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| **Requirements reference** | | | **Subject** | | NR | | N  A | | | S | | | U | R  M  K |
| 1. **Helicopter Offshore Operations** | | | | | | | | | | | | | | |
|  | | | 1. a commercial air transport operator holding a valid AOC in accordance with Part-ORO; 2. a specialised operations operator having declared its activity in accordance with Part-ORO; or 3. a non-commercial operator having declared its activity in accordance with Part-ORO. | |  | |  | | |  | | | | |
| 1. **SPA.HOFO.105 Approval for helicopter offshore operations** | | | | | | | | | | | | | | |
| (a) | | | Prior to engaging in operations under this Subpart, a specific approval by the competent authority shall have been issued to the operator. | |  | |  | | |  | | | | |
| (b) | | | To obtain such approval, the operator shall submit an application to the competent authority as specified in SPA.GEN.105, and shall demonstrate compliance with the requirements of this Subpart. | |  | |  | | |  | | | | |
| (c) | | | The operator shall, prior to performing operations from a Member State other than the Member State that issued the approval under (a), inform the competent authorities in both Member States of the intended operation. | |  | |  | | |  | | | | |
| GM1 SPA.HOFO.105(c) | | | The requirement to inform both Member States (MSs) allows the MSs to mutually decide on how best to exercise their obligations in accordance with ARO.GEN.300(d) and (e) when operations are intended to be performed in a MS other than the MS issuing the approval for offshore operations. | |  | |  | | |  | | | | |
| 1. **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 competent authority or the appropriate authority responsible for  the airspace. | |  | |  | | |  | | | | |
| AMC1 SPA.HOFO.110(a) | | RISK ASSESSMENT | |  | |  | | |  | | | | |
| AMC1 SPA.HOFO.110(b)(2) | | PASSENGER BRIEFING | |  | |  | | |  | | | | |
| AMC1.1 SPA.HOFO.110(b)(2) | | PASSENGER BRIEFING  This AMC is applicable to passengers who require more knowledge of the operational concept, such as sea pilots and support personnel for offshore wind turbines. | |  | |  | | |  | | | | |
| AMC1 SPA.HOFO.110(b)(5) | | AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS) | |  | |  | | |  | | | | |
| GM1 SPA.HOFO.110(b)(9) | | Emergency flotation systems (EFSs) cannot always be armed safely before the approach when a speed limitation needs to be complied with. In such case, the EFS should be armed as soon as safe to do so. | |  | |  | | |  | | | | |
| 4. **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. | |  | |  | | |  | | | | |
| AMC1 SPA.HOFO.  115 | | (a) The operations manual (OM) relating to the specific usage of offshore helicopter landing areas (Part C for CAT operators) should contain, or make reference to, a directory of helidecks (helideck directory (HD)) intended to be used by the operator. The directory should provide details of helideck limitations and a pictorial representation of each offshore location and its helicopter landing area, recording all necessary information of a permanent nature and using a standardized template. The HD entries should show, and be amended as necessary, the most recent status of each helideck concerning non-compliance with applicable national standards, limitations, warnings, cautions or other comments of operational importance. An example of a typical template is shown in Figure 1 of GM1 SPA.HOFO.115 below.  (b) In order to ensure that the safety of flights is not compromised, the operator should obtain  relevant information and details in order to compile the HD, as well as the pictorial representation from the owner/operator of the offshore helicopter landing area.  (c) If more than one name for the offshore location exists, the common name painted on the surface of the landing area should be listed, but other names should also be included in the HD (e.g. radio call sign, if different). After renaming an offshore location, the old name should also be included in the HD for the following 6 months.  (d) Any limitations associated with an offshore location should be included in the HD. With complex installation arrangements, including combinations of installations/vessels (e.g. combined operations), a separate listing in the HD, accompanied by diagrams/pictures, where necessary, may be required.  (e) Each offshore helicopter landing area should be inspected and assessed based on limitations, warnings, instructions and restrictions, in order to determine its acceptability with respect to the following as a minimum:  (1) The physical characteristics of the landing area, including size, load-bearing capability and  the appropriate ‘D’ and ‘t’ values.  Note 1: ‘D’ is the overall length of the helicopter from the most forward position of the  main rotor tip to the most rearward position of the tail rotor tip plane path, or rearmost  extension of the fuselage in the case of ‘Fenestron’ or ‘NOTAR’ tails.  Note 2: ‘t’ is the maximum allowable mass in tonnes.  (2) The preservation of obstacle-protected surfaces (an essential safeguard for all flights).  These surfaces are:  (i) the minimum 210° obstacle-free surface (OFS) above helideck level;  (ii) the 150° limited-obstacle surface (LOS) above helideck level; and  (iii) the minimum 180° falling ‘5:1’ gradient with respect to significant obstacles belowhelideck level. | |  | | |  | | |  | | |
| GM1 SPA.HOFO.  115 | | Example of a helicopter landing area template see on 965 /2012 as amended | |  | | |  | | |  | | |
| GM2 SPA.HOFO.  115 | | Operators should use available standards and regulations provided for operations to offshore locations such as those contained in United Kingdom Civil Aviation Authority (UK CAA) CAP 437 ‘Standards for Offshore Helicopter Landing Areas’, Norwegian Civil Aviation Regulation BSL D 5-1 or similar national documentation, or ICAO Annex 14, Vol II ‘Heliports’. | |  | | |  | | |  | | |
