

**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 the competent authority 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 the competent authority.
- (b) To obtain such approval by the competent authority, 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 the competent 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 Regulation (EC) No 1702/2003.
- (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 the competent authority 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 competent authority.
- (b) To obtain such approval by the competent authority, the operator shall:
  - (1) operate in CAT and hold a CAT AOC in accordance with Annex III (Part-ORO);
  - (2) demonstrate to the competent authority 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 the competent 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 Regulation (EC) No 2042/2003.

**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 competent 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 competent authority.
- (b) To obtain such approval by the competent authority, the operator shall:
  - (1) operate in CAT and hold a CAT AOC in accordance with Annex III (Part-ORO);
  - (2) demonstrate to the competent 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 Regulation (EC) No 1702/2003.

**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

(\*) 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.

(\*\*) 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 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 the competent 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.
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