another method of determining the weight of the load.

SPO.SPEC.HESLO.110 Transportation of dangerous goods

The operator transporting dangerous goods to or from unmanned sites or remote locations shall apply to the Authority for an exemption from the provisions of the Technical Instructions if they intend not to comply with the requirements of those Instructions.

SECTION 2 Human external cargo operations (HEC)

SPO.SPEC.HEC.100 Standard operating procedures

The standard operating procedures for HEC shall specify:

the equipment to be carried, including its operating limitations and appropriate entries in the MEL, as applicable;

crew composition and experience requirements of crew members and task specialists;

the relevant theoretical and practical training for crew members to perform their tasks, the relevant training for task specialists to perform their tasks and the qualification and nomination of persons providing such training to crew members and task specialists;

responsibilities and duties of crew members and task specialists;

helicopter performance criteria necessary to be met to conduct HEC operations;

normal, abnormal and emergency procedures.

SPO.SPEC.HEC.105 Specific HEC equipment

The helicopter shall be equipped with:

hoist operations equipment or cargo hook;

one cargo safety mirror or alternative means to see the hook; and

one load meter, unless there is another method of determining the weight of the load.

The installation of all hoist and cargo hook equipment other than a simple PCDS and any subsequent modifications shall have an airworthiness approval appropriate to the intended function.

SECTION 3 Parachute operations (PAR)

SPO.SPEC.PAR.100 Standard operating procedures

The standard operating procedures for PAR shall specify:

the equipment to be carried, including its operating limitations and appropriate entries in the MEL, as applicable;

crew composition and experience requirements of crew members and task specialists;

the relevant training for crew members and task specialists to perform their task and the qualification and nomination of persons providing such training to the crew members and task specialists;

responsibilities and duties of crew members and task specialists;

performance criteria necessary to be met to conduct parachute operations;

normal, abnormal and emergency procedures.

SPO.SPEC.PAR.105 Carriage of crew members and task specialists

The requirement for task specialist's responsibilities as laid down in SPO.GEN.106(c) shall not be applicable for task specialists performing parachute jumping.

SPO.SPEC.PAR.110 Seats

Notwithstanding SPO.IDE.A.160(a) and SPO.IDE.H.160(a)(1), the floor of the aircraft may be used as a seat, provided means are available for the task specialist to hold or strap on.

SPO.SPEC.PAR.115 Supplemental oxygen

Notwithstanding SPO.OP.195(a), the requirement to use supplemental oxygen shall not be applicable for crew members other than the pilot-in-command and for task specialists carrying out duties essential to the specialised task, whenever the cabin altitude:

exceeds 13 000 ft, for a period of not more than 6 minutes.

exceeds 15 000 ft, for a period of not more 3 minutes.

SPO.SPEC.PAR.125 Releasing of dangerous goods

Notwithstanding SPO.GEN.155, parachutists may exit the aircraft for the purpose of parachute display over congested areas of cities, towns or settlements or over an open-air assembly of persons whilst carrying smoke trail devices, provided those are manufactured for that purpose.

SECTION 4 Aerobatic flights (ABF)

SPO.SPEC.ABF.100 Standard operating procedures

The standard operating procedures for ABF shall specify:

the equipment to be carried, including its operating limitations and appropriate entries in the MEL, as applicable;

crew composition and experience requirements of crew members and task specialists;

the relevant training for crew members and task specialists to perform their task and the qualification and nomination of persons providing such training to the crew members and task specialists;

responsibilities and duties of crew members and task specialists; (e) performance criteria necessary to be met to conduct aerobatic flights;

(f) normal, abnormal and emergency procedures.

SPO.SPEC.ABF.105 Documents, manuals and information to be carried

The following documents listed in SPO.GEN.140(a) need not be carried during aerobatic flights:

details of the filed ATS flight plan, if applicable;

current and suitable aeronautical charts for the route/area of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

procedures and visual signals information for use by intercepting and intercepted aircraft; and

information concerning search and rescue services for the area of the intended flight.