| 1. **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. | |  | | |  | | |  | | |
| AMC1 SPA.HOFO.120 | | COASTAL AERODROME | |  | | |  | | |  | | |
| AMC2 SPA.HOFO.120 | | OFFSHORE DESTINATION ALTERNATE AERODROME | |  | | |  | | |  | | |
| 1. **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. |  | | |  | | |  | | | |
| AMC1 SPA.HOFO.125 | | (a)Alternative approach procedures using original equipment manufacturer (OEM)-certified approach systems are not covered by this AMC.  Before commencing the final approach, the pilot-in-command/commander should ensure that a clear path exists on the radar screen for the final and missed approach segments.  (b) The cloud ceiling should be sufficiently clear above the helideck to permit a safe landing.  (c) Minimum descent height (MDH) should not be less than 50 ft above the elevation of the helideck.  (d) Minimum descent altitude (MDA) may only be used if the radio altimeter is unserviceable.  (e) The decision range should not be less than 0.75 nm.  (f) The MDA/MDH for a single-pilot ARA should be 100 ft higher than that calculated in accordance with (c) and (d) above. The decision range should not be less than 1 nm.  (g) For approaches to non-moving offshore locations, the maximum range discrepancy between the global navigation satellite system (GNSS) and the weather radar display should not be greater than 0.3 nm at any point between the final approach fix (FAF) at 4 nm from the offshore location and  the offset initiation point (OIP) at 1.5 nm from the offshore location.  (h) For approaches to non-moving offshore locations, the maximum bearing discrepancy between the GNSS and the weather radar display should not be greater than 10° at the FAF at 4 nm from the offshore location. |  | | |  | | |  | | | | |
| GM1 SPA.HOFO.125 | | 1. General 2. Obstacle environment 3. Arrival segment 4. Initial approach segment 5. Intermediate approach segment 6. Final approach segment 7. Missed approach segment 8. Required visual reference 9. Radar equipment |  | | |  | | |  | | | | |
| GM2 SPA.HOFO.125 | | GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS)/AREA NAVIGATION SYSTEM |  | | |  | | |  | | | | |
| |  | | --- | | 1. **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, see table minima 965/201 |  |  |  |  |  | | | | | | | | | | | | | | |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Requirements reference** | **Subject** | NR | N  A | S | U | R  M  K |  1. **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 Annex according to their type of operation. |  |  |  |  |  | | AMC1 SPA.HOFO.140 | FACTORS  To ensure that the necessary factors are taken into account, operators not conducting CAT operations should use take-off and landing procedures that are appropriate to the circumstances and have been developed in accordance with ORO.MLR.100 in order to minimise the risks of collision with obstacles at the individual offshore location under the prevailing conditions. |  |  |  |  |  | | 1. **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. |  |  |  |  |  | | AMC1 SPA.HOFO.145 | FDM PROGRAMME  Refer to AMC1 ORO.AOC.130.  Note: Appendix 1 to AMC1 ORO.AOC.130 is not valid for helicopters. |  |  |  |  |  | | GM1  SPA.HOFO.145 | DEFINITION OF AN FDM PROGRAMME |  |  |  |  |  | | GM2  SPA.HOFO.145 | FDM |  |  |  |  |  | | 1. **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. |  |  |  |  |  | | AMC1 SPA.HOFO.150 | Flights should be tracked and monitored from take-off to landing. This function may be achieved by the air traffic services (ATS) when the planned route and the planned diversion routes are fully included in airspace blocks where:  (a) ATS surveillance service is normally provided and supported by ATC surveillance systems locating the aircraft at time intervals with adequate duration; and  (b) the operator has given to competent air navigation services (ANS) providers the necessary contact information.  In all other cases, the operator should establish a detailed procedure describing how the aircraft tracking  system is to be monitored, and what actions and when are to be taken if a deviation or anomaly has been detected. |  |  |  |  |  | | GM1  SPA.HOFO.150 | OPERATIONAL PROCEDURE |  |  |  |  |  | | 1. **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. |  |  |  |  |  | | | | | | | | | | | | | | | | | | | | |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Requirements reference** | **Subject** | NR | N  A | S | U | R  M  K |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | AMC1 SPA.HOFO.155 | Any VHM system should meet all of the following criteria:  (a) VHM system capability  (b) Approval of VHM installation  (c) Operational procedures  (d) Training |  |  |  |  |  | | GM1  SPA.HOFO.155 | Operators should utilise available international guidance material provided for the specification and design of VHM systems. |  |  |  |  |  | | 1. **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. |  |  |  |  |  | | GM1 SPA.HOFO.160(a)(1) | PUBLIC ADDRESS (PA) SYSTEM |  |  |  |  |  | | GM1 SPA.HOFO.160(a)(2) | RADIO ALTIMETER |  |  |  |  |  | | 1. **SPA.HOFO.165 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. |  |  |  |  |  | | AMC1 SPA.HOFO.165(c) | EMERGENCY BREATHING SYSTEM (EBS) |  |  |  |  |  | | | AMC1 SPA.HOFO.165(d) | INSTALLATION OF THE LIFE RAFT |  |  |  |  |  | | | AMC1 SPA.HOFO.165(h | EMERGENCY EXITS AND ESCAPE HATCHES |  |  |  |  |  | | | GM1 SPA.HOFO.165(h) | SEAT ALLOCATION |  |  |  |  |  | | | AMC1 SPA.HOFO.165(i) | MEDICALLY INCAPACITATED PASSENGER |  |  |  |  |  | | | | | | | | | | | | | | |
| |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | 1. **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. |  |  |  |  |  | | AMC1 SPA.HOFO.170(a) | FLIGHT CREW TRAINING AND CHECKING |  |  |  |  |  | | | | | | | | | | | | | |
| **Remarks (state non conformities with reference to RMK ref. no.):** | | | | | | | | | | | | |

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| **Flight/Technical Inspectors signature** | TNO 🞎 TCE 🞎 TSU 🞎 TNE 🞎 |