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COMMISSION REGULATION (EU) No 965/2012

of 5 October 2012

laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council

(OJ L 296, 25.10.2012, p. 1)

Amended by:

		Official Journal		
		No	page	date
►M1	Commission Regulation (EU) No 800/2013 of 14 August 2013	L 227	1	24.8.2013
►M2	Commission Regulation (EU) No 71/2014 of 27 January 2014	L 23	27	28.1.2014
►M3	Commission Regulation (EU) No 83/2014 of 29 January 2014	L 28	17	31.1.2014
►M4	Commission Regulation (EU) No 379/2014 of 7 April 2014	L 123	1	24.4.2014
►M5	Commission Regulation (EU) 2015/140 of 29 January 2015	L 24	5	30.1.2015
►M6	Commission Regulation (EU) 2015/640 of 23 April 2015	L 106	18	24.4.2015
►M7	Commission Regulation (EU) 2015/1329 of 31 July 2015	L 206	21	1.8.2015
►M8	Commission Regulation (EU) 2015/2338 of 11 December 2015	L 330	1	16.12.2015
►M9	Commission Regulation (EU) 2016/1199 of 22 July 2016	L 198	13	23.7.2016
►M10	Commission Regulation (EU) 2017/363 of 1 March 2017	L 55	1	2.3.2017
►M11	Commission Regulation (EU) 2018/394 of 13 March 2018	L 71	1	14.3.2018
►M12	Commission Regulation (EU) 2018/1042 of 23 July 2018	L 188	3	25.7.2018
►M13	amended by Commission Implementing Regulation (EU) 2020/745 of 4 June 2020	L 176	11	5.6.2020
►M14	Commission Implementing Regulation (EU) 2018/1975 of 14 December 2018	L 326	53	20.12.2018
►M15	Commission Implementing Regulation (EU) 2019/1384 of 24 July 2019	L 228	106	4.9.2019
►M16	Commission Implementing Regulation (EU) 2019/1387 of 1 August 2019	L 229	1	5.9.2019
►M17	amended by Commission Implementing Regulation (EU) 2020/1176 of 7 August 2020	L 259	10	10.8.2020
►M18	Commission Implementing Regulation (EU) 2020/2036 of 9 December 2020	L 416	24	11.12.2020
►M19	Commission Implementing Regulation (EU) 2021/1062 of 28 June 2021	L 229	3	29.6.2021
►M20	Commission Implementing Regulation (EU) 2021/1296 of 4 August 2021	L 282	5	5.8.2021
►M21	Commission Implementing Regulation (EU) 2021/2237 of 15 December 2021	L 450	21	16.12.2021
►M22	Commission Implementing Regulation (EU) 2022/414 of 11 March 2022	L 85	4	14.3.2022

►**M23**	Commission Implementing Regulation (EU) 2022/790 of 19 May 2022	L 141	13	20.5.2022
►**M24**	Commission Implementing Regulation (EU) 2022/2203 of 11 November 2022	L 293	3	14.11.2022
►**M25**	Commission Implementing Regulation (EU) 2022/2502 of 19 December 2022	L 325	56	20.12.2022
►**M26**	Commission Implementing Regulation (EU) 2023/203 of 27 October 2022	L 31	1	2.2.2023
►**M27**	Commission Implementing Regulation (EU) 2023/217 of 1 February 2023	L 30	11	2.2.2023
►**M28**	Commission Implementing Regulation (EU) 2023/1020 of 24 May 2023	L 137	1	25.5.2023
►**M29**	Commission Implementing Regulation (EU) 2023/1754 of 11 September 2023	L 224	16	12.9.2023
►**M30**	Commission Implementing Regulation (EU) 2024/1111 of 10 April 2024	L 1111	1	23.5.2024
►**M31**	Commission Implementing Regulation (EU) 2024/2076 of 24 July 2024	L 2076	1	25.7.2024
►**M32**	Commission Implementing Regulation (EU) 2025/133 of 28 January 2025	L 133	1	29.1.2025
►**M33**	Commission Implementing Regulation (EU) 2025/2293 of 10 November 2025	L 2293	1	11.11.2025

Corrected by:

►**C1** Corrigendum, OJ L 230, 6.9.2019, p. 10 (2019/1384)
►**C2** Corrigendum, OJ L 30, 2.2.2023, p. 36 (2016/1199)
►**C3** Corrigendum, OJ L 90414, 21.5.2025, p. 1 (2024/1111)

▼B

COMMISSION REGULATION (EU) No 965/2012

of 5 October 2012

laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council

▼M4

Article 1

Subject matter and scope

▼M14

1. This Regulation lays down detailed rules for air operations with aeroplanes and ►M32 rotorcraft ◄, including ramp inspections of aircraft of operators under the safety oversight of another State when landed at aerodromes located in the territory subject to the provisions of the Treaties.

▼M30

1a. This Regulation lays down detailed rules for innovative air mobility operations in accordance with visual flight rules by day conducted with the surface in sight with single pilot manned aircraft with a vertical take-off and landing capability referred to in points (b)(i) and (ii) of Article 2(1) of Regulation (EU) 2018/1139.

▼M14

2. This Regulation also lays down detailed rules on the conditions for issuing, maintaining, amending, limiting, suspending or revoking the certificates of operators of aircraft referred to in points (b)(i) and (ii) of Article 2(1) of Regulation (EU) 2018/1139, except for balloons and sailplanes, engaged in commercial air transport operation, the privileges and responsibilities of the holders of certificates as well as conditions under which operations shall be prohibited, limited or subject to certain conditions in the interest of safety;

3. This Regulation also lays down detailed rules on the conditions and procedures for the declaration by operators engaged in commercial specialised operations of aeroplanes and helicopters or in non-commercial operation of complex motor-powered aircraft, including non-commercial specialised operations of complex motor-powered aircraft, of their capability and the availability of the means to discharge the responsibilities associated with the operation of aircraft, and for the oversight of such operators.

▼M4

4. This Regulation also lays down detailed rules on the conditions under which certain high risk commercial specialised operations shall be subject to authorisation in the interest of safety, and on the conditions for issuing, maintaining, amending, limiting, suspending or revoking the authorisations.

5. This Regulation shall not apply to air operations within the scope of Article 1(2)(a) of Regulation (EC) No 216/2008.

▼M11

6. This Regulation shall not apply to air operations with airships.

▼M14

7. This Regulation shall not apply to air operations with balloons and sailplanes. However, in respect of such air operations with balloons, other than tethered gas balloons, and sailplanes, the requirements in respect of oversight of Article 3 shall apply.

▼M32

8. This Regulation shall not apply to the following operations conducted with gyroplanes:

(a) commercial operations, except for those operations specified in Article 6(4a);

(b) operations conducted under instrument flight rules.

▼B

Article 2

Definitions

For the purposes of this Regulation:

▼M14

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

▼M30

(1a) ‘rotorcraft’ means a power-driven, heavier-than-air aircraft that depends principally for its support in flight on the lift generated by up to two rotors;

(1aa) ‘helicopter’ means a type of rotorcraft supported in flight chiefly by the reactions of the air on up to two power-driven rotors on substantially vertical axes;

▼M14

(1b) ‘balloon’ means a manned lighter-than-air aircraft which is not power-driven and sustains flight through the use of either a lighter-than-air gas or an airborne heater, including gas balloons, hot-air balloons, mixed balloons and, although power-driven, hot-air airships;

(1c) ‘sailplane’ means a heavier-than-air aircraft that is supported in flight by the dynamic reaction of the air against its fixed lifting surfaces, the free flight of which does not depend on an engine;

(1d) ‘commercial operation’ means any operation of an aircraft, in return for remuneration or other valuable consideration, which is available for the public or, when not made available to the public, which is performed under a contract between an operator and a customer, where the latter has no control over the operator;

(1e) ‘tethered gas balloon’ means a gas balloon with a tether system that continuously anchors the balloon to a fixed point during operation;

▼B

(2) ‘performance class B aeroplanes’ means aeroplanes powered by propeller engines with a maximum operational passenger seating configuration of nine or less and a maximum take-off mass of 5 700 kg or less;

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

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

▼M1

(5) ‘performance-based navigation (PBN)’ means area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace;

▼M3

(6) ‘air taxi operation’ means, for the purpose of flight time and duty time limitations, a non-scheduled on demand commercial air transport operation with an aeroplane with a maximum operational passenger seating configuration (‘MOPSC’) of 19 or less;

▼M15

(7) ‘specialised operation’ means any operation, other than commercial air transport operation, where the aircraft is used for specialised activities such as agriculture, construction, photography, surveying, observation and patrol, aerial advertisement, maintenance check flights;

▼M4

(8) ‘high risk commercial specialised operation’ means any commercial specialised aircraft operation carried out over an area where the safety of third parties on the ground is likely to be endangered in the event of an emergency, or, as determined by the competent authority of the place where the operation is conducted, any commercial specialised aircraft operation that, due to its specific nature and the local environment in which it is conducted, poses a high risk, in particular to third parties on the ground;

▼M14

(9) ‘introductory flight’ means any operation against remuneration or other valuable consideration consisting of an air tour of short duration for the purpose of attracting new trainees or new members, performed either by a training organisation referred to in Article 10a of Commission Regulation (EU) No 1178/2011 ([1]) or by an organisation created with the aim of promoting aerial sport or leisure aviation;

▼M4

(10) ‘competition flight’ means any flying activity where the aircraft is used in air races or contests, as well as where the aircraft is used to practice for air races or contests and to fly to and from racing or contest events;

(11) ‘flying display’ means any flying activity deliberately performed for the purpose of providing an exhibition or entertainment at an advertised event open to the public, including where the aircraft is used to practice for a flying display and to fly to and from the advertised event;

▼M30

(12) ‘innovative air mobility (IAM) operations’ means any operation with vertical take-off and landing (VTOL)-capable aircraft in congested and non-congested areas;

(13) ‘vertical take-off and landing (VTOL)-capable aircraft’ (VCA) means a power-driven, heavier-than-air aircraft other than aeroplane or rotorcraft, capable of performing vertical take-off and landing by means of lift and thrust units used to provide lift during the take-off and landing;

([1]) Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 311, 25.11.2011, p. 1).

▼M30

(14) ‘VEMS flight’ means a flight with a VCA that operates under a VEMS approval, where immediate and rapid transportation is essential and the purpose of which is either to:

(a) facilitate emergency medical assistance by carrying one or more of the following:

(i) medical personnel;

(ii) medical supplies (equipment, blood, organs, drugs);

(iii) ill or injured persons and other persons directly involved,

or

(b) perform any operation where a person is at imminent or anticipated health risk from the environment and either:

(i) needs to be rescued or provided with supplies; or

(ii) persons, animals or equipment need to be transported to/from the VEMS operating site.

▼M32

(15) ‘gyroplane’ means a type of rotorcraft supported in flight by the reactions of the air on up to two rotors which rotate freely on substantially vertical axes.

▼B

Additional definitions are laid down in Annex I for the purposes of Annexes II to ►M4 VIII ◄.

Article 3

Oversight capabilities

1. Member States shall designate one or more entities as the competent authority within that Member State with the necessary powers and allocated responsibilities for the certification and oversight of persons and organisations subject to Regulation (EC) No 216/2008 and its implementing rules.

▼M11

The administration and management systems of the competent authorities of the Member States and of the Agency shall comply with the requirements specified in Annex II.

▼B

2. If a Member State designates more than one entity as competent authority:

(a) the areas of competence of each competent authority shall be clearly defined in terms of responsibilities and geographic limitation; and

(b) coordination shall be established between those entities to ensure effective oversight of all organisations and persons subject to Regulation (EC) No 216/2008 and its implementing rules within their respective remits.

3. Member States shall ensure that the competent authority(ies) has(ve) the necessary capability to ensure the oversight of all persons and organisations covered by their oversight programme, including sufficient resources to fulfil the requirements of this Regulation.

▼B

4. Member States shall ensure that competent authority personnel do not perform oversight activities when there is evidence that this could result directly or indirectly in a conflict of interest, in particular when relating to family or financial interest.

5. Personnel authorised by the competent authority to carry out certification and/or oversight tasks shall be empowered to perform at least the following tasks:

(a) examine the records, data, procedures and any other material relevant to the execution of the certification and/or oversight task;

(b) take copies of or extracts from such records, data, procedures and other material;

(c) ask for an oral explanation on site;

(d) enter relevant premises, operating sites or means of transport;

(e) perform audits, investigations, assessments, inspections, including ramp inspections and unannounced inspections;

(f) take or initiate enforcement measures as appropriate.

6. The tasks under paragraph 5 shall be carried out in compliance with the legal provisions of the relevant Member State.

▼M12

Article 4

Ramp inspections

1. Ramp inspections of aircraft of operators under the safety oversight of another Member State or of a third country shall be carried out in accordance with Subpart RAMP of Annex II.

2. Member States shall ensure that alcohol testing of flight crew and cabin crew members is carried out with regard to operators under their own oversight as well as with regard to operators under the oversight of another Member State or of a third country. Such testing shall be performed by ramp inspectors within the framework of the ramp inspection programme of Subpart RAMP of Annex II.

3. By way of derogation from paragraph 2, Member States may ensure alcohol testing of flight crew and cabin crew members to be carried out by other authorised officials and outside the framework of the ramp inspection programme of Subpart RAMP of Annex II, provided that such alcohol testing meets the same objectives and adheres to the same principles as tests carried out under the framework of Subpart RAMP of Annex II. Results of such alcohol tests shall be included in the centralised database in accordance with point (b) of ARO.RAMP.145.

▼M12

4. Member States may carry out additional testing for psychoactive substances other than alcohol. In that case, the Member State shall notify the European Aviation Safety Agency (‘the Agency’) and the Commission.

▼B

Article 5

Air operations

▼M14

1. Operators shall only operate an aeroplane or a helicopter for the purpose of commercial air transport (hereinafter ‘CAT’) operations as specified in Annexes III and IV.

▼M4

1a. Operators engaged in CAT operations starting and ending at the same aerodrome/operating site with Performance class B aeroplanes or non-complex helicopters shall comply with the relevant provisions of Annexes III and IV.

▼M30

1b. Operators shall only operate VCA in the context of IAM operations as specified in Annexes III and IX to this Regulation.

▼B

2. ►M1 ——————— ◄ Operators shall comply with the relevant provisions of Annex V when operating:

(a) aeroplanes and helicopters used for:

(i) operations using performance-based navigation (PBN);

(ii) operations in accordance with minimum navigation performance specifications (MNPS);

(iii) operations in airspace with reduced vertical separation minima (RVSM);

▼M21

(iv) low-visibility operations (LVOs) or operations with operational credits;

▼M14

(b) aeroplanes and helicopters used for the transport of dangerous goods (DG);

▼B

(c) two-engined aeroplanes used for extended range operations (ETOPS) in commercial air transport;

(d) helicopters used for commercial air transport operations with the aid of night vision imaging systems (NVIS);

(e) helicopters used for commercial air transport hoist operations (HHO); ►M9 ——————— ◄

(f) helicopters used for commercial air transport emergency medical service operations (HEMS); and

▼M9

(g) helicopters used for offshore operations (HOFO).

▼M30

(h) VCA used for:

(i) the transport of dangerous goods (DGs);

(ii) VEMS.

▼M4

3. Operators of complex motor-powered aeroplanes and helicopters involved in non-commercial operations shall declare their capability and means to discharge their responsibilities associated with the operation of aircraft and operate the aircraft in accordance with the provisions specified in Annex III and Annex VI. Such operators when engaged in non-commercial specialised operations shall operate the aircraft in accordance with the provisions specified in Annex III and VIII instead.

▼M14

4. Operators of other-than-complex motor-powered aeroplanes and helicopters involved in non-commercial operations, including non-commercial specialised operations, shall operate the aircraft in accordance with the provisions set out in Annex VII.

▼M32

4a. Operators of gyroplanes involved in non-commercial operations conducted in visual flight rules conditions shall operate the aircraft in accordance with the provisions set out in Annex VII.

▼M14

5. Training organisations referred to in Article 10a of Regulation (EU) No 1178/2011 and having their principal place of business in a Member State shall, when conducting flight training into, within or out of the Union, operate:

(a) complex motor-powered aeroplanes and helicopters in accordance with the provisions specified in Annex VI;

(b) other aeroplanes and ►M32 rotorcraft ◄ in accordance with the provisions specified in Annex VII.

▼M30

(c) VCA in accordance with the requirements specified in Annex IX.

In the case of points (a), (b) and (c) of the first subparagraph, the training organisations shall comply with the requirements laid down in Annex VII (Part-ORA) to Regulation (EU) No 1178/2011 instead of Annex III (Part-ORO) of this Regulation. Training for VCA shall only be provided by approved training organisations.

▼M14

6. Operators shall only operate an aeroplane or a helicopter for the purpose of commercial specialised operations in accordance with the requirements in Annexes III and VIII.

▼M4

7. Flights taking place immediately before, during or immediately after specialised operations and directly connected to those operations shall be operated in accordance with paragraphs 3, 4 and 6, as applicable. ►M5 Except for crew members, persons other than those indispensable to the mission shall not be carried on board. ◄

▼B

Article 6

Derogations

▼M4

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▼B

2. ►M5 By way of derogation from Article 5(1), aircraft referred to in Article 4(5) of Regulation (EC) No 216/2008 shall, in the case of aeroplanes, be operated under the conditions set out in Commission Decision C(2009) 7633 of 14 October 2009 when used in CAT operations. ◄ Any change to the operation that affects the conditions set out in that Decision shall be notified to the Commission and the European Aviation Safety Agency (hereinafter 'the Agency') before the change is implemented.

A Member State, other than an addressee of Decision C(2009)7633, which intends to use the derogation provided for in that Decision shall notify its intention to the Commission and the Agency before the derogation is implemented. The Commission and the Agency shall assess to what extent the change or the intended use deviates from the conditions of Decision C(2009)7633 or impacts on the initial safety assessment performed in the context of that Decision. If the assessment shows that the change or the intended use does not correspond to the initial safety assessment done for Decision C(2009)7633, the Member State concerned shall submit a new derogation request in accordance with Article 14(6) of Regulation (EC) No 216/2008.

▼M14

3. By way of derogation from Article 5 of this Regulation and without prejudice to point (b) of Article 18(2) of Regulation (EU) 2018/1139 and to Subpart P of Annex I to Commission Regulation (EU) No 748/2012 ([1]) concerning the permit to fly, the following flights shall continue to be operated under the requirements specified in the national law of the Member State in which the operator has its principal place of business, or, where the operator has no principal place of business, the place where the operator is established or resides:

(a) flights related to the introduction or modification of aeroplane or ►M32 rotorcraft ◄ types conducted by design or production organisations within the scope of their privileges;

▼M15

(b) flights carrying no passengers or cargo, where the aeroplane or ►M32 rotorcraft ◄ is ferried for refurbishment, repair, inspections, delivery, export or similar purposes, provided that the aircraft is not listed on an air operator certificate or on a declaration.

▼M9

4. Notwithstanding Article 5, Member States may, until 30 June 2018, continue to require a specific approval and additional requirements regarding operational procedures, equipment, crew qualification and training for CAT helicopter offshore operations in accordance with their national law. Member States shall notify the Commission and the Agency of the additional requirements being applied to such specific approvals. Those requirements shall not be less restrictive than those of Annexes III and IV.

▼M14

4a. By way of derogation from Article 5(1) and (6), the following operations with other-than-complex motor-powered aeroplanes and helicopters may be conducted in accordance with Annex VII:

([1]) Commission Regulation (EU) No 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations (OJ L 224, 21.8.2012, p. 1).

▼M4

(a) cost-shared flights by private individuals, on the condition that the direct cost is shared by all the occupants of the aircraft, pilot included and the number of persons sharing the direct costs is limited to six;

(b) competition flights or flying displays, on the condition that the remuneration or any valuable consideration given for such flights is limited to recovery of direct costs and a proportionate contribution to annual costs, as well as prizes of no more than a value specified by the competent authority;

▼M14

(c) introductory flights, parachute dropping, sailplane towing or aerobatic flights performed either by a training organisation having its principal place of business in a Member State and referred to in Article 10a of Regulation (EU) No 1178/2011, or by an organisation created with the aim of promoting aerial sport or leisure aviation, on the condition that the aircraft is operated by the organisation on the basis of ownership or dry lease, that the flight does not generate profits distributed outside of the organisation, and that whenever non-members of the organisation are involved, such flights represent only a marginal activity of the organisation.

▼M10

5. Until 2 September 2017, exemptions granted before 22 March 2017 in accordance with Article 8(2) of Regulation (EEC) No 3922/91, as provided for in Article 6(5) of Regulation (EU) No 965/2012 as applicable before 22 March 2017, shall be considered to constitute approvals referred to in point (a) of CAT.POL.A.300 of Annex IV (Part-CAT). After 2 September 2017, those exemptions shall no longer be valid for the operation of single-engined aeroplanes.

If any change to the operation of those aeroplanes that affects the conditions set out in those exemptions is envisaged between 22 March 2017 and 2 September 2017, that envisaged change shall be notified to the Commission and the Agency before it is implemented. The Commission and the Agency shall assess the envisaged change in accordance with Article 14(5) of Regulation (EC) No 216/2008.

▼M28

6. By way of derogation from point CAT.POL.H.225 of Annex IV and until 25 May 2028, existing helicopter operations to or from a public interest site (PIS) may be conducted under conditions determined by the Member States, whenever the size of the PIS, the obstacle environment or the helicopter does not allow compliance with the requirements for operation in performance class 1.

Member States shall notify the Commission and the Agency of the conditions being applied.

▼M9

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8. By way of derogation from the first sentence of Article 5(3), operators of complex motor-powered aeroplanes with a maximum certificated take-off mass (MCTOM) at or below 5 700 kg, equipped with turboprop engines, involved in non-commercial operations, shall operate those aircraft only in accordance with Annex VII.

▼M9

9. By way of derogation from Article 5(5)(a), training organisations shall, when conducting flight training on complex motor-powered aeroplanes with a maximum certificated take-off mass (MCTOM) at or below 5 700 kg, equipped with turboprop engines, operate those aircraft in accordance with Annex VII.

▼B

Article 7

Air operator certificates

1. Air operator certificates (AOCs) issued by a Member State to CAT operators of aeroplanes before this Regulation applies in accordance with Regulation (EEC) No 3922/91 shall be deemed to have been issued in accordance with this Regulation.

However, no later than 28 October 2014:

(a) operators shall adapt their management system, training programmes, procedures and manuals to be compliant with Annexes III, IV and V, as relevant;

(b) the AOC shall be replaced by certificates issued in accordance with Annex II to this Regulation.

2. AOCs issued by a Member State to CAT operators of helicopters before this Regulation applies shall be converted into AOCs compliant with this Regulation in accordance with a conversion report established by the Member State that issued the AOC, in consultation with the Agency.

The conversion report shall describe:

(a) the national requirements on the basis of which the AOCs were issued;

(b) the scope of privileges that were given to the operators;

(c) the differences between the national requirements on the basis of which the AOCs were issued and the requirements of Annexes III, IV and V, together with an indication of how and when the operators will be required to ensure full compliance with those Annexes.

The conversion report shall include copies of all documents necessary to demonstrate the elements set out in points (a) to (c), including copies of the relevant national requirements and procedures.

▼M11

Article 8

Flight time limitations

▼M30

1. CAT operations with aeroplanes and helicopters shall be subject to the requirements of Subpart FTL of Annex III.

▼M11

2. By way of derogation from paragraph 1, air taxi, emergency medical service and single pilot CAT operations by aeroplanes shall be subject to the requirements specified in the national law referred to in Article 8(4) of Regulation (EEC) No 3922/91 and in Subpart Q of Annex III to that Regulation.

3. By way of derogation from paragraph 1, CAT operations with helicopters and CAT operations with sailplanes shall comply with the requirements specified in the national law of the Member State in which the operator has its principal place of business.

4. Non-commercial operations, including non-commercial specialised operations, with complex motor-powered aeroplanes and helicopters, as well as commercial specialised operations with aeroplanes, helicopters and sailplanes shall comply as regards flight time limitations, with the requirements specified in the national law of the Member State in which the operator has its principal place of business, or, where the operator has no principal place of business, the place where the operator is established or resides.