SPO.SPEC.ABF.115 Equipment

The following equipment requirements need not be applicable to aerobatic flights:

first-aids kit as laid down in SPO.IDE.A.165 and SPO.IDE.H.165;

hand-fire extinguishers as laid down in SPO.IDE.A.180 and SPO.IDE.H.180; and

emergency locator transmitters or personal locator beacons as laid down in SPO.IDE.A.190 and SPO.IDE.H.190.

SECTION 5 Maintenance check flights (MCFs)

SPO.SPEC.MCF.100 Levels of maintenance check flight

Before conducting a maintenance check flight, the operator shall determine the applicable level of the maintenance check flight as follows:

Level A" maintenance check flight for a flight where the use of abnormal or emergency procedures, as defined in the aircraft flight manual, is expected, or where a flight is required to prove the functioning of a backup system or other safety devices;

a "Level B" maintenance check flight for any maintenance check flights other than a "Level A" maintenance check flight.

SPO.SPEC.MCF.105 Flight programme for a "Level A" maintenance check flight

Before conducting a Level A maintenance check flight with a complex motor-powered aircraft, the operator shall develop and document a flight programme.

SPO.SPEC.MCF.110 Maintenance check flight manual for a "Level A" maintenance check flight The operator conducting a "Level A" maintenance check flight shall:

describe those operations and associated procedures in the operations manual referred to in point ORO.MLR.100 of Part ORO or in a dedicated maintenance check flight manual;

update the manual when necessary;

inform all affected personnel of the manual and of its changes that are relevant to their duties; (d) provide the Authority with the manual and its updates.

SPO.SPEC.MCF.115 Flight crew requirements for a "Level A" maintenance check flight

The operator shall select adequate flight crew members considering the aircraft complexity and the level of the maintenance check flight. When selecting flight crew members for a "Level A" maintenance check flight with a complex motor-powered aircraft, the operator shall ensure all of the following:

that the pilot-in-command has followed a training course in accordance with point SPO.SPEC.MCF.120; if the training has been conducted in a simulator, the pilot shall conduct at least one "Level A" maintenance check flight as a pilot monitoring or as an observer before flying as a pilot in-command on a "Level A" maintenance check flight;

that the pilot-in-command has completed on aircraft of the same aircraft category as the aircraft to be flown a minimum of 1 000 flight hours, of which at least 400 hours as a pilot-in-command in a complex motor-powered aircraft and at least 50 hours on the particular aircraft type.

Notwithstanding point (2) of the first paragraph, if the operator introduces a new aircraft type to its operation and has assessed the pilot's qualifications in accordance with an established assessment procedure, the operator may select a pilot having less than 50 hours experience on the particular aircraft type.

A pilot-in-command shall not perform a "Level A" maintenance check flight on a complex motor-powered aircraft unless the pilot-in-command has carried out a "Level A" maintenance check flight within the preceding 36 months.

Recency as pilot-in-command on a "Level A" maintenance check flight is regained after performing a "Level A" maintenance check flight as an observer or a pilot monitoring, or after acting as the pilot-in-command in a "Level A" maintenance check flight in a simulator.

SPO.SPEC.MCF.120 Flight crew training course for Level A maintenance check flights

The training course required for a "Level A" maintenance check flight shall be conducted in accordance with a detailed syllabus.

The flight instruction for the training course shall be conducted in either of the following ways:

in a simulator which, for training purposes, adequately reflects the reaction of the aircraft and its systems to the checks being conducted;

during a flight in an aircraft demonstrating maintenance check flight techniques.

A training course followed on one aircraft category is considered valid for all aircraft types of that category.

When considering the aircraft used for the training and the aircraft to be flown during the maintenance check flight, the operator shall specify whether differences or familiarisation training is required and describe the contents of such a training.

