

**SPECIFIC APPROVALS
(PART-SPA)**

SUBPART A *GENERAL REQUIREMENTS*

- SPA.GEN.100 Competent authority
- SPA.GEN.105 Application for a specific approval
- SPA.GEN.110 Privileges of an operator holding a specific approval
- SPA.GEN.115 Changes to a specific approval
- SPA.GEN.120 Continued validity of a specific approval

SUBPART B *PERFORMANCE-BASED NAVIGATION (PBN) OPERATIONS*

- SPA.PBN.100 PBN operations
- SPA.PBN.105 PBN operational approval

SUBPART C *OPERATIONS WITH SPECIFIED MINIMUM NAVIGATION PERFORMANCE (MNPS)*

- SPA.MNPS.100 MNPS operations
- SPA.MNPS.105 MNPS operational approval

SUBPART D *OPERATIONS IN AIRSPACE WITH REDUCED VERTICAL SEPARATION MINIMA (RVSM)*

- SPA.RVSM.100 RVSM operations
- SPA.RVSM.105 RVSM operational approval
- SPA.RVSM.110 RVSM equipment requirements
- SPA.RVSM.115 RVSM height-keeping errors

SUBPART E *LOW VISIBILITY OPERATIONS (LVO)*

- SPA.LVO.100 Low visibility operations
- SPA.LVO.105 LVO approval
- SPA.LVO.110 General operating requirements
- SPA.LVO.115 Aerodrome related requirements
- SPA.LVO.120 Flight crew training and qualifications
- SPA.LVO.125 Operating procedures
- SPA.LVO.130 Minimum equipment

SUBPART F *EXTENDED RANGE OPERATIONS WITH TWO-ENGINED AEROPLANES (ETOPS)*

- SPA.ETOPS.100 ETOPS
- SPA.ETOPS.105 ETOPS operational approval
- SPA.ETOPS.110 ETOPS en-route alternate aerodrome
- SPA.ETOPS.115 ETOPS en-route alternate aerodrome planning minima

SUBPART G *TRANSPORT OF DANGEROUS GOODS*

- SPA.DG.100 Transport of dangerous goods
- SPA.DG.105 Approval to transport dangerous goods
- SPA.DG.110 Dangerous goods information and documentation

SUBPART H *HELICOPTER OPERATIONS WITH NIGHT VISION IMAGING SYSTEMS*

- SPA.NVIS.100 Night vision imaging system (NVIS) operations
- SPA.NVIS.110 Equipment requirements for NVIS operations
- SPA.NVIS.120 NVIS operating minima
- SPA.NVIS.130 Crew requirements for NVIS operations
- SPA.NVIS.140 Information and documentation

SUBPART I *HELICOPTER HOIST OPERATIONS*

- SPA.HHO.100 Helicopter hoist operations (HHO)
- SPA.HHO.110 Equipment requirements for HHO
- SPA.HHO.115 HHO communication
- SPA.HHO.125 Performance requirements for HHO
- SPA.HHO.130 Crew requirements for HHO
- SPA.HHO.135 HHO passenger briefing
- SPA.HHO.140 Information and documentation

SUBPART J *HELICOPTER EMERGENCY MEDICAL SERVICE OPERATIONS*

- SPA.HEMS.100 Helicopter emergency medical service (HEMS) operations
- SPA.HEMS.110 Equipment requirements for HEMS operations
- SPA.HEMS.115 Communication
- SPA.HEMS.120 HEMS operating minima
- SPA.HEMS.125 Performance requirements for HEMS operations
- SPA.HEMS.130 Crew requirements
- SPA.HEMS.135 HEMS medical passenger and other personnel briefing
- SPA.HEMS.140 Information and documentation
- SPA.HEMS.145 HEMS operating base facilities
- SPA.HEMS.150 Fuel supply
- SPA.HEMS.155 Refuelling with passengers embarking, on board or disembarking

SPECIFIC APPROVALS PART-SPA

SUBPART A GENERAL REQUIREMENTS

SPA.GEN.100 Competent authority

- (a) The Maldives Civil Aviation Authority is the competent authority in Maldives for issuing a specific approval:
 - (1) for the commercial operator; and
 - (2) for the non-commercial operator.
- (b) Notwithstanding (a)(2), for the non-commercial operator using aircraft registered in a third country, the applicable requirements under this Annex for the approval of the following operations shall not apply if these 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.