▼M30

5. An IAM operator shall, as regards flight time limitations, comply with the requirements specified in the national law of the Member State in which the operator has its principal place of business, or, where the operator has no principal place of business, the place where the operator is established or resides.

▼M2

Article 9

Minimum equipment lists

Minimum equipment lists ('MEL') approved by the State of Operator or Registry before the application of this Regulation, are deemed to be approved in accordance with this Regulation and may continue to be used by the operator.

After the entry into force of this Regulation any change to the MEL referred to in the first subparagraph for which a Master Minimum Equipment List ('MMEL') is established as part of the operational suitability data in accordance with Commission Regulation (EU) No 748/2012 ([1]) shall be made in compliance with point ORO.MLR.105 of Section 2 of Annex III to this Regulation at the earliest opportunity and not later than 18 December 2017 or two years after the operational suitability data was approved, whichever is the latest.

Any change to an MEL referred to in the first subparagraph, for which an MMEL has not been established as part of the operational suitability data, shall continue to be made in accordance with the MMEL accepted by the State of Operator or Registry as applicable.

([1]) OJ L 224, 21.8.2012, p. 1.

▼M2

Article 9a

Flight and cabin crew training

Operators shall ensure that flight crew and cabin crew members who are already in operation and have completed training in accordance with Subparts FC and CC of Annex III which did not include the mandatory elements established in the relevant operational suitability data, undertake training covering those mandatory elements not later than 18 December 2017 or two years after the approval of the operational suitability data, whichever is the latest.

▼M16

Article 9aa

Flight crew requirements for maintenance check flights

A pilot having acted, before 25 September 2019, as a pilot-in-command on a maintenance check flight that in accordance with the definition in point SPO.SPEC.MCF.100 in Annex VIII is categorised as a Level A maintenance check flight, shall be given credit for the purpose of complying with point SPO.SPEC.MCF.115(a)(1) of that Annex. In that case, the operator shall ensure that the pilot-in-command receives a briefing on any differences identified between the operating practices established before 25 September 2019 and the obligations provided in Section 5 of Subpart E of Annex VIII to this Regulation including those derived from the related procedures established by the operator.

▼M12

Article 9b

Review

1. The Agency shall conduct a continuous review of the effectiveness of the provisions concerning flight and duty time limitations and rest requirements contained in Annexes II and III. No later than 18 February 2019 the Agency shall produce a first report on the results of this review.

That review shall involve scientific expertise and shall be based on operational data gathered, with the assistance of Member States, on a long-term basis after the date of application of this Regulation.

The review shall assess the impact of at least the following on the alertness of aircrew:

(a) duties of more than 13 hours at the most favourable times of the day;

(b) duties of more than 10 hours at less favourable times of the day;

(c) duties of more than 11 hours for crew members in an unknown state of acclimatisation;

▼M12

(d) duties including a high level of sectors (more than 6);

(e) on-call duties such as standby or reserve followed by flight duties; and

(f) disruptive schedules.

2. ►M20 The Agency shall conduct a continuous review of the effectiveness of the provisions concerning support programmes, the psychological assessment of flight crew and the systematic and random testing of psychoactive substances to ensure the medical fitness of flight crew and cabin crew members set out in Annexes II and IV. No later than 14 August 2023, the Agency shall produce a first report on the results of this review.

That review shall involve relevant expertise and shall be based on data gathered, with the assistance of Member States and the Agency, on a long-term basis. ◄

▼M9

Article 10

Entry into force

►M14 ————— ◄ This Regulation shall enter into force on the third day following that of its publication in the *Official Journal of the European Union*.

▼M14

It shall apply from 28 October 2012.

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▼B

This Regulation shall be binding in its entirety and directly applicable in all Member States.

▼B

ANNEX I

▼M30

Annex I – Definitions for terms used in Annexes II to IX

▼B

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

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

(2) ‘acceptable means of compliance (AMC)’ means non-binding standards adopted by the Agency to illustrate means to establish compliance with Regulation (EC) No 216/2008 and its Implementing Rules;

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

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

(5) For the purpose of passenger classification:

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

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

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

▼M14

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▼M21

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

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

(b) landing in 2D instrument approach operations, expressed in terms of visibility and/or RVR, minimum descent altitude/height (MDA/H) and, if necessary, ceiling;

(c) landing in 3D instrument approach operations, expressed in terms of visibility and/or RVR and decision altitude/height (DA/H) as appropriate to the type and/or category of the operation;

▼B

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

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

▼M8

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

▼M8

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

▼M20

(8c) ‘alternate aerodrome’ means an adequate aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or land at the aerodrome of intended landing, where the necessary services and facilities are available, where aircraft performance requirements can be met, and which is operational at the expected time of use; ‘alternate aerodrome’ includes the following:

(a) ‘take-off alternate aerodrome’: an alternate aerodrome at which an aircraft would be able to land if it becomes necessary shortly after take-off and it is not possible to use the aerodrome of departure;

(b) ‘en route alternate (ERA) aerodrome’: an alternate aerodrome at which an aircraft would be able to land if a diversion becomes necessary while en route;

(c) ‘fuel/energy en route alternate (fuel/energy ERA) aerodrome’ means an ERA aerodrome that is required at the planning stage for use in the calculation of fuel/energy;

(d) ‘destination alternate aerodrome’: an alternate aerodrome at which an aircraft would be able to land if it becomes either impossible or inadvisable to land at the aerodrome of intended landing;

▼B

(9) ‘alternative means of compliance’ means those means that propose an alternative to an existing acceptable means of compliance or those that propose new means to establish compliance with Regulation (EC) No 216/2008 and its Implementing Rules for which no associated AMC have been adopted by the Agency;

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

▼M21

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▼M14

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▼B

►M1 (12) ◄ ‘cabin crew member’ means an appropriately qualified crew member, other than a flight crew or technical crew member, who is assigned by an operator to perform duties related to the safety of passengers and flight during operations;

▼M21

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▼M15

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

▼B

►M1 (18) ◄ ‘category B with respect to helicopters’ means a single-engined or multi-engined helicopter that does not meet category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event of an engine failure, and unscheduled landing is assumed;

▼M21

(18a) ‘ceiling’ means the height above the ground or water of the base of the lowest layer of cloud below 6 000 m (20 000 ft) covering more than half the sky;

▼B

►M1 (19) ◄ ‘certification specifications’ (CS) means technical standards adopted by the Agency indicating means to show compliance with Regulation (EC) No 216/2008 and its Implementing Rules and which can be used by an organisation for the purpose of certification;

▼M21

(20) ‘circling’ means the visual phase of a circling approach operation;

(20a) ‘circling approach operation’ means a Type A instrument approach operation to bring an aircraft into position for landing on a runway/final approach and take-off area (FATO) that is not suitably located for a straight-in approach;

▼M30

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

▼B

►M1 (22) ◄ ‘cloud base’ means the height of the base of the lowest observed or forecast cloud element in the vicinity of an aerodrome or operating site or within a specified area of operations, normally measured above aerodrome elevation or, in the case of offshore operations, above mean sea level;

▼M16

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

▼B

►M1 (23) ◄ ‘code share’ means an arrangement under which an operator places its designator code on a flight operated by another operator, and sells and issues tickets for that flight;

▼M18

(23a) ‘competency’ means a dimension of human performance that is used to reliably predict successful performance on the job and which is manifested and observed through behaviours that mobilise the relevant knowledge, skills and attitudes to carry out activities or tasks under specified conditions;

(23b) ‘competency-based training’ means assessment and training programmes that are characterised by a performance orientation, emphasis on standards of performance and their measurement and the development of training to the specified performance standards;

▼M18

(23c) ‘competency framework’ means a complete set of identified competencies that are developed, trained and assessed in the operator’s evidence-based training programme utilising scenarios that are relevant to operations and which is wide enough to prepare the pilot for both foreseen and unforeseen threats and errors;

▼B

►M1 (24) ◄ ‘congested area’ means in relation to a city, town or settlement, any area which is substantially used for residential, commercial or recreational purposes;

▼M16

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

▼M30

(26) ‘contingency fuel/energy’ means the fuel/energy required to compensate for unforeseen factors that could have an influence on the fuel/energy consumption to the destination aerodrome or vertiport;

▼M21

(27) ‘continuous descent final approach (CDFA)’ means a technique, consistent with stabilised approach procedures, for flying the final approach segment (FAS) of an instrument non-precision approach (NPA) procedure as a continuous descent, without level-off, from an altitude/height at or above the final approach fix altitude/height:

(a) for straight-in approach operations, to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare manoeuvre begins; or

(b) for circling approach operations, until MDA/H or visual flight manoeuvre altitude/height is reached;

▼B

►M1 (28) ◄ ‘converted meteorological visibility (CMV)’ means a value, equivalent to an RVR, which is derived from the reported meteorological visibility;

►M1 (29) ◄ ‘crew member’ means a person assigned by an operator to perform duties on board an aircraft;

►M1 (30) ◄ ‘critical phases of flight’ in the case of aeroplanes ►M32 or gyroplanes ◄ means the take-off run, the take-off flight path, the final approach, the missed approach, the landing, including the landing roll, and any other phases of flight as determined by the pilot-in-command or commander;

▼M30

(31) ‘critical phases of flight’ means:

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

(b) for VCA, ►C3 taxiing on the ground ◄ with passengers for the purpose of flight or after landing, air taxiing, hovering, take-off, final approach, missed approach (go-around), landing and any other phase of flight as determined by the pilot-in-command;

▼M20

(31a) ‘current fuel/energy scheme’ means the approved fuel/energy scheme that is currently used by the operator;

▼M16

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▼B

►M1 (33) ◄ ‘dangerous goods (DG)’ means articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the technical instructions or which are classified according to those instructions;

►M1 (34) ◄ ‘dangerous goods accident’ means an occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person or major property damage;

►M1 (35) ◄ ‘dangerous goods incident’ means:

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

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

▼M21

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

▼B

►M1 (36) ◄ ‘de-icing’, in the case of ground procedures, means a procedure by which frost, ice, snow or slush is removed from an aircraft in order to provide uncontaminated surfaces;

►M1 (37) ◄ ‘defined point after take-off (DPATO)’ means the point, within the take-off and initial climb phase, before which the helicopter’s ability to continue the flight safely, with the critical engine inoperative, is not assured and a forced landing may be required;

▼B

►M1 (38) ◄ ‘defined point before landing (DPBL)’ means the point within the approach and landing phase, after which the helicopter’s ability to continue the flight safely, with the critical engine inoperative, is not assured and a forced landing may be required;

▼M30

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

▼M4

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

▼B

►M1 (41) ◄ ‘dry operating mass’ means the total mass of the aircraft ready for a specific type of operation, excluding usable fuel and traffic load;

▼M16

(42) ‘dry runway’ means a runway whose surface is free of visible moisture and not contaminated within the area intended to be used;

▼M14

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

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

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

▼M18

(42d) ‘EBT module’ means a combination of sessions in a qualified flight simulation training device as part of the 3-year period of recurrent assessment and training;

▼M1

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

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

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

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

▼M1

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

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

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

(c) a balloon;

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

▼M14

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

▼B

►M1 (45) ◄ ‘elevated final approach and take-off area (elevated FATO)’ means a FATO that is at least 3 m above the surrounding surface;

▼M15

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

▼M20

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▼M21

(46) ‘enhanced flight vision system (EFVS)’ is an electronic means to provide the flight crew with a real-time sensor-derived or enhanced display of the external scene topography (the natural or man-made features of a place or region especially in a way to show their relative positions and elevation) through the use of imaging sensors; an EFVS is integrated with a flight guidance system and is implemented on a head-up display or an equivalent display system; if an EFVS is certified according to the applicable airworthiness requirements and an operator holds the necessary specific approval (when required), then it may be used for EFVS operations and may allow operations with operational credits;

(46a) ‘EFVS operation’ means an operation in which visibility conditions require an EFVS to be used instead of natural vision in order to perform an approach or landing, identify the required visual references or conduct a roll-out;

(46b) ‘EFVS 200 operation’ means an operation with an operational credit in which visibility conditions require an EFVS to be used down to 200 ft above the FATO or runway threshold. From that point to land, natural vision is used. The RVR shall not be less than 550 m;

▼M21

(47) ‘enhanced vision system (EVS)’ is an electronic means to provide the flight crew with a real-time image of the actual external scene topography (the natural or man-made features of a place or region especially in a way to show their relative positions and elevation) through the use of imaging sensors;

▼M18

(47a) ‘enrolment’ means the administrative action carried out by the operator where a pilot participates in the operator’s EBT programme;

(47b) ‘enrolled pilot’ means the pilot that participates in the EBT recurrent training programme;

(47c) ‘equivalency of approaches’ means all the approaches that place an additional demand on a proficient crew regardless of whether they are used or not in the EBT modules;

(47d) ‘equivalency of malfunctions’ means all the malfunctions that put a significant demand on a proficient crew regardless of whether they are used or not in the EBT modules;

(47e) ‘evaluation phase’ means one of the phases of an EBT modulewhich is a line-orientated flight scenario, representative of the operator’s environment during which there are one or more occurrences to evaluate key elements of the defined competency framework;

(47f) ‘evidence-based training (EBT)’ means assessment and training based on operational data that is characterised by developing and assessing the overall capability of a pilot across a range of competencies (competency framework) rather than by measuring the performance in individual events or manoeuvres;

▼M30

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

▼M15

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

▼M21

(48b) ‘final approach segment (FAS)’ means that segment of an instrument approach procedure (IAP) in which alignment and descent for landing are accomplished;

▼B

►M1 (49) ◄ ‘flight data monitoring (FDM)’ means the proactive and non-punitive use of digital flight data from routine operations to improve aviation safety;

▼M15

(49a) ‘flight operations officer’ or ‘flight dispatcher’ means a person designated by the operator to engage in the control and supervision of flight operations, who is suitably qualified, who supports, briefs or assists, or both, the pilot-in-command in the safe conduct of the flight;

▼M16

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

(49c) ‘flight recorder’ means any type of recorder that is installed on the aircraft for the purpose of facilitating accident or incident safety investigations;

▼M20

(49d) ‘flight following’ means the recording in real time of departure and arrival messages by operational personnel to ensure that a flight is operating and has arrived at the destination aerodrome or an alternate aerodrome;

(49e) ‘flight monitoring’ means, in addition to the requirements defined for flight following:

(a) operational monitoring of flights by suitably qualified operational-control personnel from departure throughout all phases of the flight;

(b) communication of all available and relevant safety information between the operational-control personnel on the ground and the flight crew; and

(c) critical assistance to the flight crew in the event of an in-flight emergency or security issue, or at the request of the flight crew;

▼B

►M1 (50) ◄ ‘flight simulation training device (FSTD)’ means a training device which is:

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

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

▼M30

(50a) ‘flight time’ means:

(a) for aeroplanes, the total time from the moment an aeroplane first moves for the purpose of taking off until the moment the aeroplane finally comes to rest at the end of the flight;

(b) for helicopters, the total time between the moment a helicopter’s rotor blades start turning for the purpose of taking off until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped;

(c) for VCA, the total time between the moment the lift and thrust units are powered on for the purpose of taking off until the moment the aircraft finally comes to rest at the end of the flight and the lift and thrust units are powered off;

▼M20

(50b) ‘flight watch’ means, in addition to all elements defined for ‘flight monitoring’, the active tracking of a flight by suitably qualified operational-control personnel throughout all phases of the flight to ensure that the flight is following its prescribed route without unplanned deviations, diversions or delays;

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▼B

►M1 (52) ◄ ‘GBAS landing system (GLS)’ means an approach landing system using ground based augmented global navigation satellite system (GNSS/GBAS) information to provide guidance to the aircraft based on its lateral and vertical GNSS position. It uses geometric altitude reference for its final approach slope;

▼M21

(52a) ‘go-around’ means a transition from an approach operation to a stabilised climb. This includes manoeuvres conducted at or above the MDA/H or DA/H, or below the DA/H (balked landings);

▼M30

(53) ‘ground emergency service personnel’ means any ground emergency service personnel, such as police officers, firefighters, etc., involved in helicopter emergency medical services (HEMSs) or in emergency medical services with VCA (VEMSs) and whose tasks are to any extent pertinent to the operation;

▼B

►M1 (54) ◄ ‘grounding’ means the formal prohibition of an aircraft to take-off and the taking of such steps as are necessary to detain it;

▼M21

(55) ‘head-up display landing system (HUDLS)’ means the total airborne system which provides head-up guidance to the pilot to enable the pilot to either control the aircraft or to monitor the autopilot during take-off (if applicable), approach and landing (and roll-out if applicable), or go-around. It includes all the sensors, computers, power supplies, indications and controls;

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▼M14

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▼B

►M1 (58) ◄ ‘helicopter hoist operation (HHO) crew member’ means a technical crew member who performs assigned duties relating to the operation of a hoist;

►M1 (59) ◄ ‘helideck’ means a FATO located on a floating or fixed offshore structure;

►M1 (60) ◄ ‘HEMS crew member’ means a technical crew member who is assigned to a HEMS flight for the purpose of attending to any person in need of medical assistance carried in the helicopter and assisting the pilot during the mission;

▼M28

(61) ‘HEMS flight’ means a flight by a helicopter operating under a HEMS approval, where immediate and rapid transportation is essential and the purpose of which is either of the following:

(a) to facilitate emergency medical assistance by carrying one or more of the following:

(i) medical personnel;

(ii) medical supplies (equipment, blood, organs, drugs);

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

(b) to perform an operation where a person faces an imminent or anticipated health risk posed by the environment and either of the following conditions is met:

(i) that person needs to be rescued or provided with supplies;

▼M28

(ii) persons, animals or equipment need to be transported to and from the HEMS operating site;

(61a) 'HEMS HEC operation' means air and ground operations for the purpose of transporting one or more persons as human external cargo (HEC) within a HEMS flight;

(62) 'HEMS operating base' means an aerodrome at which the crew members and the HEMS helicopter may be on standby for HEMS operations;

(63) 'HEMS operating site' means a site that is selected by the commander during a HEMS flight for a HEMS HEC operation or a landing or a take-off;

▼B

►M1 (64) ◄ 'HHO flight' means a flight by a helicopter operating under an HHO approval, the purpose of which is to facilitate the transfer of persons and/or cargo by means of a helicopter hoist;

►M1 (65) ◄ 'HHO offshore' means a flight by a helicopter operating under an HHO approval, the purpose of which is to facilitate the transfer of persons and/or cargo by means of a helicopter hoist from or to a vessel or structure in a sea area or to the sea itself;

►M1 (66) ◄ 'HHO passenger' means a person who is to be transferred by means of a helicopter hoist;

►M1 (67) ◄ 'HHO site' means a specified area at which a helicopter performs a hoist transfer;

►M1 (68) ◄ 'hold-over time (HoT)' means the estimated time the anti-icing fluid will prevent the formation of ice and frost and the accumulation of snow on the protected (treated) surfaces of an aeroplane;

▼M9

(69) 'hostile environment' means:

(a) an area in which:

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

▼M30

(ii) the ►M32 rotorcraft ◄ occupants or VCA occupants cannot be adequately protected from the elements; or

▼M9

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

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

(b) in any case, the following areas:

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

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

▼M14

(69a) 'human–machine interface (HMI)' means a component of certain devices that is capable of handling human–machine interactions. The interface consists of hardware and software that allow user inputs to be interpreted and processed by machines or systems that, in turn, provide the required results to the user;

▼**M18**

(69b) ‘in-seat instruction’ means a technique used in the manoeuvres training phase or the scenario-based training phase, where the instructors can:

(a) provide simple instructions to one pilot; or

(b) perform predetermined exercises acting, in a pilot seat, as pilot flying (PF) or pilot monitoring (PM) for:

(1) the demonstration of techniques; and/or

(2) triggering the other pilot to intervene or interact;

(69c) ‘instructor concordance’ means the consistency or stability of scores between different EBT instructorswhich gives a score (or scores) of how much homogeneity, or consensus, there is in the ratings given by instructors (raters);

▼**M21**

(69d) ‘instrument approach operation’ means an approach and landing using instruments for navigation guidance based on an instrument approach procedure (IAP). There are two methods for executing instrument approach operations:

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

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

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

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

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

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

▼**M30**

(70) ‘landing decision point (LDP)’ means:

(a) for helicopters, the point used to determine landing performance from which, an engine failure having been recognised at this point, the landing may be safely continued or a balked landing initiated;

(b) for VCA, the point used to determine landing performance from which the landing may be safely continued or a balked landing initiated, following a CFP;

▼**M16**

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

▼M30

(71) ‘landing distance available’ means:

(a) for aeroplanes (LDAA), the length of the runway which is declared available by the State of the aerodrome and suitable for the ground run of an aeroplane landing;

(b) for helicopters (LDAH), the length of the FATO plus any additional area declared available by the State of the aerodrome and suitable for the helicopter to complete the landing manoeuvre from a defined height; and

(c) for VCA (LDAV), the length of the FATO plus any additional area declared available and suitable for the VCA to complete the landing manoeuvre from a defined height;

(71a) ‘landing distance required (LDR)’ means:

(a) for helicopters (LDRH), the horizontal distance required to land and come to a full stop from a point of 15 m (50 ft) above the landing surface; and

(b) for VCA (LDRV), the horizontal distance required to land and come to a full stop from a point of 15 m (50 ft) above the landing surface;

▼B

►M1 (72) ◄ ‘landplane’ means a fixed wing aircraft which is designed for taking off and landing on land and includes amphibians operated as landplanes;

▼M18

(72a) ‘line-orientated flight scenario’ means the assessment and training involving a realistic, ‘real-time’, full mission simulation of scenarios that are representative of line operations;

▼M21

(72b) ‘line check’ means a check conducted by the operator and completed by the pilot or the technical crew member to demonstrate competence in carrying out normal line operations described in the operations manual;

▼M20

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

▼M21

(74) ‘low-visibility operations (LVOs)’ means approach or take-off operations on a runway with a runway visual range less than 550 m or with a decision height less than 200 ft;

(75) ‘low-visibility take-off (LVTO)’ means a take-off with an RVR less than 550 m;

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▼M15

(76a) ‘maintenance check flight (“MCF”)’ means a flight of an aircraft with an airworthiness certificate or with a permit to fly which is carried out for troubleshooting purposes or to check the functioning of one or more systems, parts or appliances after maintenance, if the functioning of the systems, parts or appliances cannot be established during ground checks and which is carried out in any of the following situations:

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

▼M15

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

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

(d) to assist with fault isolation or troubleshooting;

▼M18

(76b) ‘manoeuvres training phase’ means a phase of an EBT module during which, according to aircraft generation, crews have time to practise and improve performance in largely psychomotor skill-based exercises by achieving a prescribed flight path or performing a prescribed event to a prescribed outcome;

(76c) ‘mixed EBT programme’ means an operator’s recurrent training and checking programme as per ORO.FC.230, a portion of which is dedicated to the application of EBT but which does not replace proficiency checks as per Appendix 9 to Annex I (Part-FCL) to Regulation (EU) No 1178/2011;

▼B

►M1 (77) ◄ ‘maximum operational passenger seating configuration (MOPSC)’ means the maximum passenger seating capacity of an individual aircraft, excluding crew seats, established for operational purposes and specified in the operations manual. Taking as a baseline the maximum passenger seating configuration established during the certification process conducted for the type certificate (TC), supplemental type certificate (STC) or change to the TC or STC as relevant to the individual aircraft, the MOPSC may establish an equal or lower number of seats, depending on the operational constraints;

▼M30

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

▼M14

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

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

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

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

▼M21

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

▼B

►M1 (79) ◄ ‘night’ means the period between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise as may be prescribed by the appropriate authority, as defined by the Member State;

▼B

►M1 (80) ◄ ‘night vision goggles (NVG)’ means a head-mounted, binocular, light intensification appliance that enhances the ability to maintain visual surface references at night;