SPO.SPEC.MCF.125 Crew composition and persons on board

The operator shall establish procedures to identify the need for additional task specialists.

For a “Level A” maintenance check flight, the operator shall define in its manual the policy for other persons on board.

For a “Level A” maintenance check flight, a task specialist or additional pilot is required in the flight crew compartment to assist the flight crew members, unless the aircraft configuration does not permit it or the operator can justify, considering the flight crew members workload based on the flight programme, that the flight crew members does not require additional assistance.

SPO.SPEC.MCF.130 Simulated abnormal or emergency procedures in flight

By way of derogation from point SPO.OP.185 a task specialist may be on board a “Level A” maintenance check flight if the task specialist is required to meet the intention of the flight and has been identified in the flight programme.

SPO.SPEC.MCF.135 Flight time limitations and rest requirements

When assigning crew members to maintenance check flights, operators subject to Subpart FTL of Part-ORO shall apply the provisions of that Subpart.

SPO.SPEC.MCF.140 Systems and equipment

When a maintenance check flight is intended to check the proper functioning of a system or equipment, that system or equipment shall be identified as potentially unreliable and appropriate mitigation measures shall be agreed prior to the flight in order to minimise risks to flight safety.

SPO.SPEC.MCF.145 Cockpit voice recorder, flight data recorder and data link recording requirements for AOC holders

For a maintenance check flight of an aircraft otherwise used for CAT operations, the provisions for cockpit voice recorders (CVR), flight data recorders (FDR) and data link recorders (DLR) of Part-CATshall continue to apply.’."

J. Libyan Civil Aviation Regulation 5 of 2020 on Air operations is amended by the replacement of Part Recreational Air Operations - Part REC as follows:

"PART-REC RECREATIONAL AIR OPERATIONS [PART-REC]

SUBPART A GENERAL REQUIREMENTS

REC.GEN.101 Means of compliance

Alternative means of compliance to those prescribed by the Libyan Civil Aviation Authority (hereinafter referred to as the 'Authority') may be used by an operator to establish compliance with the Civil Aviation Law and Regulations, however such alternative means of compliance shall require prior approval from the Authority.

REC.GEN.103 Introductory flights

Introductory flights referred to in Article 6.4(c) of this Regulation when conducted in accordance with this Part, shall:

start and end at the same aerodrome or operating site;

be operated under VFR by day;

be overseen by a nominated person responsible for their safety; and

comply with any other conditions stipulated by the Authority.

REC.GEN.105 Pilot-in-command responsibilities and authority

The pilot-in-command shall be responsible for:

the safety of the aircraft and of all crew members, passengers and cargo on board during aircraft operations;

the initiation, continuation, termination or diversion of a flight in the interest of safety;

only commencing a flight if he/she is satisfied that:

the aircraft is airworthy;

the aircraft is duly registered;

instruments and equipment required for the execution of that flight are installed in the aircraft and are operative;

the mass of the aircraft and the centre of gravity location are such that the flight can be conducted safely;

all equipment, baggage and cargo are properly loaded and secured and an emergency evacuation remains possible; and

any aircraft operating limitations will not be exceeded at any time during the flight;

not commencing a flight if he/she is incapacitated from performing duties by any cause such as injury, sickness, fatigue or the effects of any psychoactive substance;

not continuing a flight beyond the nearest weather-permissible aerodrome or operating site when his/her capacity to perform duties is significantly reduced from causes such as fatigue, sickness or lack of oxygen;

The pilot-in-command shall, in an emergency situation that requires immediate decision and action, take any action he/she considers necessary in the interest of safety.

During flight, the pilot-in-command shall:

keep his/her safety belt fastened while at his/her station; and

remain at the controls of the aircraft at all times except if another pilot is taking the controls.

The pilot-in-command shall notify the nearest appropriate authority by the quickest available means of any accident involving the aircraft that results in serious injury or death of any person or substantial damage to the aircraft or property.