SPA.GEN.105 Application for a specific approval

- (a) The operator applying for the initial issue of a specific approval shall provide to MCAA 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 evidence to MCAA in compliance with the requirements of the applicable Subpart;
- (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 Annex III (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 MCAA 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.

SUBPART B
PERFORMANCE-BASED NAVIGATION (PBN) OPERATIONS

SPA.PBN.100 PBN operations

Aircraft shall only be operated in designated airspace, on routes or in accordance with procedures where performance-based navigation (PBN) specifications are established if the operator has been granted an approval by MCAA to conduct such operations.

SPA.PBN.105 PBN operational approval

To obtain a PBN operational approval from MCAA, the operator shall provide evidence that:

- (a) the relevant airworthiness approval of the RNAV system has been obtained;
- (b) a training programme for the flight crew members involved in these operations has been established;
- (c) 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 and experience requirements;
 - (3) normal procedures;
 - (4) contingency procedures;
 - (5) monitoring and incident reporting;
 - (6) electronic navigation data management.

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 MCAA to conduct such operations.

SPA.MNPS.105 MNPS operational approval

To obtain an MNPS operational approval from MCAA, 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 MCAA 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 MCAA to conduct such operations.

SPA.RVSM.105 RVSM operational approval

To obtain an RVSM operational approval from MCAA, 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 MCAA 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 MCAA.

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 MCAA:

- (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 MCAA, 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 CDFFA 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° ;
 - (iii) the final approach path is published and not greater than 3,7° ;
 - (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 MCAA.

SPA.ETOPS.105 ETOPS operational approval

To obtain an ETOPS operational approval from MCAA, 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 (*)
Non-precision approach or Circling approach	MDA/H + 400 ft (*) RVR/VIS + 1 500 m
(*) 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 Annex IV (Part-CAT) Annex VI (Part-NCC), Annex VII (Part-NCO) and Annex VIII (Part-SPO), the operator shall only transport dangerous goods by air if the operator has been approved by MCAA.

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:

- (a) establish and maintain a training programme for all personnel involved and demonstrate to MCAA 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 and segregation of dangerous goods;
 - (3) actions to take in the event of an aircraft accident or 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) dangerous goods accident and incident reporting.

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) use an acceptance checklist;
- (c) 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;
- (d) 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;
- (e) ensure that a copy of the information to the pilot-in-command/commander is retained on the ground and that this copy, or the information contained in it, is readily accessible to the aerodromes of last departure and next scheduled arrival, until after the flight to which the information refers;
- (f) retain the acceptance checklist, transport document and information to the pilot-in-command/commander for at least three months after completion of the flight;
- (g) retain the training records of all personnel for at least three years.

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 MCAA.
- (b) To obtain such approval by MCAA, the operator shall:
 - (1) operate in commercial air transport (CAT) and hold a CAT AOC in accordance with Annex III (Part-ORO);
 - (2) demonstrate to MCAA:
 - (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.
- (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.
 - (2) Any subsequent modification or maintenance to the aircraft shall be in compliance with the NVIS airworthiness approval.

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 MCAA 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 MCAA.
- (b) To obtain such approval by MCAA, the operator shall:
 - (1) operate in CAT and hold a CAT AOC in accordance with Annex III (Part-ORO);
 - (2) demonstrate to MCAA compliance with the requirements contained in this Subpart.

SPA.HHO.110 Equipment requirements for HHO

- (a) The installation of all helicopter hoist equipment, 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 MCAA.
- (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.

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 MCAA 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 MCAA.
- (b) To obtain such approval by MCAA, the operator shall:
 - (1) operate in CAT and hold a CAT AOC in accordance with Annex III (Part-ORO);
 - (2) demonstrate to MCAA 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 Regulations in force.

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 minima			
2 PILOTS		1 PILOT	
DAY			
Ceiling	Visibility	Ceiling	Visibility
500 ft and above	As defined by the applicable airspace VFR minima	500 ft and above	As defined by the applicable airspace VFR minima
499 - 400 ft	1 000 m (*)	499 – 400 ft	2 000 m
399 - 300 ft	2 000 m	399 – 300 ft	3 000 m
NIGHT			
Cloud base	Visibility	Cloud base	Visibility
1 200 ft (**)	2 500 m	1 200 ft (**)	3 000 m
(*) <i>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.</i>			
(**) <i>During the en-route phase, cloud base may be reduced to 1 000 ft for short periods.</i>			

- (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 a 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 MCAA 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 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.