►M1 (81) ◄ ‘night vision imaging system (NVIS)’ means the integration of all elements required to successfully and safely use NVGs while operating a helicopter. The system includes as a minimum: NVGs, NVIS lighting, helicopter components, training and continuing airworthiness;

►M1 (82) ◄ ‘non-hostile environment’ means an environment in which:

(a) a safe forced landing can be accomplished;

▼M30

(b) the ►M32 rotorcraft ◄ occupants or the VCA occupants can be protected from the elements; and

▼B

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

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

▼M21

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▼B

►M1 (84) ◄ ‘NVIS crew member’ means a technical crew member assigned to an NVIS flight;

►M1 (85) ◄ ‘NVIS flight’ means a flight under night visual meteorological conditions (VMC) with the flight crew using NVGs in a helicopter operating under an NVIS approval;

▼M21

(85a) ‘obstacle clearance altitude (OCA) or obstacle clearance height (OCH)’ means the lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation, as applicable, used in establishing compliance with the appropriate obstacle clearance criteria;

▼M9

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

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

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

▼B

►M1 (87) ◄ ‘operating site’ means a site, other than an aerodrome, selected by the operator or pilot-in-command or commander for landing, take-off and/or external load operations;

►M1 (88) ◄ ‘operation in performance class 1’ means an operation that, in the event of failure of the critical engine, the helicopter is able to land within the rejected take-off distance available or safely continue the flight to an appropriate landing area, depending on when the failure occurs;

▼B

►M1 (89) ◄ ‘operation in performance class 2’ means an operation that, in the event of failure of the critical engine, performance is available to enable the helicopter to safely continue the flight, except when the failure occurs early during the take-off manoeuvre or late in the landing manoeuvre, in which cases a forced landing may be required;

►M1 (90) ◄ ‘operation in performance class 3’ means an operation that, in the event of an engine failure at any time during the flight, a forced landing may be required in a multi-engined helicopter and will be required in a single-engined helicopter;

►M1 (91) ◄ ‘operational control’ means the responsibility for the initiation, continuation, termination or diversion of a flight in the interest of safety;

▼M21

(91a) ‘operational credit’ means a credit for operations with an advanced aircraft enabling lower aerodrome operating minima than would normally be established by the operator for a basic aircraft, based upon the performance of advanced aircraft systems utilising the available external infrastructure. Lower operating minima may include a lower decision height/altitude or minimum descent height/altitude, reduced visibility requirements or reduced ground facilities or a combination of these;

(92) ‘operator proficiency check’ means a check conducted by the operator and completed by the pilot or the technical crew member to demonstrate competence in carrying out normal, abnormal and emergency procedures;

▼B

►M1 (93) ◄ ‘performance class A aeroplanes’ means multi-engined aeroplanes powered by turbo-propeller engines with an MOPSC of more than nine or a maximum take-off mass exceeding 5 700 kg, and all multi-engined turbo-jet powered aeroplanes;

►M1 (94) ◄ ‘performance class B aeroplanes’ means aeroplanes powered by propeller engines with an MOPSC of nine or less and a maximum take-off mass of 5 700 kg or less;

►M1 (95) ◄ ‘performance class C aeroplanes’ means aeroplanes powered by reciprocating engines with an MOPSC of more than nine or a maximum take-off mass exceeding 5 700 kg;

▼M15

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

▼**M15**

(95b) ‘simple personnel carrying device system (simple “PCDS”)’ means a PCDS that complies with the following conditions:

(a) meets a harmonised standard under Regulation (EU) 2016/425 of the European Parliament and of the Council [1] or Directive 2006/42/EC of the European Parliament and of the Council [2];

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

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

▼**M30**

(96) ‘pilot-in-command (PIC)’ means the pilot designated as being in command and charged with the safe conduct of the flight; for the purpose of commercial air transport operations with aeroplanes and helicopters, the ‘pilot-in-command’ shall be termed ‘commander’;

▼**M14**

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

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

▼**B**

►**M1** (97) ◄ ‘principal place of business’ means the head office or registered office of the organisation within which the principal financial functions and operational control of the activities referred to in this Regulation are exercised;

►**M1** (98) ◄ ‘prioritisation of ramp inspections’ means the dedication of an appropriate portion of the total number of ramp inspections conducted by or on behalf of a competent authority on an annual basis as provided in Part-ARO;

▼**M18**

(98a) ‘proficient’ means having demonstrated the necessary skills, knowledge and attitudes that are required to perform any defined tasks to the prescribed standard;

▼**M20**

(98b) ‘psychoactive substances’ means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, with the exception of caffeine and tobacco;

▼**B**

►**M1** (99) ◄ ‘public interest site (PIS)’ means a site used exclusively for operations in the public interest;

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(1) Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC (OJ L 81, 31.3.2016, p. 51).

(2) Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (OJ L 157, 9.6.2006, p. 24).

▼B

►M1 (100) ◄ ‘ramp inspection’ means the inspection of aircraft, of flight and cabin crew qualifications and of flight documentation in order to verify the compliance with the applicable requirements;

►M1 (101) ◄ ‘rectification interval’ means a limitation on the duration of operations with inoperative equipment;

▼M30

(102) ‘rejected take-off distance available (RTODA)’ means:

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

(b) for VCA (RTODAV), the length of the final approach and take-off area declared available and suitable for VCA to complete a rejected take-off in accordance with the category in which they are operated;

(103) ‘rejected take-off distance required (RTODR)’ means:

(a) for helicopters (RTODRH), the horizontal distance required from the start of the take-off to the point where the helicopter comes to a full stop following an engine failure and rejection of the take-off at the take-off decision point;

(b) for VCA (RTODRV), the horizontal distance required from the start of the take-off to the point where the VCA comes to a full stop by completing a rejected take-off following a CFP being recognised at the take-off decision point;

▼M9

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

▼M15

(103b) ‘rules of the air’ means the rules established in Commission Implementing Regulation (EU) No 923/2012 ([1]);

▼M16

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

▼B

►M1 (104) ◄ ‘runway visual range (RVR)’ means the range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line;

▼M30

(104a) ‘safe landing’ means, in the context of the fuel/energy policy or fuel/energy schemes, a landing at an adequate aerodrome or operating site or at an adequate vertiport or diversion location with no less than the final reserve fuel/energy remaining and in compliance with the applicable operational procedures and aerodrome operating minima;

([1]) Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation and amending Implementing Regulation (EU) No 1035/2011 and Regulations (EC) No 1265/2007, (EC) No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No 255/2010 (OJ L 281, 13.10.2012, p. 1).

▼B

►M1 (105) ◄ ‘safe forced landing’ means an unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface;

▼M12

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

▼M18

(105b) ‘scenario-based training phase’ means a phase of an EBT module which focuses on the development of competencies, whilst the pilot is trained to mitigate the most critical risks identified for the aircraft generation. It should include the management of specific operator’s threats and errors in a real-time line-orientated environment;

▼B

►M1 (106) ◄ ‘seaplane’ means a fixed wing aircraft which is designed for taking off and landing on water and includes amphibians operated as seaplanes;

►M1 (107) ◄ ‘separate runways’ means runways at the same aerodrome that are separate landing surfaces. These runways may overlay or cross in such a way that if one of the runways is blocked, it will not prevent the planned type of operations on the other runway. Each runway shall have a separate approach procedure based on a separate navigation aid;

▼M16

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

▼B

►M1 (108) ◄ ‘special VFR flight’ means a VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC;

►M1 (109) ◄ ‘stabilised approach (SAp)’ means an approach that is flown in a controlled and appropriate manner in terms of configuration, energy and control of the flight path from a pre-determined point or altitude/height down to a point 50 ft above the threshold or the point where the flare manoeuvre is initiated if higher;

▼M5

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

▼B

►M1 (110) ◄ ‘take-off alternate aerodrome’ means an alternate aerodrome at which an aircraft can land should this become necessary shortly after take-off and if it is not possible to use the aerodrome of departure;

▼M30

(111) ‘take-off decision point (TDP)’ means:

(a) for helicopters, the point used to determine take-off performance from which, an engine failure having been recognised at this point, either a rejected take-off may be made or a take-off safely continued;

▼M30

(b) for VCA, the first point defined by the combination of speed and height from which a continued take-off may be performed meeting the certified minimum performance (CMP) following a CFP and is the last point in the take-off path from which a rejected take-off is assured;

▼B

►M1 (112) ◄ 'take-off distance available (TODA)' in the case of aeroplanes means the length of the take-off run available plus the length of the clearway, if provided;

▼M30

(113) 'take-off distance available (TODA)' means:

(a) for helicopters (TODAH), the length of the final approach and take-off area plus, if provided, the length of the helicopter clearway declared available and suitable for the helicopter to complete the take-off;

(b) for VCA (TODAV), the length of the final approach and take-off area plus, if provided, the length of the clearway declared available and suitable for the VCA to complete the take-off;

(114) 'take-off distance required (TODR)' means:

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

(b) for VCA (TODRV), the horizontal distance required from the start of the take-off to the point at which the safe obstacle clearance and a positive climb gradient are achieved, following a critical failure for performance (CFP) recognised at the TDP;

(115) 'take-off flight path' means:

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

(b) for VCA, the vertical and horizontal path with a critical failure for performance (CFP), which extends from the take-off point to a point at which the VCA is at a height above the take-off elevation that is compatible with the en-route profile and not higher than 305 m (1 000 ft);

(116) 'take-off mass' means the mass including everything and everyone carried on board at the commencement of the take-off for helicopters or for VCA, and during take-off run for aeroplanes;

▼B

►M1 (117) ◄ 'take-off run available (TORA)' means the length of runway that is declared available by the State of the aerodrome and suitable for the ground run of an aeroplane taking off;

▼M4

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

▼M30

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

▼B

►M1 (119) ◄ ‘technical instructions (TI)’ means the latest effective edition of the ‘Technical instructions for the safe transport of dangerous goods by air’, including the supplement and any addenda, approved and published by the International Civil Aviation Organisation;

▼M11

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

▼M14

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

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

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

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

▼M21

(120c) ‘training to proficiency’ means training designed to achieve end-state performance objectives, providing sufficient assurance that the trained individual is capable of consistently carrying out specific tasks safely and effectively;

(120d) ‘type A instrument approach operation’ means an instrument approach operation with an MDH or a DH at or above 250 ft;

(120e) ‘type B instrument approach operation’ means an operation with a DH below 250 ft. Type B instrument approach operations are categorised as:

(a) Category I (CAT I): a DH not lower than 200 ft and with either a visibility not less than 800 m or an RVR not less than 550 m;

(b) Category II (CAT II): a DH lower than 200 ft but not lower than 100 ft, and an RVR not less than 300 m;

(c) Category III (CAT III): a DH lower than 100 ft or no DH, and an RVR less than 300 m or no RVR limitation;

▼B

►M1 (121) ◄ ‘unaided NVIS flight’ means, in the case of NVIS operations, that portion of a VFR flight performed at night when a crew member is not using NVG;

►M1 (122) ◄ ‘undertaking’ means any natural or legal person, whether profit-making or not, or any official body whether having its own personality or not;

▼B

►M1 (123) ◄ 'V_1' means the maximum speed in the take-off at which the pilot must take the first action to stop the aeroplane within the accelerate-stop distance. V_1 also means the minimum speed in the take-off, following a failure of the critical engine at V_{EF}, at which the pilot can continue the take-off and achieve the required height above the take-off surface within the take-off distance;

►M1 (124) ◄ 'V_{EF}' means the speed at which the critical engine is assumed to fail during take-off;

▼M21

(124a) 'visibility (VIS)' means visibility for aeronautical purposes, which is the greater of:

(a) the greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognised when observed against a bright background; and

(b) the greatest distance at which lights in the vicinity of 1 000 candelas can be seen and identified against an unlit background;

(125) 'visual approach operation' means an approach operation by an IFR flight when either a part or all parts of an IAP is (are) not completed and the approach operation is executed with visual reference to terrain;

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

▼M4

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

— in the case of CAT operations, between air carriers pursuant to which the aircraft is operated under the AOC of the lessor; or

— in the case of commercial operations other than CAT, between operators pursuant to which the aircraft is operated under the responsibility of the lessor;

▼M16

(128) 'wet runway' means a runway whose surface is covered by any visible dampness or water up to and including 3 mm deep within the area intended to be used;

▼M28

(129) 'complex motor-powered aircraft' shall mean:

(a) an aeroplane:

— with a maximum certificated take-off mass exceeding 5 700 kg, or

— certificated for a maximum passenger seating configuration of more than nineteen, or

— certificated for operation with a minimum crew of at least two pilots, or

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

▼**M28**

(b) a helicopter certificated:

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

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

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

(c) a tilt rotor aircraft.

▼**M30**

(130) ‘ground movement’ means the movement of an aircraft on the movement area of an aerodrome or a vertiport with the aid of external equipment or accessory that is not powered by the aircraft;

(131) ‘ground personnel’ means the personnel other than flight crew members or technical crew members that are assigned to tasks related to the ground movement of the VCA or any other ground assistance provided to aircraft, and have received training in the relevant operational and safety procedures;

(132) ‘category Enhanced’ means a category for VCA certification and operation according to which the aircraft meets the requirements for continued safe flight and landing following a critical failure for performance (CFP);

(133) ‘certified minimum performance (CMP)’ means, in relation to VCA, the set of performance data obtained by considering the effect of single failures and combinations of failures that are not extremely improbable on nominal performance parameters;

(134) ‘continued safe flight and landing (CSFL)’ means, in relation to a VCA operated in the category Enhanced, that the aircraft is capable of continued controlled flight and landing at a vertiport, possibly using emergency procedures, without requiring exceptional piloting skills or strength;

(135) ‘critical failure for performance (CFP)’ means, in relation to VCA, a failure or a combination of failures that results in the maximum degradation for a given flight phase and performance parameter; the set of critical failures for performance is used to establish the certified minimum performance (CMP);

(136) ‘limited overwater operation’ means an IAM operation with a VCA that is conducted for a limited flight time over water;

(137) ‘VEMS technical crew member’ means a technical crew member (TCM) that is assigned to a VEMS flight for the purpose of assisting the pilot during the flight operation and attending to any person in need of medical assistance;

(138) ‘VEMS operating base’ means a vertiport at which the VCA, its flight crew and VEMS crew members are on standby for VEMS operations;

(139) ‘VEMS operating site’ means an operating site selected by the pilot-in-command for VEMS operations, landings and take-offs;

▼**M30**

(140) ‘vertiport’ means an area of land, water, or structure used or intended to be used for the landing and take-off of VCA, and for the movement of VCA;

(141) ‘adequate vertiport’ means a vertiport at which the VCA may be operated, taking account of the aircraft dimensions, weight, approach and departure paths, and which is provided with services and facilities necessary for the intended operation and is available at the expected time of use;

(142) ‘VTOL take-off safety speed (V_{TOSS})’ means the minimum speed at which climb shall be achieved with a CFP recognised at the TDP in the case of VCA operated in the category Enhanced;

(143) ‘manned VCA’ means a VCA piloted by at least one pilot on board.

▼B

ANNEX II

AUTHORITY REQUIREMENTS FOR AIR OPERATIONS

[PART-ARO]

ARO.GEN.005 Scope

This Annex establishes requirements for the administration and management system to be fulfilled by the Agency and Member States for the implementation and enforcement of Regulation (EC) No 216/2008 and its Implementing Rules regarding civil aviation air operations.

SUBPART GEN

GENERAL REQUIREMENTS

SECTION I

General

ARO.GEN.115 Oversight documentation

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

ARO.GEN.120 Means of compliance

▼M15

(a) The Agency shall develop acceptable means of compliance ('AMC') that may be used to establish compliance with Regulation (EU) 2018/1139 and its delegated and implementing acts.

(b) Alternative means of compliance may be used to establish compliance with Regulation (EU) 2018/1139 and its delegated and implementing acts.

(c) The competent authority shall establish a system to consistently evaluate whether the alternative means of compliance used by itself or by organisations and persons under its oversight comply with Regulation (EU) 2018/1139 and its delegated and implementing acts. That system shall include procedures to limit, revoke or amend approved alternative means of compliance, if it has been demonstrated by the competent authority that those alternative means of compliance do not comply with Regulation (EU) 2018/1139 and delegated and implementing acts adopted on its basis.

▼M14

(d) The competent authority shall evaluate all alternative means of compliance proposed by an organisation in accordance:

(1) with point ORO.GEN.120(b) of Annex III (Part-ORO) to this Regulation;

(2) for balloons with point BOP.ADD.010 of Annex II (Part-BOP) to Commission Regulation (EU) 2018/395 ([1]); or

(3) for sailplanes with point SAO.DEC.100(c) of Annex II (Part-SAO) to Commission Implementing Regulation (EU) 2018/1976 ([2]);

by analysing the documentation provided and, if considered necessary, conducting an inspection of the organisation.

([1]) Commission Regulation (EU) 2018/395 of 13 March 2018 laying down detailed rules for the operation of balloons pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 71, 14.3.2018, p. 10).

([2]) Commission Implementing Regulation (EU) 2018/1976 of 14 December 2018 laying down detailed rules for the operation of sailplanes pursuant to Regulation (EU) 2018/1139 of the European Parliament and of the Council (OJ L 326, 20.12.2018, p. 64).

▼M14

When the competent authority finds that the alternative means of compliance are in accordance with the Implementing Rules, it shall without undue delay:

(1) notify the applicant that the alternative means of compliance may be implemented and, if applicable, amend the approval, specialised operation authorisation or certificate of the applicant accordingly; and

(2) notify the Agency of their content, including copies of all relevant documentation.

▼M15

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▼B

(e) When the competent authority itself uses alternative means of compliance to achieve compliance with Regulation (EC) No 216/2008 and its Implementing Rules it shall:

(1) make them available to all organisations and persons under its oversight; and

(2) without undue delay notify the Agency.

The competent authority shall provide the Agency with a full description of the alternative means of compliance, including any revisions to procedures that may be relevant, as well as an assessment demonstrating that the Implementing Rules are met.

ARO.GEN.125 Information to the Agency

(a) The competent authority shall without undue delay notify the Agency in case of any significant problems with the implementation of Regulation (EC) No 216/2008 and its Implementing Rules.

(b) The competent authority shall provide the Agency with safety-significant information stemming from the occurrence reports it has received.

▼M26

(c) The competent authority of the Member State shall provide the Agency as soon as possible with safety-significant information stemming from the information security reports it has received pursuant to point IS.I.OR.230 of Annex II (Part-IS.I.OR) to Implementing Regulation (EU) 2023/203.

▼B

ARO.GEN.135 Immediate reaction to a safety problem

▼M15

(a) Without prejudice to Regulation (EU) No 376/2014 of the European Parliament and of the Council [1], the competent authority shall implement a system to appropriately collect, analyse and disseminate safety information.

▼B

(b) The Agency shall implement a system to appropriately analyse any relevant safety information received and without undue delay provide to Member States and the Commission any information, including recommendations or corrective actions to be taken, necessary for them to react in a timely manner to a safety problem involving products, parts, appliances, persons or organisations subject to Regulation (EC) No 216/2008 and its Implementing Rules.

[1] Regulation (EU) No 376/2014 of the European Parliament and of the Council of 3 April 2014 on the reporting, analysis and follow-up of occurrences in civil aviation, amending Regulation (EU) No 996/2010 of the European Parliament and of the Council and repealing Directive 2003/42/EC of the European Parliament and of the Council and Commission Regulations (EC) No 1321/2007 and (EC) No 1330/2007 (OJ L 122, 24.4.2014, p. 18).

▼B

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

(d) Measures taken under (c) shall immediately be notified to all persons or organisations which need to comply with them under Regulation (EC) No 216/2008 and its Implementing Rules. The competent authority shall also notify those measures to the Agency and, when combined action is required, the other Member States concerned.

▼M26

ARO.GEN.135A Immediate reaction to an information security incident or vulnerability with an impact on aviation safety

(a) The competent authority shall implement a system to appropriately collect, analyse, and disseminate information related to information security incidents and vulnerabilities with a potential impact on aviation safety that are reported by organisations. This shall be done in coordination with any other relevant authorities responsible for information security or cybersecurity within the Member State to increase the coordination and compatibility of reporting schemes.

(b) The Agency shall implement a system to appropriately analyse any relevant safety-significant information received in accordance with point ARO.GEN.125(c), and without undue delay provide the Member States and the Commission with any information, including recommendations or corrective actions to be taken, necessary for them to react in a timely manner to an information security incident or vulnerability with a potential impact on aviation safety involving products, parts, non-installed equipment, persons or organisations subject to Regulation (EU) 2018/1139 and its delegated and implementing acts.

(c) Upon receiving the information referred to in points (a) and (b), the competent authority shall take adequate measures to address the potential impact on aviation safety of the information security incident or vulnerability.

(d) Measures taken in accordance with point (c) shall immediately be notified to all persons or organisations that shall comply with them under Regulation (EU) 2018/1139 and its delegated and implementing acts. The competent authority of the Member State shall also notify those measures to the Agency and, when combined action is required, the competent authorities of the other Member States concerned.

▼B

SECTION II

Management

ARO.GEN.200 Management system

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

(1) documented policies and procedures to describe its organisation, means and methods to achieve compliance with Regulation (EC) No 216/2008 and its Implementing Rules. The procedures shall be kept up to date and serve as the basic working documents within that competent authority for all related tasks;

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

▼B

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

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

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

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

(c) The competent authority shall establish procedures for participation in a mutual exchange of all necessary information and assistance with other competent authorities concerned including on all findings raised and follow-up actions taken as a result of oversight of persons and organisations exercising activities in the territory of a Member State, but certified ►M4 or authorised ◄ by ►M1 or making declarations to ◄ the competent authority of another Member State or the Agency.

(d) A copy of the procedures related to the management system and their amendments shall be made available to the Agency for the purpose of standardisation.

▼M26

(e) In addition to the requirements contained in point (a), the management system established and maintained by the competent authority shall comply with Annex I (Part-IS.AR) to Implementing Regulation (EU) 2023/203 in order to ensure the proper management of information security risks which may have an impact on aviation safety.

ARO.GEN.205 Allocation of tasks

▼B

(a) Tasks related to the initial certification ►M4 , specialised operation authorisation ◄ or continuing oversight of persons or organisations subject to Regulation (EC) No 216/2008 and its Implementing Rules shall be allocated by Member States only to qualified entities. When allocating tasks, the competent authority shall ensure that it has:

(1) put a system in place to initially and continuously assess that the qualified entity complies with Annex V to Regulation (EC) No 216/2008.

This system and the results of the assessments shall be documented.

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

(i) the tasks to be performed;

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

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

(iv) the related liability coverage; and

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

▼B

(b) The competent authority shall ensure that the internal audit process and safety risk management process required by ARO.GEN.200(a)(4) covers all certification ►M4 , authorisation ◄ or continuing oversight tasks performed on its behalf.

▼M26

(c) For the certification and oversight of the organisation's compliance with point ORO.GEN.200A, the competent authority may allocate tasks to qualified entities in accordance with point (a), or to any relevant authority responsible for information security or cybersecurity within the Member State. When allocating tasks, the competent authority shall ensure that:

(1) all aspects related to aviation safety are coordinated and taken into account by the qualified entity or relevant authority;

(2) the results of the certification and oversight activities performed by the qualified entity or relevant authority are integrated in the overall certification and oversight files of the organisation;

(3) its own information security management system established in accordance with point ARO.GEN.200(e) covers all the certification and continuing oversight tasks performed on its behalf.

▼B

ARO.GEN.210 Changes in the management system

(a) The competent authority shall have a system in place to identify changes that affect its capability to perform its tasks and discharge its responsibilities as defined in Regulation (EC) No 216/2008 and its Implementing Rules. This system shall enable it to take action as appropriate to ensure that its management system remains adequate and effective.

(b) The competent authority shall update its management system to reflect any change to Regulation (EC) No 216/2008 and its Implementing Rules in a timely manner, so as to ensure effective implementation.

(c) The competent authority shall notify the Agency of changes affecting its capability to perform its tasks and discharge its responsibilities as defined in Regulation (EC) No 216/2008 and its Implementing Rules.