REC.GEN.110 Compliance with laws, regulations and procedure

The pilot-in-command shall comply with the laws, regulations and procedures of those States where operations are conducted.

The pilot-in-command shall be familiar with the laws, regulations and procedures, pertinent to the performance of his/her duties, prescribed for the areas to be traversed, the aerodromes or operating sites to be used and the related air navigation facilities as relating thereto.

REC.GEN.115 Taxiing of aeroplanes

An aeroplane shall only be taxied on the movement area of an aerodrome if the person at the controls is an appropriately qualified pilot.

REC.GEN.120 Rotor engagement - helicopters

A helicopter rotor shall only be turned under power for the purpose of flight with a qualified pilot at the controls.

REC.GEN.125 Portable electronic devices

The pilot-in-command shall not permit any person to use a portable electronic device (PED) on board an aircraft that could adversely affect the performance of the aircraft's systems and equipment.

REC.GEN.135 Documents, manuals and information to be carried

The original certificate of airworthiness (CofA) or permit to fly shall be carried on each flight

Notwithstanding (a), on flights:

intending to take off and land at the same aerodrome/operating site;

remaining within a distance or area determined by the Authority the documents referred to in (a) may be retained at the aerodrome or operating site.

The pilot-in-command shall make available within a reasonable time of being requested to do so by the Authority, the documentation required to be carried on board.

REC.GEN.136 Placards

A placard shall be installed in clear view of the pilot stating:

the certificated or design gross weight, whichever is the lesser; and

the maximum and minimum payload for the aircraft.

Passengers shall not be carried unless a legible placard is installed in clear view of the seated passenger

with a title advising that the placard is a passenger warning; and

stating that the aircraft does not require an airworthiness certificate.

REC.GEN.140 Transport of dangerous goods

The transport of dangerous goods by air shall be conducted in accordance with Annex 18 to the Chicago Convention as last amended and amplified by the Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Doc 9284-AN/905), including its supplements and any other addenda or corrigenda.

Reasonable quantities of articles and substances that would otherwise be classified as dangerous goods and that are used to facilitate flight safety, where carriage aboard the aircraft is advisable to ensure their timely availability for operational purposes, shall be considered authorised under paragraph 1;2.2.1(a) of the Technical Instructions. This is regardless of whether or not such articles and substances are required to be carried or intended to be used in connection with a particular flight.The packing and loading on board of the above-mentioned articles and substances shall be performed, under the responsibility of the pilot in command, in such a way as to minimise the risks posed to crew members, passengers, cargo or the aircraft during aircraft operations.

REC.GEN.145 Immediate reaction to a safety problem

The operator shall implement:

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

any relevant mandatory safety information issued by the Authority.

SUBPART B OPERATIONAL PROCEDURES

REC.OP.100 Use of aerodromes and operating sites

The pilot-in-command shall only use aerodromes and operating sites that are adequate for the type of aircraft and operation concerned.

REC.OP.110 Flight rules

Operations shall be conducted under VFR or special VFR;

Operations shall be conducted by visual reference to the surface;

REC.OP.120 Noise abatement procedures

The pilot-in-command shall take into account published noise abatement procedures to minimise the effect of aircraft noise while ensuring that safety has priority over noise abatement.

REC.OP.125 Fuel and oil supply

The pilot-in-command shall only commence a flight if the aeroplane carries sufficient fuel and oil for the following:

by day, taking-off and landing at the same aerodrome/landing site and always remaining in sight of that aerodrome/landing site, to fly the intended route and thereafter for at least 10 minutes at normal cruising altitude;

by day, to fly to the aerodrome of intended landing and thereafter to fly for at least 20 minutes at normal cruising altitude; or

by night, to fly to the aerodrome of intended landing and thereafter to fly for at least 30 minutes at normal cruising altitude;

In computing the fuel required including to provide for contingency, the pilot in command shall take into consideration any condition that may delay the landing of the aircraft or increase fuel and/or oil consumption.