ARO.GEN.220 Record-keeping

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

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

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

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

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

▼M4

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

▼M1

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

▼B

►M1 (6) ◄ details of training courses provided by certified organisations, and if applicable, records relating to FSTDs used for such training;

▼M4

(7) oversight of persons and organisations exercising activities within the territory of the Member State, but overseen, certified or authorised by the competent authority of another Member State or the Agency, as agreed between these authorities;

▼M5

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

▼B

►M1 (9) ◄ the evaluation and notification to the Agency of alternative means of compliance proposed by organisations subject to certification ►M4 , or authorisation ◄ and the assessment of alternative means of compliance used by the competent authority itself;

►M1 (10) ◄ findings, corrective actions and date of action closure;

►M1 (11) ◄ enforcement measures taken;

►M1 (12) ◄ safety information and follow-up measures; and

►M1 (13) ◄ the use of flexibility provisions in accordance with Article 14 of Regulation (EC) No 216/2008.

▼M4

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

▼B

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

SECTION III

Oversight, certification and enforcement

ARO.GEN.300 Oversight

▼M1

(a) The competent authority shall verify:

▼M4

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

▼M15

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

▼M5

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

▼M1

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

▼B

(b) This verification shall:

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

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

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

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

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

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

(e) Where the activity of a person or organisation involves more than one Member State or the Agency, the competent authority responsible for the oversight under (a) may agree to have oversight tasks performed by the competent authority(ies) of the Member State(s) where the activity takes place or by the Agency. Any person or organisation subject to such agreement shall be informed of its existence and of its scope.

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

▼M33

(g) With regard to the certification and oversight of the organisation's compliance with point ORO.GEN.200A, in addition to complying with points (a) to (f) of this point, the competent authority shall review any approval granted under point IS.I.OR.200(e) of Annex II to Implementing Regulation (EU) 2023/203 following the applicable oversight audit cycle and whenever changes are implemented in the scope of work of the organisation.

▼B

ARO.GEN.305 Oversight programme

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

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

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

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

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

▼B

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

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

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

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

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

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

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

▼M4

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

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

▼B

►M1 (e) ◄ For persons holding a licence, certificate, rating, or attestation issued by the competent authority the oversight programme shall include inspections, including unannounced inspections, as appropriate.

►M1 (f) ◄ The oversight programme shall include records of the dates when audits, inspections and meetings are due and when such audits, inspections and meetings have been carried out.

ARO.GEN.310 Initial certification procedure — organisations

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

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

▼B

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

ARO.GEN.330 Changes — organisations

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

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

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

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

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

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

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

▼M26

ARO.GEN.330A Changes to the information security management system

(a) For changes managed and notified to the competent authority in accordance with the procedure set out in point IS.I.OR.255(a) of Annex II (Part-IS.I.OR) to Implementing Regulation (EU) 2023/203, the competent authority shall include the review of such changes in its continuing oversight in accordance with the principles laid down in point ARO.GEN.300. If any non-compliance is found, the competent authority shall notify the organisation thereof, request further changes and act in accordance with point ARO.GEN.350.

(b) For other changes requiring an application for approval in accordance with point IS.I.OR.255(b) of Annex II (Part-IS.I.OR) to Implementing Regulation (EU) 2023/203:

(1) upon receiving the application for the change, the competent authority shall check the organisation's compliance with the applicable requirements before issuing the approval;

(2) the competent authority shall establish the conditions under which the organisation may operate during the implementation of the change;

(3) if it is satisfied that the organisation complies with the applicable requirements, the competent authority shall approve the change.

▼M1

ARO.GEN.345 Declaration — organisations

▼M14

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

(1) pursuant to ORO.DEC.100 of Annex III (Part-ORO) to this Regulation;

(2) for balloon operators pursuant to BOP.ADD.100 of Annex II (Part-BOP) to Regulation (EU) 2018/395; or

(3) for sailplane operators pursuant to SAO.DEC.100 of Annex II (Part-SAO) to Implementing Regulation (EU) 2018/1976.

▼M14

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

▼M1

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

▼B

ARO.GEN.350 Findings and corrective actions — organisations

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

▼M4

(b) A level 1 finding shall be issued by the competent authority when any significant non-compliance is detected with the applicable requirements of Regulation (EC) No 216/2008 and its Implementing Rules, with the organisation's procedures and manuals or with the terms of an approval, certificate, specialised operation authorisation or with the content of a declaration which lowers safety or seriously hazards flight safety.

▼B

The level 1 findings shall include:

▼M11

(1) failure to give the competent authority access to the facilities of the organisation in accordance with point ORO.GEN.140 of Annex III (Part-ORO) to this Regulation, or for balloons operators in accordance with points BOP.ADD.015 and BOP.ADD.035 of Annex II (Part-BOP) to Regulation (EU) 2018/395, during normal operating hours and after two written requests;

▼B

(2) obtaining or maintaining the validity of the organisation certificate ►M4 or specialised operations authorisation ◄ by falsification of submitted documentary evidence;

(3) evidence of malpractice or fraudulent use of the organisation certificate ►M4 or specialised operations authorisation ◄; and

(4) the lack of an accountable manager.

▼M4

(c) A level 2 finding shall be issued by the competent authority when any non-compliance is detected with the applicable requirements of Regulation (EC) No 216/2008 and its Implementing Rules, with the organisation's procedures and manuals or with the terms of an approval, certificate, specialised operation authorisation or with the content of a declaration which could lower safety or hazard flight safety.

▼B

(d) When a finding is detected during oversight or by any other means, the competent authority shall, without prejudice to any additional action required by Regulation (EC) No 216/2008 and its Implementing Rules, communicate the finding to the organisation in writing and request corrective action to address the non-compliance(s) identified. Where relevant, the competent authority shall inform the State in which the aircraft is registered.

(1) In the case of level 1 findings the competent authority shall take immediate and appropriate action to prohibit or limit activities, and if appropriate, it shall take action to revoke the certificate ►M4 , specialised operations authorisation ◄ or specific approval or to limit or suspend it in whole or in part, depending upon the extent of the level 1 finding, until successful corrective action has been taken by the organisation.

▼B

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

(i) grant the organisation a corrective action implementation period appropriate to the nature of the finding that in any case initially shall not be more than three months. At the end of this period, and subject to the nature of the finding, the competent authority may extend the three-month period subject to a satisfactory corrective action plan agreed by the competent authority; and

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

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

▼M15

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

▼B

(e) Without prejudice to any additional enforcement measures, when the authority of a Member State acting under the provisions of ARO.GEN.300 (d) identifies any non-compliance with the applicable requirements of Regulation (EC) No 216/2008 and its Implementing Rules by an organisation certified by ►M4 , or authorised by ◄ ►M1 or declaring its activity to ◄ the competent authority of another Member State or the Agency, it shall inform that competent authority and provide an indication of the level of finding.

ARO.GEN.355 Findings and enforcement measures — persons

(a) If, during oversight or by any other means, evidence is found by the competent authority responsible for oversight in accordance with ARO.GEN.300(a) that shows a non-compliance with the applicable requirements by a person holding a licence, certificate, rating or attestation issued in accordance with Regulation (EC) No 216/2008 and its Implementing Rules, the competent authority shall act in accordance with ARA.GEN.355(a) to (d) of Annex VI (Part-ARA) to Commission ►M4 Regulation (EU) No 1178/2011 ◄ ([1]).

(b) If, during oversight or by any other means, evidence is found showing a non-compliance with the applicable requirements by a person subject to the requirements laid down in Regulation (EC) No 216/2008 and its Implementing Rules and not holding a licence, certificate, rating or attestation issued in accordance with that Regulation and its Implementing Rules, the competent authority that identified the non-compliance shall take any enforcement measures necessary to prevent the continuation of that non-compliance.

▼M4

ARO.GEN.360 Findings and enforcement measures — all operators

If, during oversight or by any other means, evidence is found showing a non-compliance with the applicable requirements by an operator subject to the requirements laid down in Regulation (EC) No 216/2008 and its Implementing Rules, the competent authority that identified the non-compliance shall take any enforcement measures necessary to prevent the continuation of that non-compliance.

([1]) OJ L 100, 5.4.2012, p. 1.

▼B

SUBPART OPS

AIR OPERATIONS

▼M30

SECTION I

Certification of commercial air transport (CAT) operators and innovative air mobility (IAM) operators

▼B

ARO.OPS.100 Issue of the air operator certificate

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

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

▼M4

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

▼B

ARO.OPS.105 Code-share arrangements

In considering the safety of a code-share agreement involving a third-country operator, the competent authority shall:

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

(2) liaise with the competent authority of the State of the third-country operator as necessary.

▼M11

ARO.OPS.110 Lease agreements for aeroplanes and helicopters

▼B

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

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

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

▼M15

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

▼B

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

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

(1) the AOC of the lessor or lessee is suspended or revoked;

▼M15

(2) the lessor is subject to an operating ban pursuant to Regulation (EC) No 2111/2005 of the European Parliament and of the Council [1];

[1] Regulation (EC) No 2111/2005 of the European Parliament and of the Council of 14 December 2005 on the establishment of a Community list of air carriers subject to an operating ban within the Community and on informing air transport passengers of the identity of the operating air carrier, and repealing Article 9 of Directive 2004/36/EC (OJ L 344, 27.12.2005, p. 15)

▼M15

(3) the authorisation issued in accordance with Commission Regulation (EU) No 452/2014 ([1]) has been suspended, revoked or surrendered.

▼M7

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

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

(2) the aircraft is included in the list of operators subject to operational restrictions or it is registered in a State of which all operators under its oversight are subject to an operating ban pursuant to Regulation (EC) No 2111/2005.

▼B

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

▼M15

(1) proper coordination with the competent authority responsible for the continuing oversight of the aircraft, in accordance with Commission Regulation (EU) No 1321/2014 ([2]), or for the operation of the aircraft, if it is not the same authority;

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

▼M7

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

▼M4

SECTION Ia

Authorisation of high risk commercial specialised operations

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

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

▼M15

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

([1]) Commission Regulation (EU) No 452/2014 of 29 April 2014 laying down technical requirements and administrative procedures related to air operations of third country operators pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 133, 6.5.2014, p. 12).

([2]) Commission Regulation (EU) No 1321/2014 of 26 November 2014 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks (OJ L 362, 17.12.2014, p. 1).

▼M4

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

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

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

(f) Upon receiving an application for the issue of an authorisation for a cross-border high risk commercial specialised operation, the competent authority of the operator shall review the operator's risk assessment documentation and standard operating procedures (SOP) in coordination with the competent authority of the place where the operation is planned to be conducted. When both authorities are satisfied with the risk assessment and SOP, the competent authority of the operator shall issue the authorisation.

ARO.OPS.155 Lease agreements

(a) The competent authority shall approve a lease agreement involving a third country registered aircraft or a third country operator when the SPO operator has demonstrated compliance with ORO.SPO.100.

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

▼B

SECTION II

Approvals

ARO.OPS.200 Specific approval procedure

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

▼M1

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

▼M30

(1) the operations specifications, as established in Appendix II, for commercial air transport operations with aeroplanes and helicopters and for innovative air mobility (IAM) operations with VCA; or

▼M15

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

▼B

ARO.OPS.205 Minimum equipment list approval

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

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

▼B

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

▼M4

ARO.OPS.210 Determination of distance or local area

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

▼B

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

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

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

▼M28

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

(a) Upon receiving an application for the issue of, or changes to, an approval for a helicopter operation to or from a public interest site, the competent authority shall assess the application in accordance with point CAT.POL.H.225 of Annex IV and conduct any additional assessment of the operator as deemed necessary.

(b) The approval referred to in point CAT.POL.H.225 of Annex IV shall include a list of the public interest site or sites and helicopter type or types specified by the operator and to which the approval applies.

(c) The approval shall only apply to public interest sites established before 1 July 2002, or to public interest sites established before 28 October 2014 and for which a derogation from point CAT.POL.H.225 of Annex IV granted under Article 6(6) has been notified to the Commission and the Agency.

(d) If changes to the obstacle environment at a public interest site are notified or discovered, the competent authority shall assess whether the approvals it has granted covering helicopter operations to or from that site remain valid. Where permanent changes to the obstacle environment have a significantly negative safety impact, the following shall apply:

(1) the competent authority shall limit the privileges of the relevant approvals granted under point CAT.POL.H.225 of Annex IV to exclude helicopter operations to and from that site and remove the site from the list attached to the approval in accordance with point (b);

(2) the site shall no longer qualify for a public interest site approval under point CAT.POL.H.225 of Annex IV;

(3) where the new obstacles are removed, operators may apply or reapply for an approval for a helicopter operation under point CAT.POL.H.225 of Annex IV for the particular site.

(e) The competent authority shall not grant an approval under point CAT.POL.H.225 of Annex IV for a public interest site that was previously operated in performance class 1 following a change in the obstacle environment.

▼M30

ARO.OPS.224 Approval of fuel/energy schemes for IAM operations

(a) The competent authority shall approve the fuel/energy scheme proposed by an IAM operator if that operator demonstrates compliance with the requirements of points UAM.OP.VCA.190, UAM.OP.VCA.191, ►C3 UAM.OP.VCA.195 and UAM.OP.MVCA.192 of Annex IX ◄.

▼M30

(b) In addition, the competent authority shall:

(1) assess whether the IAM operator's management system and safety risk management process can support the implementation of the proposed individual fuel/energy scheme; and

(2) establish an oversight plan to conduct periodic assessments of the IAM operator's current fuel/energy scheme to verify compliance of the scheme with the applicable requirements or decide whether the scheme should be amended or revoked.

ARO.OPS.225 Approval of fuel/energy schemes – aeroplanes and helicopters

▼M20

(a) The competent authority shall approve the fuel/energy scheme proposed by a CAT operator if the operator demonstrates compliance with all applicable requirements laid down in this Regulation related to fuel/energy for aeroplanes or helicopters involved in CAT.

(b) The competent authority shall assess and oversee the fuel/energy planning and in-flight re-planning, selection of aerodrome and, in-flight fuel/energy management policies associated with the fuel/energy schemes, together with the processes supporting the implementation of these fuel/energy schemes.

(c) In addition to points (a) and (b), when approving individual fuel/energy schemes, the competent authority shall:

(1) verify that the operator has demonstrated the baseline safety performance of the current fuel/energy scheme;

(2) assess the capability of the operator to support the implementation of the proposed individual fuel/energy scheme; the following elements shall be considered as a minimum:

(i) the operator's management system,

(ii) the operator's operational capabilities;

(3) verify that the operator's safety risk assessment that supports the proposed individual fuel/energy scheme achieves an equivalent level of safety to that of the current fuel/energy scheme; and

(4) establish an oversight plan to carry out periodic assessments of the approved individual fuel/energy scheme to verify compliance of the scheme or decide whether the scheme should be amended or revoked.

(d) The approval referred to in point CAT.OP.MPA.182 (d)(2) shall include a list of the isolated aerodromes that are specified by the operator for each aircraft type to which the approval applies.

(e) Without prejudice to points ARO.GEN.120 (d) and (e), the competent authority shall notify the Agency of the start of the evaluation of an alternative means of compliance related to fuel/energy schemes.

▼M18

ARO.OPS.226 Approval and oversight of evidence-based training programmes

(a) Where a competent authority grants an approval for EBT programmes, inspectors must receive qualification and training in EBT principles, application, approval processes and continuing oversight.

(b) The competent authority shall assess and oversee the EBT programme, together with the processes that support the implementation of the EBT programme and its effectiveness.

(c) Upon receiving an application for the approval of an EBT programme, the competent authority shall:

▼M18

(1) ensure the resolution of level 1 findings in the areas that will support the application of the EBT programme;

(2) assess the capability of the operator to support the implementation of the EBT programme. The following elements shall be considered as a minimum:

(i) the maturity and capability of the operator's management system in the areas that will support the application of the EBT programme — in particular, flight crew training;

(ii) the operator's EBT programme suitability — the EBT programme shall correspond to the size of the operator, and the nature and complexity of its activities, taking into account the hazards and associated risks inherent in those activities;

(iii) the adequacy of the operator's record-keeping system, in particular with regard to flight crew training, checking and qualifications records in particular ORO.GEN.220 and ORO.MLR.115 points (c) and (d);

(iv) the suitability of the operator's grading system to assess the pilot competencies;

(v) the competence and the experience of the instructors and other personnel involved in the EBT programme in the use of the processes and procedures that support the implementation of the EBT programme; and

(vi) the operator's EBT implementation plan and a safety risk assessment supporting the EBT programme in order to demonstrate how an equivalent level of safety to that of the current training programme can be achieved.

(d) The competent authority shall grant an EBT programme approval when the assessment concludes that the compliance with at least ORO.FC.146, ORO.FC.231, and ORO.FC.232 is ensured.

(e) Without prejudice to ARO.GEN.120 (d) and (e), the competent authority shall notify the Agency when it starts the evaluation of an alternative means of compliance related to EBT.

▼M3

ARO.OPS.230 Determination of disruptive schedules

For the purpose of flight time limitations, the competent authority shall determine, in accordance with the definitions of 'early type' and 'late type' of disruptive schedules in point ORO.FTL.105 of Annex III, which of those two types of disruptive schedules shall apply to all CAT operators under its oversight.

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

(a) The competent authority shall approve flight time specification schemes proposed by CAT operators if the operator demonstrates compliance with Regulation (EC) No 216/2008 and Subpart FTL of Annex III to this Regulation.

(b) Whenever a flight time specification scheme proposed by an operator deviates from the applicable certification specifications issued by the Agency, the competent authority shall apply the procedure described in Article 22(2) of Regulation (EC) No 216/2008.

(c) Whenever a flight time specification scheme proposed by an operator derogates from applicable implementing rules, the competent authority shall apply the procedure described in Article 14(6) of Regulation (EC) No 216/2008.

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

▼M9

ARO.OPS.240 Specific approval of RNP AR APCH

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

(b) In the case of a procedure-specific approval, the competent authority shall:

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

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

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

▼M4

SECTION III

Oversight of operations

ARO.OPS.300 Introductory flights

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

▼B

SUBPART RAMP

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

ARO.RAMP.005 Scope

This Subpart establishes the requirements to be followed by the competent authority or the Agency when exercising its tasks and responsibilities regarding the performance of ramp inspections of aircraft used by third country operators or used by operators under the regulatory oversight of another Member State when landed at aerodromes located in the territory subject to the provisions of the Treaty.

ARO.RAMP.100 General

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

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

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

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

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

(d) When it so deems necessary, the Agency, in cooperation with the Member States in whose territory the inspection shall take place, shall conduct ramp inspections of aircraft to verify compliance with the applicable requirements for the purpose of:

(1) certification tasks assigned to the Agency by Regulation (EC) No 216/2008;

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(2) standardisation inspections of a Member State; or

(3) inspections of an organisation to verify compliance with the applicable requirements in potentially unsafe situations.

ARO.RAMP.105 Prioritisation criteria

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

(b) This list shall include:

(1) operators of aircraft identified on the basis of the analysis of available data in accordance with ARO.RAMP.150(b)(4);

(2) operators or aircraft communicated to the Agency by the European Commission and identified on the basis of:

(i) an opinion expressed by the Air Safety Committee (ASC) within the context of the implementation of Regulation (EC) No 2111/2005 that further verification of effective compliance with relevant safety standards through systematic ramp inspections is necessary; or

(ii) information obtained by the European Commission from the Member States pursuant to Article 4(3) of Regulation (EC) No 2111/2005;

(3) aircraft operated into the territory subject to the provisions of the Treaty by operators included in Annex B of the list of operators subject to an operating ban pursuant to Regulation (EC) No 2111/2005;

(4) aircraft operated by operators certified in a State exercising regulatory oversight over operators included in the list referred to in (3);

▼M15

(5) aircraft used by a third-country operator that operates into, within or out of the territory subject to the provisions of the Treaty for the first time or whose authorisation issued in accordance with Regulation (EU) No 452/2014 is limited or reinstated after suspension or revocation.

▼B

(c) The list shall be produced, in accordance with procedures established by the Agency, after every update of the Community list of operators subject to an operating ban pursuant to Regulation (EC) No 2111/2005, and in any case at least once every four months.

▼M12

ARO.RAMP.106 Alcohol testing

(a) The competent authority shall carry out alcohol testing on flight and cabin crew.

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

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

▼M12

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

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

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

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

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ARO.RAMP.110 Collection of information

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

ARO.RAMP.115 Qualification of ramp inspectors

(a) The competent authority and the Agency shall have qualified inspectors to conduct ramp inspections.

(b) Ramp inspectors shall:

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

(2) have successfully completed:

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

(A) flight deck;

(B) cabin safety;

(C) aircraft condition;

(D) cargo;

(ii) appropriate on-the-job training delivered by a senior ramp inspector appointed by the competent authority or the Agency;

▼M15

(3) maintain the validity of their qualification by undergoing recurrent training and by performing a minimum of 12 inspections per calendar year.

▼B

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

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

(e) The Agency shall facilitate and coordinate an inspector exchange programme aimed at allowing inspectors to obtain practical experience and contributing to the harmonisation of procedures.

ARO.RAMP.120 Approval of training organisations

(a) The competent authority shall approve a training organisation, having its principal place of business in the territory of the respective Member State, when satisfied that the training organisation:

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

▼B

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

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

(4) uses qualified training instructors.

(b) If so requested by the competent authority, the verification of compliance and continuous compliance with the requirements referred to in (a) shall be performed by the Agency.

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

(1) initial theoretical training;

(2) initial practical training;

(3) recurrent training.

ARO.RAMP.125 Conduct of ramp inspections

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

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

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

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ARO.RAMP.130 Categorisation of findings

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

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

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

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

ARO.RAMP.135 Follow-up actions on findings

(a) For a category 2 or 3 finding the competent authority, or where relevant the Agency, shall:

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

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

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

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

(2) requesting immediate corrective actions;

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

(4) imposing an immediate operating ban in accordance with Article 6 of Regulation (EC) No 2111/2005.

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

ARO.RAMP.140 Grounding of aircraft

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

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

(2) ground that aircraft.

(b) The competent authority of the State where the aircraft is grounded shall immediately inform the competent authority of the State of the operator and of the State in which the aircraft is registered, if relevant, and the Agency in the case of a grounded aircraft used by a third-country operator.

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

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

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

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(2) it has obtained a permit-to-fly in accordance with Regulation (EU) No 748/2012, for aircraft registered in a Member State;

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(3) a permit-to-fly or equivalent document of the State of Registry or the State of the operator for aircraft registered in a third country and operated by an EU or a third country operator; and

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

ARO.RAMP.145 Reporting

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

(b) The competent authority or the Agency shall enter into the centralised database any information useful for the application of Regulation (EC) No 216/2008 and its Implementing Rules and for the accomplishment by the Agency of the tasks assigned to it by this Annex, including the relevant information referred to in ARO.RAMP.110.

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

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

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ARO.RAMP.150 Agency coordination tasks

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

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

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(2) the information provided by third countries or international organisations with whom appropriate agreements have been concluded with the EU, or organisations with whom the Agency has concluded appropriate arrangements in accordance with Article 27(2) of Regulation (EC) No 216/2008.

(b) This management shall include the following tasks:

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

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

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

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

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

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

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

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

ARO.RAMP.155 Annual report

The Agency shall prepare and submit to the Commission an annual report on the ramp inspection system containing at least the following information:

(a) status of the progress of the system;

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

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

(d) actions taken during the year;

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

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

▼B

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

(a) Member States shall use the information received by them pursuant to ARO.RAMP.105 and ARO.RAMP.145 solely for the purpose of Regulation (EC) No 216/2008 and its implementing rules and shall protect it accordingly.

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

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Appendix I

AIR OPERATOR CERTIFICATE

(Approval schedule for air transport operators)

Types of operation:

Commercial air transport (CAT) ☐ Passengers; ☐ Cargo; ☐ Other ([1]): .....

Innovative air mobility (IAM) ☐ Passengers; ☐ Cargo; ☐ Other ([1]): .....

([4])	State of the Operator ([2]) Issuing Authority ([3])	([5])
AOC # ([6]): 	Operator Name ([7]) Dba Trading Name ([8]) Operator postal address ([10]): Telephone ([11]): Fax Email:	Operational Points of Contact: ([9]) Contact details at which operational management can be contacted without undue delay, are listed in ..... ([12]).

☐ This is to certify that ..... ([13]) is authorised to conduct commercial air transport (CAT) operations, as defined in the attached operations specifications, in accordance with the operations manual and with Annex V to Regulation (EU) 2018/1139 and its delegated and implementing acts.

☐ This is to certify that ..... ([13]) is authorised to conduct innovative air mobility (IAM) operations, as defined in the attached operations specifications, in accordance with the operations manual and with Annex V to Regulation (EU) 2018/1139 and its delegated and implementing acts.

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

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

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▼C3

Appendix II

OPERATIONS SPECIFICATIONS **(subject to the approved conditions in the operations manual)**			
Issuing authority contact details Telephone ([1]): _____; Fax: _____; Email: _____			
AOC ([2]):	Operator name ([3]):	Date ([4]):	Signature:
	Dba trading name		
Operations specifications #:			
Aircraft model ([5]): Registration marks ([6]):			
Types of operation: Commercial air transport (CAT) □ Passengers □ Cargo □ Other ([7]): _____ Innovative air mobility (IAM) □ Passengers □ Cargo □ Other ([7]): _____			
Area of operation ([8]):			
Special limitations ([9]):			

Specific approvals:	Yes	No	Specification ([10])	Remarks
Dangerous goods	□	□		
Low-visibility operations				
Take-off	□	□	RVR ([11]): ... m	
Approach and landing	□	□	CAT ([12]) .... DA/H: ...ft, RVR: ...m	
Operational credits	□	□	CAT ([13]) ...DA/H: ...ft, RVR: ...m	
RVSM ([14]) □ N/A	□	□		
ETOPS ([15]) □ N/A	□	□	Maximum diversion time ([16]): … minutes	
Complex navigation specifications for PBN operations ([17])	□	□		([18])
Minimum navigation performance specification	□	□		
Operations with single-engined turbine aeroplane at night or in IMC (SET-IMC)	□	□	([19])	
Helicopter operations with the aid of night-vision imaging systems	□	□		
Helicopter hoist operations	□	□		
Helicopter emergency medical service operations	□	□		
Helicopter offshore operations	□	□		

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Reduced VFR operating minima on helicopter point-in-space approaches and departures	□	□		
VTOL-capable aircraft emergency medical service operations (VEMS)	□	□		
Cabin crew training ([20])	□	□		
Issue of CC attestation ([21])	□	□		
Use of type B EFB applications	□	□	([22])	
Continuing airworthiness	□	□	([23])	
Others ([24])				

([1]) Telephone contact details of the competent authority, including the country code. Email address to be provided, as well as fax if available.
([2]) Insertion of associated air operator certificate (AOC) number.
([3]) Insertion of the operator's registered name and the operator's trading name, if different. Insert 'Dba' (for 'Doing business as') before the trading name.
([4]) Issue date of the operations specifications (dd-mm-yyyy) and signature of the competent authority representative.
([5]) Insertion of ICAO designation of the aircraft make, model and series, or master series, if a series has been designated (e.g. Boeing-737-3K2 or Boeing-777-232) or insertion of the VTOL-capable aircraft make, model and series, as applicable.
([6]) The registration marks are listed either in the operations specifications or in the operations manual. In the latter case, the related operations specifications must make a reference to the related page in the operations manual. In case not all specific approvals apply to the aircraft model, the registration marks of the aircraft may be entered in the 'Remarks' column to the related specific approval.
([7]) Other type of transportation (e.g. emergency medical service) to be specified.
([8]) Listing of geographical area(s) of authorised operation (by geographical coordinates or specific routes, flight information region or national or regional boundaries).
([9]) Listing of applicable special limitations (e.g. VFR only, Day only, etc.).
([10]) List in this column the most permissive criteria for each approval or the approval type (with appropriate criteria).
([11]) Insertion of approved minimum take-off RVR in metres. One line per approval may be used if different approvals are granted.
([12]) Insertion of applicable precision approach category: CAT II or CAT III. Insertion of minimum RVR in metres and DH in feet. One line is used per listed approach category.
([13]) Insertion of applicable operational credit: SA CAT I, SA CAT II, EFVS, etc. Insertion of minimum RVR in metres and DH in feet. One line is used per listed operational credit.
([14]) The 'Not Applicable' (N/A) box may be checked only if the aircraft maximum ceiling is below FL290.
([15]) Extended range operations (ETOPS) currently apply only to two-engined aircraft. Therefore, the 'Not Applicable' (N/A) box may be checked if the aircraft model has fewer or more than two engines.
([16]) The threshold distance may also be listed (in NM), as well as the engine type.
([17]) Performance-based navigation (PBN): one line is used for each complex PBN-specific approval (e.g. RNP AR APCH), with appropriate limitations listed in the 'Specifications' or 'Remarks' columns, or in both. Procedure-specific approvals of specific RNP AR APCH procedures may be listed in the operations specifications or in the operations manual. In the latter case, the related operations specifications must have a reference to the related page in the operations manual.
([18]) Specify if the specific approval is limited to certain runway ends or aerodromes, or both.
([19]) Insertion of the particular airframe or engine combination.
([20]) Approval to conduct the training course and examination to be completed by applicants for a cabin crew attestation as specified in Annex V (Part-CC) to Regulation (EU) No 1178/2011.
([21]) Approval to issue cabin crew attestations as specified in Annex V (Part-CC) to Regulation (EU) No 1178/2011.
([22]) Insertion of the list of type B EFB applications together with the reference of the EFB hardware (for portable EFBs). This list is contained either in the operations specifications or in the operations manual. In the latter case, the related operations specifications must make a reference to the related page in the operations manual.
([23]) The approval reference of the organisation responsible for managing the continuing airworthiness of the aircraft and a reference to the relevant regulation (e.g. Annex Vc (Part-CAMO) to Regulation (EU) No 1321/2014).
([24]) Other approvals or data may be entered here, using one line (or one multi-line block) per authorisation (e.g. short-landing operations, steep-approach operations, reduced required landing distance, helicopter operations to or from a public interest site, helicopter operations over a hostile environment located outside a congested area, helicopter operations without a safe forced landing capability, operations with increased bank angles, maximum distance from an adequate aerodrome for two-engined aeroplanes without an ETOPS approval).

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Appendix III

List of specific approvals

Non-commercial operations

Specialised operations

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

Issuing authority ([1]):		
List of specific approvals # ([2]): Name of operator: Date ([3]): Signature:		
Aircraft model and registration marks ([4]):		
Types of specialised operation (SPO), if applicable: □ ([5])…		
Specific approvals ([6]):	Specification ([7])	Remarks
…		
…		
…		
…		

([1]) Insertion of name and contact details.
([2]) Insertion of the associated number.
([3]) Issue date of the specific approvals (dd-mm-yyyy) and signature of the competent authority representative.
([4]) Insertion of the Commercial Aviation Safety Team (CAST)/ICAO designation of the aircraft make, model and series, or master series, if a series has been designated (e.g. Boeing-737-3K2 or Boeing-777-232). The CAST/ICAO taxonomy is available at: http://www.intlaviationstandards.org/
The registration marks shall be either listed in the list of specific approvals or in the operations manual. In the latter case the list of specific approvals shall refer to the related page in the operation manual.
([5]) Specify the type of operation, e.g., agriculture, construction, photography, surveying, observation and patrol, aerial advertisement, maintenance check flights.
([6]) List in this column any approved operations, e.g., dangerous goods, LVO, RVSM, PBN, MNPS, HOFO.
([7]) List in this column the most permissive criteria for each approval, e.g. the decision height and RVR minima for CAT II.

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▼**M15**

Appendix IV

AUTHORISATION OF HIGH RISK COMMERCIAL SPECIALISED OPERATIONS	
Issuing authority: (1) Authorisation no: (2)	
Operator name: (3) Operator address: (4) Telephone: (5) Fax Email:	
Aircraft model and registration marks: (6)	
Authorised specialised operation: (7)	
Authorised area or site of operation: (8)	
Special limitations: (9)	
This is to confirm that … is authorised to perform high risk commercial specialised operation(s) in accordance with this authorisation, operator's Standard Operating Procedures, Annex V to Regulation (EU) 2018/1139 and its delegated and implementing acts.	
Date of issue (10):	Name and Signature (11): Title:

(1) Name and contact details of the competent authority
(2) Insertion of associated authorisation number.
(3) Insertion of the operator's registered name and the operator's trading name, if different. Insert 'Dba' before the trading name (for 'Doing business as').
(4) Operator's principal place of business address.
(5) Operator's principal place of business telephone and fax details, including the country code. Email to be provided if available.
(6) Insertion of the Commercial Aviation Safety Team (CAST)/ICAO designation of the aircraft make, model and series, or master series, if a series has been designated (e.g. Boeing-737-3K2 or Boeing-777-232). The CAST/ICAO taxonomy is available at: http://www.intlaviationstandards.org. The registration marks shall be either listed in the list of specific approvals or in the operations manual. In the latter case the list of specific approvals shall refer to the related page in the operation manual.
(7) Specify the type of operation, e.g., agriculture, construction, photography, surveying, observation and patrol, aerial advertisement, maintenance check flights.
(8) Listing of geographical area(s) or site(s) of authorised operation (by geographical coordinates or flight information region or national or regional boundaries).
(9) Listing of applicable special limitations (e.g. VFR only, Day only, etc.).
(10) Issue date of the authorisation (dd-mm-yyyy).
(11) Title, name and signature of the competent authority representative. In addition, an official stamp may be applied on the authorisation.

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▼B

ANNEX III

ORGANISATION REQUIREMENTS FOR AIR OPERATIONS

[PART-ORO]

▼M30

ORO.GEN.005 Scope

This Annex establishes the requirements to be met by an air operator that conducts:

(a) commercial air transport (CAT) operations;

(b) commercial specialised operations;

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

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

(e) innovative air mobility (IAM) operations.

▼B

SUBPART GEN

GENERAL REQUIREMENTS

SECTION I

General

ORO.GEN.105 Competent authority

For the purpose of this Annex, the competent authority exercising oversight over operators subject to a certification ►M1 or declaration ◄ obligation ►M4 or specialised operation authorisation ◄ shall be for operators having their principal place of business in a Member State, the authority designated by that Member State.

ORO.GEN.110 Operator responsibilities

▼M4

(a) The operator is responsible for the operation of the aircraft in accordance with Annex IV to Regulation (EC) No 216/2008, as applicable, the relevant requirements of this Annex and its air operator certificate (AOC) or specialised operation authorisation (SPO authorisation) or declaration.

▼B

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

(c) The operator shall establish and maintain a system for exercising operational control over any flight operated under the terms of its certificate ►M4 , SPO authorisation ◄ ►M1 or declaration. ◄

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

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

▼M5

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

▼B

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

▼M15

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

▼B

(i) The operator shall specify flight planning procedures to provide for the safe conduct of the flight based on considerations of aircraft performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes or operating sites concerned. These procedures shall be included in the operations manual.

▼M10

(j) The operator shall establish and maintain dangerous goods training programmes for personnel as required by the technical instructions. Such training programmes shall be commensurate with the responsibilities of personnel. Training programmes of operators performing CAT, whether they transport dangerous goods or not, and of operators conducting operations other than CAT referred to in points (b), (c) and (d) of point ORO.GEN.005 that transport dangerous goods shall be subject to review and approval by the competent authority.

▼M14

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

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

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

▼B

ORO.GEN.115 ►M4 Application for an AOC ◄

(a) The application for an ►M4 air ◄ operator certificate or an amendment to an existing certificate shall be made in a form and manner established by the competent authority, taking into account the applicable requirements of Regulation (EC) No 216/2008 and its Implementing Rules.

(b) Applicants for an initial certificate shall provide the competent authority with documentation demonstrating how they will comply with the requirements established in Regulation (EC) No 216/2008 and its Implementing Rules. Such documentation shall include a procedure describing how changes not requiring prior approval will be managed and notified to the competent authority.

▼B

ORO.GEN.120 Means of compliance

(a) Alternative means of compliance to those adopted by the Agency may be used by an operator to establish compliance with Regulation (EC) No 216/2008 and its Implementing Rules.

(b) When an operator subject to certification wishes to use an alternative means of compliance to the acceptable means of compliance (AMC) adopted by the Agency to establish compliance with Regulation (EC) No 216/2008 and its Implementing Rules, it shall, prior to implementing it, provide the competent authority with a full description of the alternative means of compliance. The description shall include any revisions to manuals or procedures that may be relevant, as well as an assessment demonstrating that the Implementing Rules are met.

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

▼M1

(c) An operator required to declare its activity shall notify to the competent authority the list of alternative means of compliance it uses to establish compliance with Regulation (EC) No 216/2008 and its Implementing Rules.

▼M4

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

▼B

ORO.GEN.125 ►M4 Terms of approval and privileges of an AOC holder ◄

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

ORO.GEN.130 ►M4 Changes related to an AOC holder ◄

(a) Any change affecting:

(1) the scope of the certificate or the operations specifications of an operator; or

(2) any of the elements of the operator's management system as required in ORO.GEN.200(a)(1) and (a)(2),

shall require prior approval by the competent authority.

(b) For any changes requiring prior approval in accordance with Regulation (EC) No 216/2008 and its Implementing Rules, the operator shall apply for and obtain an approval issued by the competent authority. The application shall be submitted before any such change takes place, in order to enable the competent authority to determine continued compliance with Regulation (EC) No 216/2008 and its Implementing Rules and to amend, if necessary, the operator certificate and related terms of approval attached to it.

The operator shall provide the competent authority with any relevant documentation.

▼B

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

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

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

ORO.GEN.135 ►M4 Continued validity of an AOC ◄

▼M15

(a) The operator's certificate shall remain valid subject to all of the following:

(1) the operator remaining in compliance with the relevant requirements of Regulation (EU) 2018/1139 and its delegated and implementing acts, taking into account the provisions related to the handling of findings as specified under point ORO.GEN.150 of this Annex;

(2) the competent authority being granted access to the operator as defined in point ORO.GEN.140 of this Annex to determine continued compliance with the relevant requirements of Regulation (EU) 2018/1139 and its delegated and implementing acts;

(3) the certificate not being surrendered or revoked.

▼B

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

ORO.GEN.140 Access

▼M15

(a) For the purpose of determining compliance with the relevant requirements of Regulation (EU) 2018/1139 and its delegated and implementing acts, the operator shall grant access at any time to any facility, aircraft, document, records, data, procedures or any other material relevant to its activity subject to certification, SPO authorisation or declaration, whether it is contracted or not, to any person authorised by one of the following authorities:

(1) the competent authority defined in point ORO.GEN.105 of Annex III to this Regulation;

(2) the authority acting under the provisions of points ARO.GEN.300(d), ARO.GEN.300(e) or Subpart RAMP of Annex II to this Regulation.

▼M30

(b) Access to the aircraft referred to in point (a) shall:

(i) for CAT operations with aeroplanes and helicopters, include the possibility to enter and remain in the aircraft during flight operations unless otherwise decided by the commander for the flight crew compartment in accordance with point CAT.GEN.MPA.135 in the interest of safety;

(ii) for IAM operations with VCA, include the possibility to enter and remain in the aircraft during flight operations unless otherwise decided by the pilot-in-command in accordance with point IAM.GEN.MVCA.135 in the interest of safety.

▼B

ORO.GEN.150 Findings

After receipt of notification of findings, the operator shall:

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

▼B

(b) define a corrective action plan; and

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

ORO.GEN.155 Immediate reaction to a safety problem

The operator shall implement:

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

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

ORO.GEN.160 Occurrence reporting

▼M15

(a) The operator shall report to the competent authority, and to any other organisation required to be informed by the State of the operator, any accident, serious incident and occurrence as defined in Regulation (EU) No 996/2010 of the European Parliament and of the Council [1] and Regulation (EU) No 376/2014.

▼M2

(b) Without prejudice to point (a) the operator shall report to the competent authority and to the organisation responsible for the design of the aircraft any incident, malfunction, technical defect, exceeding of technical limitations or occurrence that would highlight inaccurate, incomplete or ambiguous information contained in the operational suitability data established in accordance with Regulation (EU) No 748/2012 or other irregular circumstance that has or may have endangered the safe operation of the aircraft and that has not resulted in an accident or serious incident.

▼M15

(c) Without prejudice to Regulation (EU) No 996/2010 and Regulation (EU) No 376/2014, the reports referred in points (a) and (b) shall be made in a form and manner established by the competent authority and shall contain all pertinent information about the conditions known to the operator.

▼B

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

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

SECTION 2

Management

ORO.GEN.200 Management system

(a) The operator shall establish, implement and maintain a management system that includes:

(1) clearly defined lines of responsibility and accountability throughout the operator, including a direct safety accountability of the accountable manager;

(2) a description of the overall philosophies and principles of the operator with regard to safety, referred to as the safety policy;

[1] Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC (OJ L 295, 12.11.2010, p. 35).

▼B

(3) the identification of aviation safety hazards entailed by the activities of the operator, their evaluation and the management of associated risks, including taking actions to mitigate the risk and verify their effectiveness;

(4) maintaining personnel trained and competent to perform their tasks;

(5) documentation of all management system key processes, including a process for making personnel aware of their responsibilities and the procedure for amending this documentation;

(6) a function to monitor compliance of the operator with the relevant requirements. Compliance monitoring shall include a feedback system of findings to the accountable manager to ensure effective implementation of corrective actions as necessary; and

(7) any additional requirements that are prescribed in the relevant Subparts of this Annex or other applicable Annexes.

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

▼M26

ORO.GEN.200A Information security management system

In addition to the management system referred to in point ORO.GEN.200, the operator shall establish, implement and maintain an information security management system in accordance with Implementing Regulation (EU) 2023/203 in order to ensure the proper management of information security risks which may have an impact on aviation safety.

▼M4

ORO.GEN.205 Contracted activities

▼M15

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

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

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

▼M4

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

▼B

ORO.GEN.210 Personnel requirements

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

▼B

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

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

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

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

ORO.GEN.215 Facility requirements

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

ORO.GEN.220 Record-keeping

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

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

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

▼M15

SECTION 3

Additional organisational requirements

▼M30

ORO.GEN.310 Use of aeroplanes or helicopters listed on an AOC for non-commercial operations and specialised operations

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

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

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

(b) When an aeroplane or a helicopter is used in accordance with point (a)(2), the AOC holder that provides the aeroplane or helicopter and the operator that uses the aeroplane or helicopter shall establish a procedure:

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

(2) describing the handover procedure of the aeroplane or helicopter upon its return to the AOC holder.

▼**M30**

That procedure shall be included in the operations manual of each operator or in a contract concluded between the AOC holder and the operator that uses the aeroplane or the helicopter in accordance with point (a)(2). The AOC holder shall establish a template for such a contract. Point ORO.GEN.220 shall apply to those contracts.

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

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

(d) The continuing airworthiness of the aeroplane or the helicopter used in accordance with point (a) shall be managed by the organisation responsible for the continuing airworthiness of the aeroplane or helicopter included in the AOC, in accordance with Regulation (EU) No 1321/2014.

(e) The AOC holder that provides the aeroplane or the helicopter in accordance with point (a) shall:

(1) indicate in its operations manual the registration marks of the aeroplane or helicopter provided, and the type of operations conducted with that aeroplane or helicopter;

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

(3) ensure that the hazard identification, risk assessment and mitigation measures it has put in place address all the operations conducted with that aeroplane or helicopter.

(f) For operations conducted under Annex VI (Part-NCC) and Annex VIII (Part-SPO), the operator that uses the aeroplane or the helicopter in accordance with point (a) shall ensure all the following:

(1) that every flight conducted under its operational control is recorded in the aeroplane's or helicopter's technical log system;

(2) that no changes are made to the aeroplane's or helicopter's systems or its configuration;

▼M30

(3) that any defect or technical malfunction occurring while the aeroplane or helicopter is under its operational control is reported to the organisation referred to in point (d);

(4) that the AOC holder receives a copy of any occurrence report related to the flights conducted with the aeroplane or helicopter, completed in accordance with Regulation (EU) No 376/2014 and Implementing Regulation (EU) 2015/1018 ([1]).

▼B

SUBPART AOC

AIR OPERATOR CERTIFICATION

▼M30

ORO.AOC.100 Application for an air operator certificate (AOC)

(a) Without prejudice to Regulation (EC) No 1008/2008 of the European Parliament and of the Council ([2]), prior to commencing CAT operations with aeroplanes or helicopters or IAM operations with VCA, the operator shall apply for and obtain an AOC issued by the competent authority.

(b) The operator shall provide the following information to the competent authority:

(1) the official name and business name, address and mailing address of the applicant;

(2) a description of the proposed operation, including the type(s) and number of aircraft to be operated;

(3) a description of the management system, including organisational structure;

(4) the name of the accountable manager;

(5) the names of the nominated persons as required under point ORO.AOC.135(a), together with their qualifications and experience;

(6) a copy of the operations manual as required under point ORO.MLR.100;

(7) a statement that all the documentation submitted to the competent authority has been verified by the applicant and found to comply with the applicable requirements.

(c) Applicants shall demonstrate to the competent authority that:

(1) the CAT operations with aeroplanes and helicopters comply with the essential requirements of Annex V to Regulation (EU) 2018/1139, this Annex (Part-ORO), Annex IV (Part-CAT) and Annex V (Part-SPA) to this Regulation, and Annex I (Part-26) to Regulation (EU) 2015/640 ([3]);

([1]) Commission Implementing Regulation (EU) 2015/1018 of 29 June 2015 laying down a list classifying occurrences in civil aviation to be mandatorily reported according to Regulation (EU) No 376/2014 of the European Parliament and of the Council (OJ L 163, 30.6.2015, p. 1, ELI: http://data.europa.eu/eli/reg_impl/2015/1018/oj).

([2]) Regulation (EC) No 1008/2008 of the European Parliament and of the Council of 24 September 2008 on common rules for the operation of air services in the Community (OJ L 293, 31.10.2008, p. 3, ELI: http://data.europa.eu/eli/reg/2008/1008/oj).

([3]) Commission Regulation (EU) 2015/640 of 23 April 2015 on additional airworthiness specifications for a given type of operations and amending Regulation (EU) No 965/2012 (OJ L 106, 24.4.2015, p. 18, ELI: http://data.europa.eu/eli/reg/2015/640/oj).

▼M30

(1a) for IAM operations with VCA, they comply with the essential requirements of Annex V to Regulation (EU) 2018/1139, this Annex III (Part-ORO), Annex V (Part-SPA) and Annex IX (Part-IAM) to this Regulation, and with Annex I (Part-26) to Regulation (EU) 2015/640;

(2) all aircraft operated have been issued with a certificate of airworthiness (CofA) in accordance with Regulation (EU) No 748/2012 or are dry-leased in accordance with point ORO.AOC.110(d); and

(3) their organisation and management is suitable and properly matched to the scale and scope of the intended operation.

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

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

ORO.AOC.110 Leasing agreement

Any lease-in

(a) Without prejudice to Regulation (EC) No 1008/2008, any lease agreement concerning aircraft used by an operator certified in accordance with this Part shall be subject to prior approval by the competent authority.

▼M7

(b) The operator certified in accordance with this Part shall not lease-in aircraft included in the list of operators subject to operational restrictions, registered in a State of which all operators under its oversight are subject to an operating ban or from an operator that is subject to an operating ban pursuant to Regulation (EC) No 2111/2005.

▼M15

Wet lease-in

(c) The applicant for the approval of the wet lease-in of an aircraft from a third-country operator shall demonstrate to the competent authority all of the following:

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

(2) that the safety standards of the third country operator with regard to continuing airworthiness and air operations are equivalent to the applicable requirements established by Regulation (EU) No 1321/2014 and this Regulation;

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

▼M7

Dry lease-in

(d) An applicant for the approval of the dry lease-in of an aircraft registered in a third country shall demonstrate to the competent authority that:

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

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

(3) compliance with the applicable requirements of Regulation (EU) No 1321/2014 is ensured; and

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

▼B

Dry lease-out

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

Wet lease-out

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

ORO.AOC.115 Code-share agreements

(a) Without prejudice to applicable EU safety requirements for third country operators and aircraft, an operator certified in accordance with this Part shall enter into a code-share agreement with a third country operator only after:

(1) having verified that the third country operator complies with the applicable ICAO standards; and

(2) having provided the competent authority with documented information enabling such authority to comply with ARO.OPS.105.