REC.OP.130 Passenger briefing

The pilot-in-command shall ensure that before or, where appropriate, during the flight, passengers are given a briefing on emergency equipment and procedures.

REC.OP.135 Flight preparation

Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the space-based facilities, ground and/or water facilities, including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.

Before commencing a flight, the pilot-in-command shall be familiar with all available meteorological information appropriate to the intended flight.

REC.OP.145 Refuelling with passengers embarking, on board or disembarking

The aircraft shall not be refuelled when passengers are embarking, on board or disembarking.

REC.OP.150 Carriage of passengers

The pilot-in-command shall ensure that, prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety, each passenger on board occupies a seat or berth and has his/her safety belt or restraint device properly secured.

REC.OP.155 Smoking on board - aeroplanes and helicopters

The pilot-in-command shall not allow smoking on board.

REC.OP.160 Meteorological conditions

The pilot-in-command shall only commence or continue a flight if:

the weather at the aerodrome or operating site and the condition of the runway or FATO intended to be used would not prevent a safe take-off and departure and

the latest available meteorological information indicates that the weather conditions along the route and at the intended destination at the estimated time of use will be at or above the applicable VFR operating minima.

REC.OP.165 Ice and other contaminants - ground procedures

The pilot-in-command shall only commence take-off if the aircraft is clear of any deposit that might adversely affect the performance or controllability of the aircraft.

REC.OP.170 Ice and other contaminants - flight procedures

The pilot-in-command shall not commence a flight or intentionally fly into expected or actual icing conditions.

If an aircraft encounters icing, the pilot-in-command shall exit the icing conditions without delay, by a change of level and/or route, and if necessary by declaring an emergency to ATC.

REC.OP.180 Simulated situations in flight

The pilot-in-command shall, when carrying passengers or cargo, not simulate:

situations that require the application of abnormal or emergency procedures; or

flight in instrument meteorological conditions (IMC).

Notwithstanding (a), when training flights are conducted such situations may be simulated with student pilots on-board.

REC.OP.185 In-flight fuel management

The pilot-in-command shall check at regular intervals that the amount of usable fuel remaining in flight is not less than the fuel required to proceed to a weather-permissible aerodrome or operating site and the planned reserve fuel as required by REC.OP.125.

REC.OP.190 Use of supplemental oxygen

The pilot-in-command shall ensure that all flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen continuously whenever he/she determines that at the altitude of the intended flight the lack of oxygen might result in impairment of the faculties of crew members, and shall ensure that supplemental oxygen is available to passengers when lack of oxygen might harmfully affect passengers.

In any other case when the pilot-in-command cannot determine how the lack of oxygen might affect all occupants on board, he/she shall ensure that:
all crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen for any period in excess of 30 minutes when the pressure altitude in the the passenger compartment will be between 10 000 ft and 13 000 ft; and

all occupants use supplemental oxygen for any period that the pressure altitude in the the passenger compartment will be above 13 000 ft.

SUBPART C AIRCRAFT PERFORMANCE AND OPERATING LIMITATIONS

REC.POL.100 Operating limitations - all aircraft

During any phase of operation, the loading, the mass and the centre of gravity (CG) position of the aircraft shall be such that the flight can be completed safely.

REC.POL.110 Performance - general

The pilot-in-command shall only operate the aircraft if the performance is adequate to comply with the applicable rules of the air and any other restrictions applicable to the flight, the airspace or the aerodromes or operating sites used, taking into account the charting accuracy of any charts and maps used

.

SUBPART D INSTRUMENTS, DATA AND EQUIPMENT

REC.IDE.115 Operating lights

Aircraft operated at night shall be equipped with:

an anti-collision light system;

navigation/position lights;

a landing light;

lighting to provide adequate illumination for all instruments and equipment essential to the safe operation of the aeroplane;

an independent portable light for each crew member station; and

lights to conform with the International Regulations for Preventing Collisions at Sea if the aeroplane is operated as a seaplane.