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

(c) The operator certified in accordance with this Part shall not sell and issue tickets for a flight operated by a third country operator when the third country operator is subject to an operating ban pursuant to Regulation (EC) No 2111/2005 or is failing to maintain compliance with the applicable ICAO standards.

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

(a) When intending to provide the training course required in Annex V (Part-CC) to ►M4 Regulation (EU) No 1178/2011 ◄, the operator shall apply for and obtain an approval issued by the competent authority. For this purpose, the applicant shall demonstrate compliance with the requirements for the conduct and content of training course established in CC.TRA.215 and CC.TRA.220 of that Annex and shall provide the competent authority with:

(1) the date of intended commencement of activity;

(2) the personal details and qualifications of the instructors as relevant to the training elements to be covered;

▼B

(3) the name(s) and address(es) of the training site(s) at which the training is to be conducted;

(4) a description of the facilities, training methods, manuals and representative devices to be used; and

(5) the syllabi and associated programmes for the training course.

(b) If a Member State decides, in accordance with ARA.CC.200 of Annex VI (Part-ARA) to ►M4 Regulation (EU) No 1178/2011 ◄, that operators may be approved to issue cabin crew attestations, the applicant shall, in addition to (a):

(1) demonstrate to the competent authority that:

(i) the organisation has the capability and accountability to perform this task;

(ii) the personnel conducting examinations are appropriately qualified and free from conflict of interest; and

(2) provide the procedures and the specified conditions for:

(i) conducting the examination required by CC.TRA.220;

(ii) issuing cabin crew attestations; and

(iii) supplying the competent authority with all relevant information and documentation related to the attestations it will issue and their holders, for the purpose of record-keeping, oversight and enforcement actions by that authority.

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

▼M30

ORO.AOC.125 Non-commercial operations of an AOC holder with aeroplanes or helicopters listed on its AOC

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

(1) an identification of the applicable requirements;

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

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

(b) An AOC holder shall comply with:

(1) Annex VIII (Part-SPO) when conducting maintenance check flights with complex motor-powered aircraft;

(2) Annex VII (Part-NCO) when conducting maintenance check flights with other than complex motor-powered aircraft.

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

▼M30

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

▼M7

ORO.AOC.130 Flight data monitoring-aeroplanes

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

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

▼B

ORO.AOC.135 Personnel requirements

▼M15

(a) In accordance with point ORO.GEN.210(b), the operator shall nominate persons responsible for the management and supervision of the following areas:

(1) flight operations;

(2) crew member training;

(3) ground operations;

(4) continuing airworthiness or for the continuing airworthiness management contract in accordance with Regulation (EU) No 1321/2014, as the case may be.

▼B

(b) *Adequacy and competency of personnel*

(1) The operator shall employ sufficient personnel for the planned ground and flight operations.

(2) All personnel assigned to, or directly involved in, ground and flight operations shall:

(i) be properly trained;

(ii) demonstrate their capabilities in the performance of their assigned duties; and

(iii) be aware of their responsibilities and the relationship of their duties to the operation as a whole.

(c) *Supervision of personnel*

(1) The operator shall appoint a sufficient number of personnel supervisors, taking into account the structure of the operator's organisation and the number of personnel employed.

(2) The duties and responsibilities of these supervisors shall be defined, and any other necessary arrangements shall be made to ensure that they can discharge their supervisory responsibilities.

(3) The supervision of crew members and personnel involved in the operation shall be exercised by individuals with adequate experience and the skills to ensure the attainment of the standards specified in the operations manual.

ORO.AOC.140 Facility requirements

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

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

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

▼B

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

ORO.AOC.150 Documentation requirements

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

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

▼M1

SUBPART DEC

DECLARATION

ORO.DEC.100 Declaration

▼M4

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

▼M1

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

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

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

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

(e) notify the competent authority when it ceases operation.

▼M4

SUBPART SPO

COMMERCIAL SPECIALISED OPERATIONS

ORO.SPO.100 Common requirements for commercial specialised operators

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

(b) Aircraft shall have a certificate of airworthiness (CofA) in accordance with Regulation (EU) No 748/2012 or shall be leased-in in accordance with (c).

▼M15

(c) A commercial specialised operator shall obtain prior approval of the competent authority and comply with the following conditions:

(1) for wet leasing-in an aircraft of a third-country operator:

(i) that the safety standards of a third-country operator with regard to continuing airworthiness and air operations are equivalent to the applicable requirements established by Regulation (EU) No 1321/2014 ([1]) and this Regulation;

([1]) Commission Regulation (EU) No 1321/2014 of 26 November 2014 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks (OJ L 362, 17.12.2014, p. 1).

▼M15

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

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

(2) for dry leasing-in an aircraft registered in a third country:

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

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

(iii) that the safety standards of the third-country aircraft with regard to continuing airworthiness are equivalent to the applicable requirements established by Regulation (EU) No 1321/2014;

(iv) that the aircraft is equipped in accordance with Annex VIII (Part SPO).

▼M4

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

(a) A commercial specialised operator shall apply for and obtain an authorisation issued by the competent authority of the operator prior to commencing a high risk commercial specialised operation:

(1) that is carried out over an area where the safety of third parties on the ground is likely to be endangered in the event of an emergency, or

(2) that, as determined by the competent authority of the place where the operation is conducted, due to its specific nature and the local environment in which it is conducted, poses a high risk, in particular to third parties on the ground.

(b) The operator shall provide the following information to the competent authority:

(1) the official name and business name, address, and mailing address of the applicant;

(2) a description of the management system, including organisational structure;

(3) a description of the proposed operation, including the type(s), and number of aircraft to be operated;

(4) the risk assessment documentation and related standard operating procedures, required by SPO.OP.230;

(5) a statement that all the documentation sent to the competent authority has been verified by the operator and found in compliance with the applicable requirements.

(c) The application for an authorisation or its amendment shall be made in a form and manner established by the competent authority, taking into account the applicable requirements of Regulation (EC) No 216/2008 and its Implementing Rules.

ORO.SPO.115 Changes

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

▼M4

(b) The application for approval of a change shall be submitted before any such change takes place, in order to enable the competent authority to determine continued compliance with Regulation (EC) No 216/2008 and its Implementing Rules and to amend, if necessary, the authorisation. The operator shall provide the competent authority with any relevant documentation.

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

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

ORO.SPO.120 Continued validity

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

(b) The operator's authorisation shall remain valid subject to:

(1) the operator remaining in compliance with the relevant requirements of Regulation (EC) No 216/2008 and its Implementing Rules, taking into account the provisions related to the handling of findings as specified under ORO.GEN.150;

(2) the competent authority being granted access to the operator as defined in ORO.GEN.140 to determine continued compliance with the relevant requirements of Regulation (EC) No 216/2008 and its Implementing Rules; and

(3) the authorisation not being surrendered or revoked.

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

▼B

SUBPART MLR

MANUALS, LOGS AND RECORDS

ORO.MLR.100 Operations manual — general

(a) The operator shall establish an operations manual (OM) as specified under 8.b of Annex IV to Regulation (EC) No 216/2008.

▼M30

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

▼B

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

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

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

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

▼B

(g) For AOC holders:

(1) for amendments required to be notified in accordance with ORO.GEN.115(b) and ORO.GEN.130(c), the operator shall supply the competent authority with intended amendments in advance of the effective date; and

(2) for amendments to procedures associated with prior approval items in accordance with ORO.GEN.130, approval shall be obtained before the amendment becomes effective.

▼M4

(g1) For SPO authorisation holders, any amendment associated with the authorised standard operating procedures, prior approval shall be obtained before the amendment becomes effective.

▼B

(h) Notwithstanding (g) ►M4 and (g1) ◄, when immediate amendments or revisions are required in the interest of safety, they may be published and applied immediately, provided that any approval required has been applied for.

(i) The operator shall incorporate all amendments and revisions required by the competent authority.

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

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

▼M30

ORO.MLR.101 Operations manual – structure for CAT and IAM operations

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

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

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

(c) Part C: CAT operations with aeroplanes and helicopters, comprising route/role/area and aerodrome / operating site instructions and information or, IAM operations with VCA, comprising route/role/area and vertiport / diversion location / operating site instructions and information;

(d) Part D: Training, comprising all training instructions for personnel required to ensure safe operations.

▼B

ORO.MLR.105 Minimum equipment list

▼M5

(a) A minimum equipment list (MEL) shall be established as specified under point 8.a.3 of Annex IV to Regulation (EC) No 216/2008, based on the relevant master minimum equipment list (MMEL) as defined in the data established in accordance with Regulation (EU) No 748/2012. If an MMEL has not been established as part of the operational suitability data, the MEL may be based on the relevant MMEL accepted by the State of Operator or Registry as applicable.

▼B

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

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

(d) In addition to the list of items, the MEL shall contain:

(1) a preamble, including guidance and definitions for flight crews and maintenance personnel using the MEL;

(2) the revision status of the MMEL upon which the MEL is based and the revision status of the MEL;

(3) the scope, extent and purpose of the MEL.

(e) The operator shall:

(1) establish rectification intervals for each inoperative instrument, item of equipment or function listed in the MEL. The rectification interval in the MEL shall not be less restrictive than the corresponding rectification interval in the MMEL;

(2) establish an effective rectification programme;

(3) only operate the aircraft after expiry of the rectification interval specified in the MEL when:

(i) the defect has been rectified; or

(ii) the rectification interval has been extended in accordance with (f).

(f) Subject to approval of the competent authority, the operator may use a procedure for the one time extension of category B, C and D rectification intervals, provided that:

(1) the extension of the rectification interval is within the scope of the MMEL for the aircraft type;

(2) the extension of the rectification interval is, as a maximum, of the same duration as the rectification interval specified in the MEL;

(3) the rectification interval extension is not used as a normal means of conducting MEL item rectification and is used only when events beyond the control of the operator have precluded rectification;

(4) a description of specific duties and responsibilities for controlling extensions is established by the operator;

(5) the competent authority is notified of any extension of the applicable rectification interval; and

(6) a plan to accomplish the rectification at the earliest opportunity is established.

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

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

(i) Unless otherwise specified in the MEL, the operator shall complete:

▼B

(1) the operational procedures referenced in the MEL when planning for and/or operating with the listed item inoperative; and

(2) the maintenance procedures referenced in the MEL prior to operating with the listed item inoperative.

(j) Subject to a specific case-by-case approval by the competent authority, the operator may operate an aircraft with inoperative instruments, items of equipment or functions outside the constraints of the MEL but within the constraints of the MMEL, provided that:

▼M2

(1) the concerned instruments, items of equipment or functions are within the scope of the MMEL as defined in point (a);

(2) the approval is not used as a normal means of conducting operations outside the constraints of the approved MEL and is used only when events beyond the control of the operator have precluded the MEL compliance;

(3) a description of specific duties and responsibilities for controlling the operation of the aircraft under such approval is established by the operator; and

(4) a plan to rectify the inoperative instruments, items of equipment or functions or to return operating the aircraft under the MEL constraints at the earliest opportunity is established.

ORO.MLR.110 Journey log

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

ORO.MLR.115 Record-keeping

▼M30

(a) The following records shall be stored for at least 5 years:

(1) for CAT operators of airplanes and helicopters and IAM operators of VCA, records of the activities referred to in point ORO.GEN.200;

(2) for declared operators, a copy of the operator's declaration, details of approvals held and operations manual;

(3) for SPO authorisation holders, in addition to point (a)(2), records related to the risk assessment conducted in accordance with point SPO.OP.230 and related standard operating procedures.

▼B

(b) The following information used for the preparation and execution of a flight, and associated reports, shall be stored for three months:

(1) the operational flight plan, if applicable;

(2) route-specific notice(s) to airmen (NOTAM) and aeronautical information services (AIS) briefing documentation, if edited by the operator;

(3) mass and balance documentation;

(4) notification of special loads, including written information to the commander/pilot-in-command about dangerous goods ►M4 , if applicable ◄;

(5) the journey log, or equivalent; and

(6) flight report(s) for recording details of any occurrence, or any event that the commander/pilot-in-command deems necessary to report or record;

▼B

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

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

(d) The operator shall:

(1) maintain records of all training, checking and qualifications of each crew member, as prescribed in Part-ORO; and

(2) make such records available, on request, to the crew member concerned.

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

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

SUBPART SEC

SECURITY

▼M16

ORO.SEC.100 Flight crew compartment security — aeroplanes

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

(b) All passenger-carrying aeroplanes that are engaged in the commercial transportation of passengers shall be equipped with an approved secure flight crew compartment door that is capable of being locked and unlocked from either pilot's station and designed to meet the applicable airworthiness requirements, where such airplanes fall within any of the following categories:

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

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

▼M16

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

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

(1) that door shall be closed prior to engine start for take-off and shall be locked when required so by security procedures or by the pilot-in-command until engine shutdown after landing, except when deemed to be necessary for authorised persons to access or egress in compliance with national civil aviation security programmes;

(2) means shall be provided for monitoring from either pilot's station the entire door area outside the flight crew compartment to identify persons that request to enter and to detect suspicious behaviour or potential threat.

▼M4

ORO.SEC.105 Flight crew compartment security — helicopters

▼B

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

SUBPART FC

FLIGHT CREW

▼M30

ORO.FC.005 Scope

This Subpart establishes the requirements for flight crew training, experience and qualifications to be met by an air operator, and comprises:

(a) SECTION 1, specifying common requirements.

(b) SECTION 2, specifying additional requirements applicable to CAT operations with aeroplanes and helicopters, with the exception of CAT operations with passengers conducted under VFR by day, starting and ending at the same aerodrome or operating site and within a local area specified by the competent authority, with:

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

(2) other-than-complex motor-powered helicopters, single-engined, with an MOPSC of 5 or less.

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

(d) SECTION 4, specifying additional requirements for IAM operations with manned VTOL-capable aircraft (VCA).

▼M1

SECTION 1

Common requirements

▼B

ORO.FC.100 Composition of flight crew

(a) The composition of the flight crew and the number of flight crew members at designated crew stations shall be not less than the minimum specified in the aircraft flight manual or operating limitations prescribed for the aircraft.

▼B

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

(c) All flight crew members shall hold a licence and ratings issued or accepted in accordance with Commission Regulation (EU) No 1178/2011 ([1]) and appropriate to the duties assigned to them.

▼M21

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

▼B

(e) When engaging the services of flight crew members who are working on a freelance or part-time basis, the operator shall verify that all applicable requirements of this Subpart and the relevant elements of Annex I (Part-FCL) to Regulation (EU) No 1178/2011, including the requirements on recent experience, are complied with, taking into account all services rendered by the flight crew member to other operator(s) to determine in particular:

(1) the total number of aircraft types or variants operated; and

(2) the applicable flight and duty time limitations and rest requirements.

▼M21

(f) Specific requirements for helicopter operations

If the helicopter is operated with a crew of two pilots, each pilot shall either:

(1) hold a certificate of satisfactory completion of a multi-crew cooperation (MCC) course in helicopters in accordance with Regulation (EU) No 1178/2011; or

(2) have at least 500 hours of flight time as a pilot in multi-pilot operations.

▼M30

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

(a) In accordance with point 8.6 of Annex V to Regulation (EU) 2018/1139, one pilot amongst the flight crew, qualified as pilot-in-command in accordance with Annex I (Part-FCL) to Regulation (EU) No 1178/2011, shall be designated by the operator as pilot-in-command or, for CAT operations with aeroplanes and helicopters, as commander.

(b) The operator shall only designate a flight crew member to act as pilot-in-command or commander if all the following apply:

(1) the flight crew member has the minimum level of experience specified in the operations manual;

(2) the flight crew member has adequate knowledge of the route or area to be flown and of the aerodromes, including alternate aerodromes, vertiports, facilities and procedures to be used;

(3) for multi-crew operations, the flight crew member has completed an operator's command course if promoted from co-pilot to pilot-in-command/commander.

([1]) OJ L 311, 25.11.2011, p. 1.

▼M30

(c) For both commercial operations with aeroplanes and helicopters and IAM operations with VCA, the pilot-in-command or commander or the pilot to whom the conduct of the flight may be delegated shall have received initial familiarisation training in the route or area to be flown and in the aerodromes, vertiports, diversion locations, facilities and procedures to be used, and shall maintain this knowledge as follows:

(1) aerodrome or vertiport knowledge shall be maintained by operating at least once at an aerodrome or a vertiport within a 12-calendar-month period;

(2) route or area knowledge or diversion location knowledge shall be maintained by operating at least once on a route or an area or at a diversion location within a 36-calendar-month period; in addition, refresher training is required regarding route or area knowledge if not operating on a route or an area for 12 months within the 36-calendar-month period.

(d) Notwithstanding point (c), for operations conducted under VFR by day with performance class B and C aeroplanes and helicopters, familiarisation training in routes and aerodromes may be replaced by area familiarisation training.

▼B

ORO.FC.110 Flight engineer

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

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

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

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

ORO.FC.120 Operator conversion training

▼M30

(a) The flight crew member shall complete the operator conversion training course before commencing unsupervised line flying:

(1) when changing to an aircraft for which a new type or class rating is required;

(2) each time the flight crew member joins an operator.

▼B

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

▼M21

ORO.FC.125 Differences training, familiarisation, equipment and procedure training

(a) Flight crew members shall complete differences training or familiarisation when required by Annex I (Part-FCL) to Regulation (EU) No 1178/2011.

(b) Flight crew members shall complete equipment and procedure training when changing equipment or changing procedures requiring additional knowledge on types or variants currently operated.

(c) The operations manual shall specify when such differences training or familiarisation or equipment and procedure training is required.

▼B

ORO.FC.130 Recurrent training and checking

▼M21

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

▼B

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

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

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

▼M21

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

(a) Flight crew members that operate more than one type or variant of aircraft shall comply with the requirements prescribed in this Subpart for each type or variant, unless credits related to the training, checking, and recent experience requirements are defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012 for the relevant types or variants.

(b) The operator may define groups of single-engined helicopter types. An operator proficiency check on one type shall be valid for all the other types within the group if both of the following conditions are met:

(1) the group either includes only single-engined turbine helicopters operated under VFR or it includes only single-engined piston helicopters operated under VFR;

(2) for CAT operations, at least two operator proficiency checks per type shall be conducted within a 3-year cycle.

(c) For specialised operations, elements of the aircraft/FSTD training and operator proficiency check that cover the relevant aspects associated with the specialised task and are not related to the type or group of types may be credited towards the other groups or types, based on a risk assessment performed by the operator.

▼M30

(d) For operations with more than one helicopter type or variant or VCA type or variant used for conducting sufficiently similar operations, if line checks rotate between types or variants, each line check shall revalidate the line check for the other helicopter types or variants or VCA types or variants.

▼M21

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

▼M18

ORO.FC.145 Provision of training, checking and assessment

(a) All training, checking and assessment required in this Subpart shall be conducted in accordance with the training programmes and syllabi established by the operator in the operations manual;

▼M18

(b) When establishing the training programmes and syllabi, the operator shall include the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012.

▼M30

(c) For both CAT operations with airplanes and helicopters and IAM operations with VCA, the training and checking programmes, including the syllabi and means to deliver the programme such as individual flight simulation training devices (FSTDs) and other training solutions, shall be approved by the competent authority.

▼M21

(d) The FSTD used to meet the requirements of this Subpart shall be qualified in accordance with Regulation (EU) No 1178/2011 and it shall replicate the aircraft used by the operator, as far as practicable. Differences between the FSTD and the aircraft shall be described and addressed through a briefing or training, as appropriate.

▼M18

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

▼M21

(f) The operator shall monitor the validity of each recurrent training and checking.

(g) The validity periods required in this Subpart shall be counted from the end of the month in which the recency, training or check was completed.

▼M18

ORO.FC.146 Personnel providing training, checking and assessment

(a) All training, checking and assessment required in this Subpart shall be conducted by appropriately qualified personnel.

▼M21

(b) In the case of flight and flight simulation training, checking and assessment, the personnel that provide the training and conduct the checking or assessment shall be qualified in accordance with Annex I (Part-FCL) to Regulation (EU) No 1178/2011. Additionally, the personnel providing training and conducting checking towards specialised operations shall be suitably qualified for the relevant operation.

▼M18

(c) For an EBT programme, the personnel that performs assessment and provides training shall:

(1) hold an Annex I (Part-FCL) instructor or examiner certificate;

(2) complete the operator's EBT instructor standardisation programme. This shall include an initial standardisation programme and a recurrent standardisation programme.

Completion of the operator's EBT initial standardisation will qualify the instructor to perform EBT practical assessment.

▼M21

(d) Notwithstanding point (b), the line evaluation of competence may be conducted by a suitably qualified commander nominated by the operator that is standardised in EBT concepts and the assessment of competencies (line evaluator).

▼M30

(e) Notwithstanding point (b), the aircraft/FSTD training and the operator proficiency check may be conducted by a suitably qualified commander, or pilot-in-command for IAM operations, that holds an FI/TRI/SFI certificate and is nominated by the operator for any of the following operations:

(1) CAT operations with helicopters that meet the criteria defined in point ORO.FC.005(b)(2);

▼M30

(2) CAT operations with other than complex motor-powered helicopters by day and over routes navigated by reference to visual landmarks;

(3) CAT operations with performance class B aeroplanes that do not meet the criteria defined in point ORO.FC.005(b)(1);

(4) IAM operations with VCA by day and over routes navigated by reference to visual landmarks.

▼M21

(f) Notwithstanding point (b), the aircraft/FSTD training and the demonstration of competence/operator proficiency check may be conducted by a suitably qualified pilot-in-command/commander nominated by the operator for any of the following operations:

(1) specialised operations;

▼M27

(2) CAT operations of aeroplanes meeting the criteria defined in point ORO.FC.005(b)(1).

▼M21

(g) Notwithstanding point (b), the line check may be conducted by a suitably qualified commander nominated by the operator.

(h) The operator shall inform the competent authority about the persons nominated under points (e) to (g).

▼M1

SECTION 2

Additional requirements for commercial air transport operations

▼B

ORO.FC.200 Composition of flight crew

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

(b) The commander may delegate the conduct of the flight to another pilot suitably qualified in accordance with Annex I (Part-FCL) to Regulation (EU) No 1178/2011 provided that the requirements of ORO.FC.105(b)(1), (b)(2) and (c) are complied with.

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

(1) The minimum flight crew shall be two pilots for all turbo-propeller aeroplanes with a maximum operational passenger seating configuration (MOPSC) of more than nine and all turbojet aeroplanes.

(2) Aeroplanes other than those covered by (c)(1) shall be operated with a minimum crew of two pilots, unless the requirements of ORO.FC.202 are complied with, in which case they may be operated by a single pilot.

▼M21

(d) Specific requirements for helicopter operations

For all operations of helicopters with an MOPSC of more than 19 and for operations under IFR of helicopters with an MOPSC of more than 9, the minimum flight crew shall be two pilots.

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

(a) The commander may delegate the conduct of the flight to:

(1) another qualified commander; or

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(2) for operations only above flight level (FL) 200, a pilot who complies with the following minimum qualifications:

(i) ATPL;

(ii) conversion training and checking, including type rating training, in accordance with ORO.FC.220;

(iii) all recurrent training and checking in accordance with ORO.FC.230 and ORO.FC.240;

(iv) route/area and aerodrome competence in accordance with ORO.FC.105.

(b) The co-pilot may be relieved by:

(1) another suitably qualified pilot;

(2) for operations only above FL 200, a cruise relief co-pilot that complies with the following minimum qualifications:

(i) valid commercial pilot licence (CPL) with an instrument rating;

(ii) conversion training and checking, including type rating training, in accordance with ORO.FC.220 except the requirement for take-off and landing training;

▼M31

(iii) recurrent training and checking in accordance with point ORO.FC.230, subject to the following conditions:

(A) the checking shall not include take-off manoeuvres;

(B) the checking shall include landing manoeuvres at least in the role of the pilot monitoring;

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

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

▼M21

In order to be able to fly under IFR or at night with a minimum flight crew of one pilot, the following shall be complied with:

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(a) The operator shall include in the operations manual a pilot's conversion and recurrent training programme that includes the additional requirements for a single-pilot operation. The pilot shall have undertaken training on the operator's procedures, in particular regarding:

(1) engine management and emergency handling;

(2) use of normal, abnormal and emergency checklist;

(3) air traffic control (ATC) communication;

(4) departure and approach procedures;

(5) autopilot management, if applicable;

(6) use of simplified in-flight documentation;

(7) single-pilot crew resource management.

▼M21

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

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(1) a minimum of 50 hours flight time under IFR on the relevant type or class of aeroplane, of which 10 hours are as commander; and

(2) completed during the preceding 90 days on the relevant type or class of aeroplane:

(i) five IFR flights, including three instrument approaches, in a single-pilot role; or

(ii) an IFR instrument approach check.

(d) For aeroplane operations at night the pilot shall have:

(1) a minimum of 15 hours flight time at night which may be included in the 50 hours flight time under IFR in (c)(1); and

(2) completed during the preceding 90 days on the relevant type or class of aeroplane:

(i) three take-offs and landings at night in the single pilot role; or

(ii) a night take-off and landing check.

(e) For helicopter operations under IFR the pilot shall have:

(1) 25 hours total IFR flight experience in the relevant operating environment; and

(2) 25 hours flight experience as a single pilot on the specific type of helicopter, approved for single-pilot IFR, of which 10 hours may be flown under supervision, including five sectors of IFR line flying under supervision using the single-pilot procedures; and

(3) completed during the preceding 90 days:

(i) five IFR flights as a single pilot, including three instrument approaches, carried out on a helicopter approved for this purpose; or

(ii) an IFR instrument approach check as a single pilot on the relevant type of helicopter, flight training device (FTD) or full flight simulator (FFS).

ORO.FC.205 Command course

(a) For aeroplane and helicopter operations, the command course shall include at least the following elements:

(1) training in an FSTD, which includes line oriented flight training (LOFT) and/or flight training;

(2) the operator proficiency check, operating as commander;

(3) command responsibilities training;

(4) line training as commander under supervision, for a minimum of:

(i) 10 flight sectors, in the case of aeroplanes; and

▼B

(ii) 10 hours, including at least 10 flight sectors, in the case of helicopters;

(5) completion of a line check as commander and demonstration of adequate knowledge of the route or area to be flown and of the aerodromes, including alternate aerodromes, facilities and procedures to be used; and

(6) crew resource management training.

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

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

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

(c) If the flight crew member has not previously received theoretical training in human factors to the ATPL level, he/she shall complete, before or combined with the initial CRM training, a theoretical course provided by the operator and based on the human performance and limitations syllabus for the ATPL as established in Annex I (Part-FCL) to Regulation (EU) No 1178/2011.

ORO.FC.220 Operator conversion training and checking

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

▼M21

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

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

(d) The flight crew member shall complete:

(1) the operator proficiency check and the emergency and safety equipment training and checking before commencing line flying under supervision (LIFUS); and

(2) the line check upon completion of line flying under supervision. For performance class B aeroplanes, LIFUS may be performed on any aeroplane within the applicable class.

▼M2

(e) In the case of aeroplanes, pilots that have been issued a type rating based on a zero flight-time training (‘ZFTT’) course shall:

(1) commence line flying under supervision not later than 21 days after the completion of the skill test or after appropriate training provided by the operator. The content of that training shall be described in the operations manual;

(2) complete six take-offs and landings in an FSTD not later than 21 days after the completion of the skill test under the supervision of a type rating instructor for aeroplanes (‘TRI(A)’) occupying the other pilot seat. The number of take-offs and landings may be reduced when credits are defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012. If those take-offs and landings have not been performed within 21 days, the operator shall provide refresher training the content of which shall be described in the operations manual;

(3) conduct the first four take-offs and landings of the LIFUS in the aeroplane under the supervision of a TRI(A) occupying the other pilot seat. The number of take-offs and landings may be reduced when credits are defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012.

▼M21

(f) If operational circumstances, such as applying for a new AOC or adding a new aircraft type or class to the fleet, do not allow the operator to comply with the requirements in (d), the operator may develop a specific conversion course, to be used temporarily for a limited number of pilots.

ORO.FC.230 Recurrent training and checking

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

(b) *Operator proficiency check*

(1) Each flight crew member shall complete operator proficiency checks as part of the normal crew complement.

(2) When the flight crew member will be required to operate under IFR, the operator proficiency check shall be conducted without external visual reference, as appropriate.

(3) The validity period of the operator proficiency check shall be 6 calendar months. For operations under VFR by day of performance class B aeroplanes that are conducted during seasons not longer than 8 consecutive months, one operator proficiency check shall be sufficient. The proficiency check shall be undertaken before commencing CAT operations.

(c) *Line check*

Each flight crew member shall complete a line check on the aircraft. The validity period of the line check shall be 12 calendar months.

▼M21

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

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

(e) *CRM training*

(1) Elements of CRM shall be integrated into all appropriate phases of the recurrent training.

(2) Each flight crew member shall undergo specific modular CRM training. All major topics of CRM training shall be covered by distributing modular training sessions as evenly as possible over each 3-year period.

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

▼M18

ORO.FC.231 Evidence-based training

(a) EBT PROGRAMME

(1) The operator may substitute the requirements of ORO.FC.230 by establishing, implementing and maintaining a suitable EBT programme approved by the competent authority.

The operator shall demonstrate its capability to support the implementation of the EBT programme (including an implementation plan) and perform a safety risk assessment demonstrating how an equivalent level of safety is achieved.

(2) The EBT programme shall:

(i) correspond to the size of the operator, and the nature and complexity of its activities, taking into account the hazards and associated risks inherent in those activities;

(ii) ensure pilot competence by assessing and developing pilot competencies required for a safe, effective and efficient operation of aircraft;

(iii) ensure that each pilot is exposed to the assessment and training topics derived in accordance with ORO.FC.232;

(iv) include at least six EBT modules distributed across a 3-year programme; each EBT module shall consist of an evaluation phase and a training phase. The validity period of a EBT module shall be 12 months;

(A) The evaluation phase comprises a line-orientated flight scenario (or scenarios) to assess all competencies and identify individual training needs.

▼**M18**

(B) The training phase comprises:

(a) the manoeuvres training phase, comprising training to proficiency in certain defined manoeuvres;

(b) the scenario-based training phase, comprising a line-orientated flight scenario (or scenarios) to develop competencies and address individual training needs.

The training phase shall be conducted in a timely manner after the evaluation phase.

(3) The operator shall ensure that each pilot enrolled in the EBT programme completes:

(i) a minimum of two EBT modules within the validity period of the type rating, separated by a period of not less than 3 months. The EBT module is completed when:

(A) the content of the EBT programme is completed for that EBT module (exposure of the pilot to the assessment and training topics); and

(B) an acceptable level of performance in all observed competencies has been demonstrated;

(ii) line evaluation(s) of competence; and

(iii) ground training.

(4) The operator shall establish an EBT instructor standardisation and concordance assurance programme to ensure that the instructors involved in EBT are properly qualified to perform their tasks.

(i) All instructors must be subject to this programme;

(ii) The operator shall use appropriate methods and metrics to assess concordance;

(iii) The operator shall demonstrate that the instructors have sufficient concordance.

(5) The EBT programme may include contingency procedures for unforeseen circumstances that could affect the delivery of the EBT modules. The operator shall demonstrate the need for those procedures. The procedures shall ensure that a pilot does not continue line operations if the performance observed was below the minimum acceptable level. They may include:

(i) a different separation period between EBT modules; and

(ii) different order of the phases of the EBT module.

(b) COMPETENCY FRAMEWORK

The operator shall use a competency framework for all aspects of assessment and training within an EBT programme. The competency framework shall:

(1) be comprehensive, accurate, and usable;

▼**M18**

(2) include observable behaviours required for safe, effective and efficient operations;

(3) include a defined set of competencies, their descriptions and their associated observable behaviours.

(c) TRAINING SYSTEM PERFORMANCE

(1) The EBT system performance shall be measured and evaluated through a feedback process in order to:

(i) validate and refine the operator's EBT programme;

(ii) ascertain that the operator's EBT programme develops pilot competencies.

(2) The feedback process shall be included in the operator's management system.

(3) The operator shall develop procedures governing the protection of EBT data.

(d) GRADING SYSTEM

(1) The operator shall use a grading system to assess the pilot competencies. The grading system shall ensure:

(i) a sufficient level of detail to enable accurate and useful measurements of individual performance;

(ii) a performance criterion and a scale for each competency, with a point on the scale which determines the minimum acceptable level to be achieved for the conduct of line operations. The operator shall develop procedures to address low performance of the pilot;

(iii) data integrity;

(iv) data security.

(2) The operator shall verify at regular intervals the accuracy of the grading system against a criterion-referenced system.

(e) SUITABLE TRAINING DEVICES AND VOLUME OF HOURS TO COMPLETE THE OPERATOR'S EBT PROGRAMME

(1) Each EBT module shall be conducted in an FSTD with a qualification level adequate to ensure the correct delivery of the assessment and training topics.

(2) The operator shall provide a sufficient volume of hours in the suitable training device for the pilot to complete the operator's EBT programme. The criteria to determine the volume of the EBT programme are as follows:

(i) The volume corresponds to the size and complexity of the EBT programme;

(ii) The volume is sufficient to complete the EBT programme;

(iii) The volume ensures an effective EBT programme taking into account the recommendations provided by ICAO, the Agency, and the competent authority;

(iv) The volume corresponds to the technology of the training devices used.

(f) EQUIVALENCY OF MALFUNCTIONS

(1) Each pilot shall receive assessment and training in the management of aircraft system malfunctions.

▼**M18**

(2) Aircraft system malfunctions that place a significant demand on a proficient crew shall be organised by reference to the following characteristics:

(i) immediacy;

(ii) complexity;

(iii) degradation of aircraft control;

(iv) loss of instrumentation;

(v) management of consequences.

(3) Each pilot shall be exposed to at least one malfunction for each characteristic at the frequency determined by the table of assessment and training topics.

(4) Demonstrated proficiency in the management of one malfunction is considered equivalent to demonstrated proficiency in the management of other malfunctions with the same characteristics.

(g) EQUIVALENCY OF APPROACHES RELEVANT TO OPERATIONS

(1) The operator shall ensure that each pilot receives regular training in the conduct of approach types and approach methods relevant to operations.

(2) This training shall include approaches that place an additional demand on a proficient crew.

(3) This training shall include the approaches that require specific approval in accordance with Annex V (Part- SPA) to this Regulation.

(h) LINE EVALUATION OF COMPETENCE

(1) Each pilot shall periodically undertake a line evaluation of competence in an aircraft to demonstrate the safe, effective and efficient conduct of normal line operations described in the operations manual.

(2) The validity period of a line evaluation of competence shall be 12 months.

(3) The operator approved for EBT may, with the approval of the competent authority, extend the validity of the line evaluation of competence to:

(i) either 2 years, subject to a risk assessment;

(ii) or 3 years, subject to a feedback process for the monitoring of line operations which identifies threats to the operations, minimises the risks of such threats, and implements measures to manage human error in the operations.

(4) For successful completion of the line evaluation of competence, the pilot shall demonstrate an acceptable level of performance in all observed competencies.

(i) GROUND TRAINING

(1) Every 12 calendar months, each pilot shall undergo:

(i) technical ground training;

(ii) assessment and training on the location and use of all emergency and safety equipment carried on the aircraft.

▼M18

(2) The operator may, with the approval of the competent authority and subject to a risk assessment, extend the period of assessment and training on the location and use of all emergency and safety equipment carried on the aircraft to 24 months.

ORO.FC.232 EBT programme assessment and training topics

(a) The operator shall ensure that each pilot is exposed to the assessment and training topics.

(b) The assessment and training topics shall be:

(1) derived from safety and operational data that are used to identify the areas for improvement and prioritisation of pilot training to guide in the construction of suitable EBT programmes;

(2) distributed across a 3-year period at a defined frequency;

(3) relevant to the type or variant of aircraft on which the pilot operates.

▼M21

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

(a) Commanders of aeroplanes whose duties require them to operate in either pilot's seat and carry out the duties of a co-pilot, or commanders required to conduct training or checking duties shall complete additional training and checking to ensure that they are proficient in conducting the relevant normal, abnormal and emergency procedures from either seat. Such training and checking shall be specified in the operations manual. The checking may be conducted together with the operator proficiency check prescribed in ORO.FC.230(b) or in the EBT programme prescribed in ORO.FC.231.

(b) The additional training and checking shall include at least the following:

(1) an engine failure during take-off;

(2) a one-engine-inoperative approach and go-around; and

(3) a one-engine-inoperative landing.

(c) The validity period shall be 12 calendar months. For operators with an approved EBT programme, the validity is determined by the assessment and training topics in accordance with ORO.FC.232.

(d) When operating in the co-pilot's seat, the checks required by ORO.FC.230 or the assessment and training required by ORO.FC.231 for operating in the commander's seat shall, in addition, be valid and current.

(e) The pilot relieving the commander shall have demonstrated, concurrent with the operator proficiency checks prescribed in ORO.FC.230(b) or the assessment and training required by ORO.FC.231, practice of drills and procedures that would not normally be his or her responsibility. Where the differences between left- and right-hand seats are not significant, practice may be conducted in either seat.

(f) The pilot, other than the commander, occupying the commander's seat shall demonstrate practice of drills and procedures, concurrent with the operator proficiency checks prescribed in ORO.FC.230(b) or the assessment and training required by ORO.FC.231, which are the commander's responsibility acting as pilot monitoring. Where the differences between left- and right-hand seats are not significant, practice may be conducted in either seat.

▼M21

ORO.FC.236 Pilot qualification to operate in either pilot's seat — helicopters

(a) Helicopter pilots whose duties require them to operate in either pilot's seat shall complete additional training and checking to ensure that they are proficient in conducting the relevant normal, abnormal and emergency procedures from either seat. The validity period of this qualification shall be 12 calendar months.

(b) Current FIs or TRIs on the relevant type are considered to fulfil the requirement of point (a) if they have had a FI or TRI activity in the last 6 months on that type and on the helicopter.

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

(a) The procedures or operational restrictions for operation on more than one type or variant established in the operations manual and approved by the competent authority shall cover:

(1) the flight crew members' minimum experience level;

(2) the minimum experience level on one type or variant before beginning training for and operation of another type or variant;

(3) the process whereby flight crew qualified on one type or variant will be trained and qualified on another type or variant; and

(4) all applicable recent experience requirements for each type or variant.

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(b) INTENTIONALLY LEFT BLANK

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

▼B

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

▼M21

(a) The aeroplane operator having appropriate experience may substitute one or more of the following training and checking requirements for flight crew by an alternative training and qualification programme (ATQP), approved by the competent authority:

(1) set out in point SPA.LVO.120 on flight crew training and qualifications;

(2) set out in point ORO.FC.220 on conversion training and checking;

(3) set out in point ORO.FC.125 on differences training, familiarisation, equipment and procedure training;

(4) set out in point ORO.FC.205 on command course;

(5) set out in point ORO.FC.230 on recurrent training and checking; and

(6) set out in point ORO.FC.240 on operation on more than one type or variant.

▼B

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

▼B

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

▼M21

(d) In addition to the checks required by points ORO.FC.230 and FCL.060 of Annex I (Part-FCL) to Regulation (EU) No 1178/2011, each flight crew member shall complete a line oriented evaluation (LOE) conducted in an FSTD. The validity period of an LOE shall be 12 calendar months. The LOE is completed when both of the following conditions are met:

(1) the syllabus of the LOE is completed; and

(2) the flight crew member has demonstrated an acceptable level of performance.

(e) After 2 years of operating with an approved ATQP, the operator may, with the approval of the competent authority, extend the validity periods of the checks referred to in point ORO.FC.230 as follows:

(1) Operator proficiency check to 12 calendar months.

(2) Line check to 24 calendar months.

(3) Emergency and safety equipment checking to 24 calendar months.

(f) Each flight crew member shall undergo specific modular CRM training. All major topics of CRM training shall be covered by distributing modular training sessions as evenly as possible over each 3-year period.

(g) The ATQP programme shall include 48 hours on an FSTD for each flight crew member, distributed evenly over a 3-year programme. The operator may reduce the number of FSTD hours, but no lower than 36 hours, provided that it demonstrates that the level of safety that is achieved is equivalent to that of the programme the ATQP may substitute in accordance with point (a).

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

▼M10

(a) The holder of a CPL(A) (aeroplane) shall only act as commander in commercial air transport on a single-pilot aeroplane if either of the following conditions is met:

(1) when carrying passengers under VFR outside a radius of 50 NM (90 km) from an aerodrome of departure, he/she has a minimum of 500 hours of flight time on aeroplanes or holds a valid instrument rating;

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

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

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

▼B

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

▼M21

(a) Holders of a CPL(H) (helicopter) shall only act as commanders in CAT operations on a single-pilot helicopter if:

(1) when operating under IFR, they have a minimum of 700 hours total flight time on helicopters, including 300 hours as pilot-in-command. The total flight time on helicopters shall include 100 hours under IFR. Up to 50 hours instrument time performed on an FFS(H) level B or FTD level 3 qualification or higher qualified for instrument training, may be credited towards the 100 hours. The 300 hours as pilot-in-command may be substituted by hours operating as co-pilot within an established multi-pilot crew system prescribed in the operations manual on the basis of 2 hours of flight time as co-pilot for 1 hour flight time as pilot-in command;

▼B

(2) when operating under visual meteorological conditions (VMC) at night, he/she has:

(i) a valid instrument rating; or

(ii) 300 hours of flight time on helicopters, including 100 hours as pilot-in-command and 10 hours as pilot flying at night.

▼M4

SECTION 3

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

▼M21

ORO.FC.320 Operator conversion training and checking

The operator conversion course shall include an operator proficiency check.

ORO.FC.325 Equipment and procedure training and checking

If a flight crew member undergoes equipment and procedure training that requires training on a suitable FSTD or the aircraft, with regard to standard operating procedures related to a specialised operation, the flight crew member shall undergo an operator proficiency check.

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

(a) Each flight crew member shall complete recurrent training and operator proficiency checks. In the case of specialised operations, the recurrent training and checking shall cover the relevant aspects associated with the specialised tasks described in the operations manual.

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

(c) The validity period of the operator proficiency check shall be 12 calendar months.

▼M30

SECTION 4

Additional requirements for IAM operations with manned VTOL-capable aircraft (VCA)

ORO.FC.400 Flight crew composition

The minimum flight crew composition for IAM operations with manned VTOL-capable aircraft (VCA) shall correspond to that specified in the operations manual, considering the minimum number specified in the flight manual or in other documents associated with the certificate of airworthiness (CofA) of the particular aircraft.

▼M30

ORO.FC.415 Initial operator's crew resource management (CRM) training

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

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

ORO.FC.420 Operator conversion training and checking

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

(b) Once an IAM operator conversion training course starts, the flight crew member shall not be assigned to flying duties on another type or class of aircraft until the training course is completed or terminated.

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

(d) The flight crew member shall complete:

(1) the IAM operator proficiency check and the emergency and safety equipment training and checking before commencing line flying under supervision (LIFUS); and

(2) the line check upon completion of LIFUS.

(e) If operational circumstances, such as applying for a new AOC or adding a new aircraft type or class to the fleet, do not allow the IAM operator to comply with the requirements in point (d), that operator may develop a specific conversion course to be used temporarily for a limited number of flight crew members.

ORO.FC.430 Recurrent training and checking

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

(b) IAM operator proficiency check

(1) Each flight crew member shall complete the IAM operator proficiency checks as part of the normal crew complement to demonstrate their competence in applying normal, abnormal and emergency procedures, covering the relevant aspects associated with the tasks described in the operations manual.

(2) Reserved.

(3) The validity period of the IAM operator proficiency check shall be 6 calendar months.

(c) Line check

Each flight crew member shall complete a line check on the VCA. The validity period of the line check shall be 12 calendar months.

▼M30

(d) Emergency and safety equipment training and checking

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

(e) CRM training

(1) CRM training elements shall be integrated into all appropriate phases of the recurrent training.

(2) Each flight crew member shall receive specific modular CRM training. All major topics of the CRM training shall be covered by distributing modular training sessions as evenly as possible over each 3-year period.

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

ORO.FC.440 Conducting operations on more than one type or variant

(a) The procedures or operational restrictions for conducting operations on more than one type or variant established in the operations manual and approved by the competent authority shall cover:

(1) the flight crew members' minimum experience required;

(2) the minimum experience required for a given type or variant before commencing training in and operation on another type or variant;

(3) the process whereby flight crew members qualified on one type or variant will be trained in and qualify for another type or variant; and

(4) all applicable recent experience requirements for each type or variant.

(b) Flight crew members should not operate more than three aircraft types or groups of types, including at least one VCA.

▼B

SUBPART CC

CABIN CREW

ORO.CC.005 Scope

▼M1

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

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

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

▼B

SECTION 1

▼M1

Common requirements

▼M15

ORO.CC.100 Number and composition of cabin crew

(a) For the operation of aircraft with an MOPSC of more than 19, at least one cabin crew member shall be assigned when carrying one or more passenger(s).

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

(1) the number of cabin crew members established during the aircraft certification process in accordance with the applicable certification specifications, for the aircraft cabin configuration used by the operator;

(2) if the number under point (1) has not been established, the number of cabin crew members established during the aircraft certification process for the maximum certified passenger seating configuration reduced by 1 for every whole multiple of 50 passenger seats of the aircraft cabin configuration used by the operator falling below the maximum certified seating capacity;

(3) one cabin crew member for every 50, or fraction of 50, passenger seats installed on the same deck of the aircraft to be operated.

(c) For operations with more than one cabin crew member, the operator shall nominate one cabin crew member accountable to the pilot-in-command or the commander.

(d) By way of derogation from point (a), non-commercial operations with aircraft with an MOPSC of more than 19 may be performed without an operating cabin crew member, subject to the prior approval by the competent authority. To obtain the approval, the operator shall ensure that all of the following conditions are fulfilled:

(1) there are maximum 19 passengers on board;

(2) the operator has developed procedures for that operation.

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ORO.CC.110 Conditions for assignment to duties

(a) Cabin crew members shall only be assigned to duties on an aircraft if they:

(1) are at least 18 years of age;

(2) have been assessed, in accordance with the applicable requirements of Annex IV (Part-MED) to Regulation (EU) No 1178/2011, as physically and mentally fit to perform their duties and discharge their responsibilities safely; and

(3) have successfully completed all applicable training and checking required by this Subpart and are competent to perform the assigned duties in accordance with the procedures specified in the operations manual.

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(b) Before assigning to duties cabin crew members who are working on a freelance or part-time basis, the operator shall verify that all applicable requirements of this Subpart are complied with, taking into account all services rendered by the cabin crew member to any other operator(s), to determine in particular:

(1) the total number of aircraft types and variants operated; and

(2) the applicable flight and duty time limitations and rest requirements.

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

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

(a) A detailed programme and syllabus shall be established by the operator for each training course in accordance with the applicable requirements of this Subpart, and of Annex V (Part-CC) to ►M4 Regulation (EU) No 1178/2011 ◄ where applicable, to cover the duties and responsibilities to be discharged by the cabin crew members.

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

(c) Each training course shall be:

(1) conducted in a structured and realistic manner; and

(2) performed by personnel appropriately qualified for the subject to be covered.

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

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

ORO.CC.120 Initial training course

(a) Each new entrant who does not already hold a valid cabin crew attestation issued in accordance with Annex V (Part-CC) to ►M4 Regulation (EU) No 1178/2011 ◄:

(1) shall be provided with an initial training course as specified in CC.TRA.220 of that Annex; and

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(2) shall successfully undergo the associated examination before undertaking other training required by this Subpart.