REC.IDE.120 Operations under VFR - flight and navigational instruments and associated equipment

(a) Aircraft operated by day shall be equipped with a means of measuring and displaying the following:

magnetic heading;

time, in hours, minutes and seconds;

pressure altitude and

for aircraft other than powered parachutes, indicated airspeed;

Aircraft operated at night, or in conditions where the aircraft cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a), equipped with:

a means of measuring and displaying the following:

turn and slip;

attitude;

vertical speed; and

stabilised heading; and

a means of indicating when the supply of power to the gyroscopic instruments is not adequate.

Aircraft operated in conditions where they cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a) and (b), equipped with a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

REC.IDE.140 Seats, seat safety belts, restraint systems and child restraint devices

(a) Aircraft shall be equipped with:

a seat or berth for each person on board who is aged 24 months or more;

a seat belt on each passenger seat and restraining belts for each berth;

a child restraint device (CRD) for each person on board younger than 24 months.

REC.IDE.155 Supplemental oxygen

Aircraft operated when an oxygen supply is required in accordance with REC.OP.190 shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

REC.IDE.175 Flight over water

The following aircraft shall be equipped with a life-jacket for each person on board, or equivalent individual floatation device for each person on board younger than 24 months, that shall be worn or stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided when:

flying over water beyond a distance from land that would permit a safe landing in the event of an engine failure; or

taking off or landing at an aerodrome or operating site where, in the opinion of the pilot-in-command, the take-off or approach path is so disposed over water that there would be a likelihood of a ditching;

Seaplanes operated over water shall be equipped with:

one anchor;

one sea anchor (drogue), when necessary to assist in manoeuvring; and

equipment for making the sound signals, as prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

REC.IDE.180 Survival equipment

Aircraft operated over areas in which search and rescue would be especially difficult shall be equipped with such signalling devices and life-saving equipment, including means of sustaining life, as may be appropriate to the area overflown.

REC.IDE.190 Radio communication equipment

(a) Where required by the airspace being flown aircraft shall be equipped with radio communication equipment capable of conducting two-way communication with those aeronautical stations and on those frequencies to meet airspace requirements.

(b) Radio communication equipment, if required by (a), shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

(c) When more than one communication equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

REC.IDE.195 Navigation equipment

Aircraft operated over routes that cannot be navigated by reference to visual landmarks shall be equipped with any navigation equipment necessary to enable them to proceed in accordance with:

(a) the ATS flight plan; if applicable; and

(b) the applicable airspace requirements.

REC.IDE.200 Transponder

Where required by the airspace being flown, aircraft shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

K. Libyan Civil Aviation Regulation 5 of 2020 on Air operations is amended by the replacement of Part Cabin Crew - Part CC as follows:

PART-CC: CABIN CREW

[PART-CC]

SUB PART GEN - General Requirements

CC.GEN.001 Authority

For the purpose of this Part, the Authority shall be the Libyan Civil Aviation Authority (LYCAA.)

CC.GEN.005 Scope

This Part establishes the requirements for the issue of cabin crew certificate of competency and the conditions for their validity and use by their holders.

CC.GEN.010 Reserved

CC.GEN.015 Application for a cabin crew certificate of competency

The application for a cabin crew certificate of competency shall be made in a form and manner established by the Authority.

CC.GEN.020 Minimum age

The applicant for a cabin crew certificate of competency shall be at least 18 years old.

CC.GEN.025 Privileges and conditions

The privileges of holding a cabin crew certificate of competency are to act as cabin crew members in commercial air transport (CAT)and non-commercial air transport. (NCC).

Cabin crew members may exercise the privileges specified in (a) only if they:

hold a valid cabin crew certificate of competency as specified in CC.CCCC.105; and

comply with CC.GEN.005, CC.TRA.225 and the applicable requirements of Part- MED.

CC.GEN.030 Documents and record-keeping

To show compliance with the applicable requirements as specified in CC.GEN.025(b), each certificate holder shall keep, and provide upon request, the cabin crew certificate of competency, the list and the training and checking records of his/her aircraft type or variant qualification(s). unless the operator employing his/her services keeps such records and can make them readily available upon request by the Authority or by the holder.

SUBPART CCCC- SPECIFIC REQUIREMENTS FOR THE CABIN CREW CERTIFICATES OF COMPETENCY

CC.CCCC.100 Issue of the cabin crew certificate of competency

cabin crew certificate of competency shall only be issued to applicants who have passed the examination following completion of the initial training course in accordance with this Part.

cabin crew certificate of competency shall be issued:

by the Authority; and/or

by an organisation approved to do so by the Authority.

CC.CCCC.105 Validity of the cabin crew certificate of competency

The cabin crew certificate of competency shall be issued with unlimited duration and shall remain valid unless:

it is suspended or revoked by the Authority; or

its holder has not exercised the associated privileges during the preceding 60 months on at least one aircraft type.

CC.CCCC.110 Suspension and revocation of the cabin crew certificate of competency

If holders do not comply with this Part, their cabin crew certificate of competency may be suspended or revoked by the Authority.

In case of suspension or revocation of their cabin crew certificate of competency by the Authority, holders shall:

be informed in writing of this decision, and of their right of appeal in accordance with Libyan law;

not exercise the privileges granted by their cabin crew certificate of competency;

inform, without undue delay, the operator(s) employing their services; and

return their certificate of competency in accordance with the applicable procedure established by the Authority.

SUB PART TRA

Training Requirements for Cabin Crew Certificate of Competency Applicants and Holders

CC.TRA.215 Provision of training

Training required by this Part shall be:

provided by training organisations or commercial air transport operators approved by the Authority for the purpose of providing such training;

performed by personnel suitably experienced and qualified for the training elements to be covered; and

conducted according to the training programme and syllabus specified in the organisation's approval from the Authority.

CC.TRA.220 Initial training course and examination

applicants for a cabin crew certificate of competency shall complete an initial training course to familiarise themselves with the aviation environment and to acquire sufficient general knowledge and basic proficiency required to perform the duties and discharge the responsibilities related to the safety of passengers and flight during normal, abnormal and emergency operations.

The programme of the initial training course shall cover at least the elements specified in Appendix 1 to this Part. It shall include theoretical and practical training.

Applicants for a cabin crew certificate of competency shall undergo an examination covering all elements of the training programme specified in (b), except CRM training, to demonstrate that they have attained the level of knowledge and proficiency required in (a).

CC.TRA.225 Aircraft type or variant qualification(s)

Holders of a valid cabin crew certificate of competency shall only operate on an aircraft if they are qualified in accordance with the applicable requirements of Part-ORO.

To be qualified for an aircraft type or a variant, the holder:

shall comply with the applicable training, checking and validity requirements, covering the following as relevant to the aircraft to be operated:

i. aircraft-type specific training, operator conversion training and familiarisation;

ii. differences training;

iii. recurrent training; and

shall have operated within the preceding 6 months on the aircraft type, or shall have completed the relevant refresher training and checking before operating again on that aircraft type.

APPENDIX TO PART -CC

Appendix 1 to Part-CC Initial training course and examination

TRAINING PROGRAMME
The training programme of the initial training course shall include at least the following:

General theoretical knowledge of aviation and aviation regulations covering all elements relevant to the duties and responsibilities required from cabin crew:

aviation terminology, theory of flight, passenger distribution, areas of operation, meteorology and effects of aircraft surface contamination;

aviation regulations relevant to cabin crew and the role of the authority;

duties and responsibilities of cabin crew during operations and the need to respond promptly and effectively to emergency situations;

continuing competence and fitness to operate as a cabin crew member, including as regards flight and duty time limitations and rest requirements;

the importance of ensuring that relevant documents and manuals are kept up-to-date, with amendments provided by the operator as applicable;

the importance of cabin crew performing their duties in accordance with the operations manual of the operator;

the importance of the cabin crew's pre-flight briefing and the provision of necessary safety information with regards to their specific duties; and

the importance of identifying when cabin crew members have the authority and responsibility to initiate an evacuation and other emergency procedures.

Communication:
During training, emphasis shall be placed on the importance of effective communication between cabin crew and flight crew, including communication techniques, common language and terminology.

Introductory course on human factors (HF) in aviation and crew resource management (CRM)
This course shall be conducted by at least one cabin crew CRM instructor. The training elements shall be covered in depth and shall include at least the following:

General: human factors in aviation, general instructions on CRM principles and objectives, human performance and limitations;

Relevant to the individual cabin crew member: personality awareness, human error and reliability, attitudes and behaviours, self-assessment; stress and stress management; fatigue and vigilance; assertiveness; situation awareness, information acquisition and processing.

Passenger handling and cabin surveillance:

the importance of correct seat allocation with reference to aeroplane mass and balance, special categories of passengers and the necessity of seating able-bodied passengers adjacent to unsupervised exits

rules covering the safe stowage of cabin baggage and cabin service items and the risk of it becoming a hazard to occupants of the passenger compartment or otherwise obstruction or damaging emergency equipment or exits;

advice on the recognition and management of passengers who are, or become, intoxicated with alcohol or are under the influence of drugs or are aggressive;

precautions to be taken when live animals are carried in the passenger compartment;

duties to be undertaken in the event of turbulence, including securing the passenger compartment; and

methods used to motivate passengers and the crowd control necessary to expedite an emergency evacuation.

Aero-medical aspects and first-aid:

general instruction on aero-medical aspects and survival;

the physiological effects of flying with particular emphasis on hypoxia, oxygen requirements, Eustachian tubal function and barotraumas;

basic first-aid, including care of:

air sickness;

gastro-intestinal disturbances;

hyperventilation;

burns;

wounds;

the unconscious; and

fractures and soft tissue injuries;

in-flight medical emergencies and associated first-aid covering at least:

asthma;

stress and allergic reactions;

shock;

diabetes;

choking;

epilepsy;

childbirth;

stroke; and

heart attack;)

the use of appropriate equipment including first-aid oxygen, first-aid kits and emergency medical kits and their contents;

practical cardio-pulmonary resuscitation training by each cabin crew member using a specifically designed dummy and taking account of the characteristics of an aircraft environment; and

travel health and hygiene, including:

hygiene on board;

risk of contact with infectious diseases and means to reduce such risks;

handling of clinical waste;

aircraft disinsection;

handling of death on board; and

alertness management, physiological effects of fatigue, sleep physiology, circadian rhythm and time zone changes.

Dangerous goods in accordance with the applicable ICAO Technical Instructions.

General security aspects in aviation, including awareness of the provisions laid down in Security regulations

Fire and smoke training:

emphasis on the responsibility of cabin crew to deal promptly with emergencies involving fire and smoke and, in particular, emphasis on the importance of identifying the actual source of the fire;

the importance of informing the flight crew immediately, as well as the specific actions necessary for coordination and assistance, when fire or smoke is discovered;

the necessity for frequent checking of potential fire-risk areas including toilets, and the associated smoke detectors;

the classification of fires and the appropriate type of extinguishing agents and procedures for particular fire situations;

the techniques of application of extinguishing agents, the consequences of misapplication, and of use in a confined space including practical training in fire-fighting and in the donning and use of smoke protection equipment used in aviation; and
the general procedures of ground-based emergency services at aerodromes.

Survival training:
principles of survival in hostile environments (e.g. polar, desert, jungle, sea) ; and

water survival training which shall include the actual donning and use of personal flotation equipment in water and the use of slide-rafts or similar equipment, as well as actual practice in water.