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

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

(a) Each cabin crew member shall have completed appropriate aircraft type specific training and operator conversion training, as well as the associated checks, before being:

(1) first assigned by the operator to operate as a cabin crew member; or

(2) assigned by that operator to operate on another aircraft type.

▼M2

(b) When establishing the aircraft type specific and the operator conversion training programmes and syllabi, the operator shall include, where available, the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012.

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(c) The aircraft type specific training programme shall:

(1) involve training and practice on a representative training device or on the actual aircraft; and

(2) cover at least the following aircraft type specific training elements:

(i) aircraft description as relevant to cabin crew duties;

(ii) all safety equipment and systems installed relevant to cabin crew duties;

(iii) operation and actual opening, by each cabin crew member, of each type or variant of normal and emergency doors and exits in the normal and emergency modes;

(iv) demonstration of the operation of the other exits including flight crew compartment windows;

(v) fire and smoke protection equipment where installed;

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(vi) evacuation slide training, where fitted;

(vii) operation of the seat, restraint system and oxygen system equipment relevant to pilot incapacitation.

(d) The operator conversion training programme for each aircraft type to be operated shall:

(1) involve training and practice on a representative training device or on the actual aircraft;

(2) include training in the operator's standard operating procedures for cabin crew members to be first assigned to duties by the operator;

(3) cover at least the following operator specific training elements as relevant to the aircraft type to be operated:

(i) description of the cabin configuration;

(ii) location, removal and use of all portable safety and emergency equipment carried on-board;

(iii) all normal and emergency procedures;

(iv) passenger handling and crowd control;

(v) fire and smoke training including the use of all related fire-fighting and protective equipment representative of that carried on-board;

(vi) evacuation procedures;

(vii) pilot incapacitation procedures;

(viii) applicable security requirements and procedures;

(ix) crew resource management.

ORO.CC.130 Differences training

(a) In addition to the training required in ORO.CC.125, the cabin crew member shall complete appropriate training and checking covering any differences before being assigned on:

(1) a variant of an aircraft type currently operated; or

(2) a currently operated aircraft type or variant with different:

(i) safety equipment;

(ii) safety and emergency equipment location; or

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(iii) normal and emergency procedures.

(b) The differences training programme shall:

(1) be determined as necessary on the basis of a comparison with the training programme completed by the cabin crew member, in accordance with ORO.CC.125(c) and (d), for the relevant aircraft type; and

(2) involve training and practice in a representative training device or the actual aircraft as relevant to the difference training element to be covered.

▼M2

(c) When establishing a differences training programme and syllabus for a variant of an aircraft type currently operated, the operator shall include, where available, the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012.

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ORO.CC.135 Familiarisation

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

ORO.CC.140 Recurrent training

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

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

(c) Aircraft type specific training elements:

(1) Recurrent training shall include annually touch-drills by each cabin crew member for simulating the operation of each type or variant of normal and emergency doors and exits for passenger evacuation.

(2) Recurrent training shall also include at intervals not exceeding three years:

(i) operation and actual opening by each cabin crew member, in a representative training device or in the actual aircraft, of each type or variant of normal and emergency exits in the normal and emergency modes;

(ii) actual operation by each cabin crew member, in a representative training device or in the actual aircraft, of the flight crew compartment security door, in both normal and emergency modes, and of the seat and restraint system, and a practical demonstration of the oxygen system equipment relevant to pilot incapacitation;

(iii) demonstration of the operation of all other exits including the flight crew compartment windows; and

(iv) demonstration of the use of the life-raft, or slide raft, where fitted.

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(d) Operator specific training elements:

(1) Recurrent training shall include annually:

(i) by each cabin crew member:

(A) location and handling of all safety and emergency equipment installed or carried on board; and

(B) the donning of life-jackets, portable oxygen and protective breathing equipment (PBE);

(ii) stowage of articles in the passenger compartment;

(iii) procedures related to aircraft surface contamination;

(iv) emergency procedures;

(v) evacuation procedures;

(vi) incident and accident review;

(vii) crew resource management;

(viii) aero-medical aspects and first aid including related equipment;

(ix) security procedures.

(2) Recurrent training shall also include at intervals not exceeding three years:

(i) use of pyrotechnics (actual or representative devices);

(ii) practical demonstration of the use of flight crew checklists;

(iii) realistic and practical training in the use of all fire-fighting equipment, including protective clothing, representative of that carried in the aircraft;

(iv) by each cabin crew member:

(A) extinguishing a fire characteristic of an aircraft interior fire;

(B) donning and use of PBE in an enclosed simulated smoke-filled environment.

(e) Validity periods:

(1) The annual recurrent training validity period shall be 12 calendar months counted from the end of the month when the check was taken.

(2) If the recurrent training and checking required in (a) are undertaken within the last three calendar months of the validity period, the new validity period shall be counted from the original expiry date.

(3) For the additional triennial training elements specified in (c)(2) and (d)(2), the validity period shall be 36 calendar months counted from the end of the month when the checks were taken.

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ORO.CC.145 Refresher training

(a) When a cabin crew member, during the preceding six months within the validity period of the last relevant recurrent training and checking:

(1) has not performed any flying duties, he/she shall, before being reassigned to such duties, complete refresher training and checking for each aircraft type to be operated; or

(2) has not performed flying duties on one particular aircraft type, he/she shall, before being reassigned to duties, complete on that aircraft type:

(i) refresher training and checking; or

(ii) two familiarisation flights in accordance with ORO.CC.135.

(b) The refresher training programme for each aircraft type shall at least cover:

(1) emergency procedures;

(2) evacuation procedures;

(3) operation and actual opening, by each cabin crew member, of each type or variant of normal and emergency exits and of the flight crew compartment security door in the normal and emergency modes;

(4) demonstration of the operation of all other exits including the flight crew compartment windows;

(5) location and handling of all relevant safety and emergency equipment installed or carried on-board.

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

SECTION 2

Additional requirements for commercial air transport operations

ORO.CC.200 Senior cabin crew member

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

(b) The operator shall nominate cabin crew members to the position of senior cabin crew member only if they:

(1) have at least one year of experience as operating cabin crew member; and

(2) have successfully completed a senior cabin crew training course and the associated check.

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(c) The senior cabin crew training course shall cover all duties and responsibilities of senior cabin crew members and shall include at least the following elements:

(1) pre-flight briefing;

(2) cooperation with the crew;

(3) review of operator requirements and legal requirements;

(4) accident and incident reporting;

(5) human factors and crew resource management (CRM); and

(6) flight and duty time limitations and rest requirements.

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

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

▼M15

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

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

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

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

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

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

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

(1) an equivalent level of safety is achieved with the reduced number of cabin crew members, in particular for evacuation of passengers;

(2) despite the reduced number of cabin crew members a senior cabin crew member is present in accordance with point ORO.CC.200;

(3) at least one cabin crew member is required for every 50, or fraction of 50, passengers present on the same deck of the aircraft;

(4) in the case of normal ground operations with aircraft requiring more than one cabin crew member, the number determined in accordance with point (3) shall be increased by one cabin crew member per each pair of floor level emergency exits.

▼M15

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

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

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

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

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

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ORO.CC.210 Additional conditions for assignment to duties

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

(a) hold a valid attestation issued in accordance with Annex V (Part-CC) to ►M4 Regulation (EU) No 1178/2011 ◄;

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

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

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

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

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

(b) After a cabin crew member has successfully completed a training course and the associated check, the operator shall:

(1) update the cabin crew member's training records in accordance with ORO.MLR.115; and

(2) provide him/her with a list showing updated validity periods as relevant to the aircraft type(s) and variant(s) on which the cabin crew member is qualified to operate.

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

(a) A cabin crew member shall not be assigned to operate on more than three aircraft types, except that, with the approval of the competent authority, the cabin crew member may be assigned to operate on four aircraft types if for at least two of the types:

(1) safety and emergency equipment and type-specific normal and emergency procedures are similar; and

(2) non-type-specific normal and emergency procedures are identical.

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(b) For the purpose of (a) and for cabin crew training and qualifications, the operator shall determine:

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(1) each aircraft as a type or a variant taking into account, where available, the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012 for the relevant aircraft type or variant; and

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(2) variants of an aircraft type to be different types if they are not similar in the following aspects:

(i) emergency exit operation;

(ii) location and type of portable safety and emergency equipment;

(iii) type-specific emergency procedures.

ORO.CC.255 Single cabin crew member operations

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

(b) Cabin crew members who have no previous operating experience as single cabin crew member shall only be assigned to such type of operation after they have:

(1) completed training as required in (c) in addition to other applicable training and checking required by this Subpart;

(2) successfully passed the checks verifying their proficiency in discharging their duties and responsibilities in accordance with the procedures specified in the operations manual; and

(3) undertaken familiarisation flying of at least 20 hours and 15 sectors on the relevant aircraft type under the supervision of an appropriately experienced cabin crew member.

(c) The following additional training elements shall be covered with particular emphasis to reflect single cabin crew operations:

(1) responsibility to the commander for the conduct of normal and emergency procedures;

(2) importance of coordination and communication with the flight crew, in particular when managing unruly or disruptive passengers;

(3) review of operator requirements and legal requirements;

(4) documentation;

(5) accident and incident reporting; and

(6) flight and duty time limitations and rest requirements.

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SUBPART TC

TECHNICAL CREW IN HEMS, HHO OR NVIS OPERATIONS

▼M30

ORO.TC.100 Scope

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

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ORO.TC.105 Conditions for assignment to duties

▼M30

(a) Technical crew members involved in commercial air transport HEMS, VEMS, HHO or NVIS operations shall only be assigned duties provided they:

(1) are at least 18 years of age;

(2) are physically and mentally fit to safely discharge their assigned duties and responsibilities;

(3) have completed all applicable training required by this Subpart to perform their assigned duties;

(4) have been checked and found to be proficient to perform all their assigned duties in accordance with the procedures specified in the operations manual.

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(b) Before assigning to duties technical crew members who are self-employed and/or working on a freelance or part-time basis, the operator shall verify that all applicable requirements of this Subpart are complied with, taking into account all services rendered by the technical crew member to other operator(s) to determine in particular:

(1) the total number of aircraft types and variants operated;

(2) the applicable flight and duty time limitations and rest requirements.

ORO.TC.110 Training and checking

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

▼M28

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

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

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(d) The checks that follow the operator conversion training and any required familiarisation flights shall take place prior to operating as a required technical crew member in HEMS, VEMS, HHO or NVIS operations.

▼M28

(e) The validity of the technical crew member's check to demonstrate their proficiency in carrying out normal and emergency procedures shall be 12 calendar months.

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ORO.TC.115 Initial training

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

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

(b) fire and smoke training;

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

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

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

ORO.TC.120 Operator conversion training

Each technical crew member shall complete:

(a) operator conversion training, including relevant CRM elements,

(1) before being first assigned by the operator as a technical crew member; or

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

▼M30

(b) The operator conversion training shall include:

(1) the location and use of all safety and survival equipment carried on board the aircraft;

(2) all normal and emergency procedures;

(3) on-board equipment used to perform duties in the aircraft or on the ground for the purpose of assisting the pilot during HEMS, VEMS, HHO or NVIS operations.

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ORO.TC.125 Differences training

(a) Each technical crew member shall complete differences training when changing equipment or procedures on types or variants currently operated.

(b) The operator shall specify in the operations manual when such differences training is required.

▼M28

ORO.TC.130 Familiarisation flights

If the operator conversion training does not include training in an aircraft/FSTD, each technical crew member shall undertake familiarisation flights.

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ORO.TC.135 Recurrent training

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

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

ORO.TC.140 Refresher training

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

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

(1) refresher training on the type or class; or

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

▼M3

SUBPART FTL

FLIGHT AND DUTY TIME LIMITATIONS AND REST REQUIREMENTS

SECTION 1

General

▼M30

ORO.FTL.100 Scope

This Subpart establishes the requirements to be met by an air operator and its flight and cabin crew (aircrew) members with regard to flight and duty time limitations and rest requirements for aircrew assigned to commercial air transport (CAT) operations with aeroplanes.

▼M3

ORO.FTL.105 Definitions

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

(1) ‘acclimatised’ means a state in which a crew member’s circadian biological clock is synchronised to the time zone where the crew member is. A crew member is considered to be acclimatised to a 2-hour wide time zone surrounding the local time at the point of departure. When the local time at the place where a duty commences differs by more than 2 hours from the local time at the place where the next duty starts, the crew member, for the calculation of the maximum daily flight duty period, is considered to be acclimatised in accordance with the values in the Table 1.

Table 1

Time difference (h) between reference time and local time where the crew member starts the next duty	Time elapsed since reporting at reference time				
	< 48	48–71:59	72–95:59	96–119:59	≥ 120
< 4	B	D	D	D	D
≤ 6	B	X	D	D	D
≤ 9	B	X	X	D	D
≤ 12	B	X	X	X	D

‘B’ means acclimatised to the local time of the departure time zone,

‘D’ means acclimatised to the local time where the crew member starts his/her next duty, and

‘X’ means that a crew member is in an unknown state of acclimatisation;

(2) ‘reference time’ means the local time at the reporting point situated in a 2-hour wide time zone band around the local time where a crew member is acclimatised;

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

(4) ‘suitable accommodation’ means, for the purpose of standby, split duty and rest, a separate room for each crew member located in a quiet environment and equipped with a bed, which is sufficiently ventilated, has a device for regulating temperature and light intensity, and access to food and drink;

▼M3

(5) ‘augmented flight crew’ means a flight crew which comprises more than the minimum number required to operate the aircraft, allowing each flight crew member to leave the assigned post, for the purpose of in-flight rest, and to be replaced by another appropriately qualified flight crew member;

(6) ‘break’ means a period of time within a flight duty period, shorter than a rest period, counting as duty and during which a crew member is free of all tasks;

(7) ‘delayed reporting’ means the postponement of a scheduled FDP by the operator before a crew member has left the place of rest;

(8) ‘disruptive schedule’ means a crew member’s roster which disrupts the sleep opportunity during the optimal sleep time window by comprising an FDP or a combination of FDPs which encroach, start or finish during any portion of the day or of the night where a crew member is acclimatised. A schedule may be disruptive due to early starts, late finishes or night duties.

(a) ‘early type’ of disruptive schedule means:

(i) for ‘early start’ a duty period starting in the period between 05:00 and 05:59 in the time zone to which a crew member is acclimatised; and

(ii) for ‘late finish’ a duty period finishing in the period between 23:00 and 01:59 in the time zone to which a crew member is acclimatised;

(b) ‘late type’ of disruptive schedule means:

(i) for ‘early start’ a duty period starting in the period between 05:00 and 06:59 in the time zone to which a crew member is acclimatised; and

(ii) for ‘late finish’ a duty period finishing in the period between 00:00 and 01:59 in the time zone to which a crew member is acclimatised;

(9) ‘night duty’ means a duty period encroaching any portion of the period between 02:00 and 04:59 in the time zone to which the crew is acclimatised;

(10) ‘duty’ means any task that a crew member performs for the operator, including flight duty, administrative work, giving or receiving training and checking, positioning, and some elements of standby;

(11) ‘duty period’ means a period which starts when a crew member is required by an operator to report for or to commence a duty and ends when that person is free of all duties, including post-flight duty;

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

▼**M14**

(13) ‘flight time’ means, for aeroplanes, the time between an aircraft first moving from its parking place for the purpose of taking off until it comes to rest on the designated parking position and all engines or propellers are shut down;

▼**M3**

(14) ‘home base’ means the location, assigned by the operator to the crew member, from where the crew member normally starts and ends a duty period or a series of duty periods and where, under normal circumstances, the operator is not responsible for the accommodation of the crew member concerned;

(15) ‘local day’ means a 24-hour period commencing at 00:00 local time;

(16) ‘local night’ means a period of 8 hours falling between 22:00 and 08:00 local time;

(17) ‘operating crew member’ means a crew member carrying out duties in an aircraft during a sector;

(18) ‘positioning’ means the transferring of a non-operating crew member from one place to another, at the behest of the operator, excluding:

— the time of travel from a private place of rest to the designated reporting place at home base and vice versa, and

— the time for local transfer from a place of rest to the commencement of duty and vice versa;

(19) ‘rest facility’ means a bunk or seat with leg and foot support suitable for crew members’ sleeping on board an aircraft;

(20) ‘reserve’ means a period of time during which a crew member is required by the operator to be available to receive an assignment for an FDP, positioning or other duty notified at least 10 hours in advance;

(21) ‘rest period’ means a continuous, uninterrupted and defined period of time, following duty or prior to duty, during which a crew member is free of all duties, standby and reserve;

(22) ‘rotation’ is a duty or a series of duties, including at least one flight duty, and rest periods out of home base, starting at home base and ending when returning to home base for a rest period where the operator is no longer responsible for the accommodation of the crew member;

(23) ‘single day free of duty’ means, for the purpose of complying with the provisions of Council Directive 2000/79/EC ([1]), a time free of all duties and standby consisting of one day and two local nights, which is notified in advance. A rest period may be included as part of the single day free of duty;

(24) ‘sector’ means the segment of an FDP between an aircraft first moving for the purpose of taking off until it comes to rest after landing on the designated parking position;

(25) ‘standby’ means a pre-notified and defined period of time during which a crew member is required by the operator to be available to receive an assignment for a flight, positioning or other duty without an intervening rest period;

([1]) OJ L 302, 1.12.2000, p. 57.

▼M3

(26) ‘airport standby’ means a standby performed at the airport;

(27) ‘other standby’ means a standby either at home or in a suitable accommodation;

(28) ‘window of circadian low (“WOCL”)’ means the period between 02:00 and 05:59 hours in the time zone to which a crew member is acclimatised.

ORO.FTL.110 Operator responsibilities

An operator shall:

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

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

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

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

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

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

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

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

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

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

ORO.FTL.115 Crew member responsibilities

Crew members shall:

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

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

▼M3

ORO.FTL.120 Fatigue risk management (FRM)

(a) When FRM is required by this Subpart or an applicable certification specification, the operator shall establish, implement and maintain a FRM as an integral part of its management system. The FRM shall ensure compliance with the essential requirements in points 7.f, 7.g and 8.f of Annex IV to Regulation (EC) No 216/2008. The FRM shall be described in the operations manual.

(b) The FRM established, implemented and maintained shall provide for continuous improvement to the overall performance of the FRM and shall include:

(1) a description of the philosophy and principles of the operator with regard to FRM, referred to as the FRM policy;

(2) documentation of the FRM processes, including a process for making personnel aware of their responsibilities and the procedure for amending this documentation;

(3) scientific principles and knowledge;

(4) a hazard identification and risk assessment process that allows managing the operational risk(s) of the operator arising from crew member fatigue on a continuous basis;

(5) a risk mitigation process that provides for remedial actions to be implemented promptly, which are necessary to effectively mitigate the operator's risk(s) arising from crew member fatigue and for continuous monitoring and regular assessment of the mitigation of fatigue risks achieved by such actions;

(6) FRM safety assurance processes;

(7) FRM promotion processes.

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

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

ORO.FTL.125 Flight time specification schemes

(a) Operators shall establish, implement and maintain flight time specification schemes that are appropriate for the type(s) of operation performed and that comply with Regulation (EC) No 216/2008, this Subpart and other applicable legislation, including Directive 2000/79/EC.

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

(c) To demonstrate compliance with Regulation (EC) No 216/2008 and this Subpart, the operator shall apply the applicable certification specifications adopted by the Agency. Alternatively, if the operator wants to deviate from those certification specifications in accordance with Article 22(2) of Regulation (EC) No 216/2008, it shall provide the competent authority with a full description of the intended deviation prior to implementing it. The description shall include any revisions to manuals or procedures that may be relevant, as well as an assessment demonstrating that the requirements of Regulation (EC) No 216/2008 and of this Subpart are met.

▼M3

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

SECTION 2

Commercial Air Transport Operators

ORO.FTL.200 Home base

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

ORO.FTL.205 Flight duty period (FDP)

(a) The operator shall:

(1) define reporting times appropriate to each individual operation taking into account ORO.FTL.110(c);

(2) establish procedures specifying how the commander shall, in case of special circumstances which could lead to severe fatigue, and after consultation with the crew members concerned, reduce the actual FDP and/or increase the rest period in order to eliminate any detrimental effect on flight safety.

(b) Basic maximum daily FDP.

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

Table 2

Maximum daily FDP — Acclimatised crew members

Start of FDP at reference time	1–2 Sectors	3 Sectors	4 Sectors	5 Sectors	6 Sectors	7 Sectors	8 Sectors	9 Sectors	10 Sectors
0600–1329	13:00	12:30	12:00	11:30	11:00	10:30	10:00	09:30	09:00
1330–1359	12:45	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00
1400–1429	12:30	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00
1430–1459	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00	09:00
1500–1529	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00	09:00
1530–1559	11:45	11:15	10:45	10:15	09:45	09:15	09:00	09:00	09:00
1600–1629	11:30	11:00	10:30	10:00	09:30	09:00	09:00	09:00	09:00
1630–1659	11:15	10:45	10:15	09:45	09:15	09:00	09:00	09:00	09:00
1700–0459	11:00	10:30	10:00	09:30	09:00	09:00	09:00	09:00	09:00
0500–0514	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00	09:00
0515–0529	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00	09:00
0530–0544	12:30	12:00	11:30	11:00	10:30	10:00	09:30	09:00	09:00
0545–0559	12:45	12:15	11:45	11:15	10:45	10:15	09:45	09:15	09:00

▼M3

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

Table 3

Crew members in an unknown state of acclimatisation

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

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

Table 4

Crew members in an unknown state of acclimatisation under FRM

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

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

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

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

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

(1) The maximum daily FDP may be extended by up to 1 hour not more than twice in any 7 consecutive days. In that case:

(i) the minimum pre-flight and post-flight rest periods shall be increased by 2 hours; or

(ii) the post-flight rest period shall be increased by 4 hours.

(2) When extensions are used for consecutive FDPs, the additional pre- and post-flight rest between the two extended FDPs required under subparagraph 1 shall be provided consecutively.

▼**M3**

(3) The use of the extension shall be planned in advance, and shall be limited to a maximum of:

(i) 5 sectors when the WOCL is not encroached; or

(ii) 4 sectors, when the WOCL is encroached by 2 hours or less; or

(iii) 2 sectors, when the WOCL is encroached by more than 2 hours.

(4) Extension of the maximum basic daily FDP without in-flight rest shall not be combined with extensions due to in-flight rest or split duty in the same duty period.

(5) Flight time specification schemes shall specify the limits for extensions of the maximum basic daily FDP in accordance with the certification specifications applicable to the type of operation, taking into account:

(i) the number of sectors flown; and

(ii) WOCL encroachment.

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

Flight time specification schemes shall specify the conditions for extensions of the maximum basic daily FDP with in-flight rest in accordance with the certification specifications applicable to the type of operation, taking into account:

(i) the number of sectors flown;

(ii) the minimum in-flight rest allocated to each crew member;

(iii) the type of in-flight rest facilities; and

(iv) the augmentation of the basic flight crew.

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

(1) The conditions to modify the limits on flight duty, duty and rest periods by the commander in the case of unforeseen circumstances in flight operations, which start at or after the reporting time, shall comply with the following:

(i) the maximum daily FDP which results after applying points (b) and (e) of point ORO.FTL.205 or point ORO.FTL.220 may not be increased by more than 2 hours unless the flight crew has been augmented, in which case the maximum flight duty period may be increased by not more than 3 hours;

(ii) if on the final sector within an FDP the allowed increase is exceeded because of unforeseen circumstances after take-off, the flight may continue to the planned destination or alternate aerodrome; and

(iii) the rest period following the FDP may be reduced but can never be less than 10 hours.

▼M3

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

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

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

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

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

(g) Unforeseen circumstances in flight operations — delayed reporting

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

ORO.FTL.210 Flight times and duty periods

(a) The total duty periods to which a crew member may be assigned shall not exceed:

(1) 60 duty hours in any 7 consecutive days;

(2) 110 duty hours in any 14 consecutive days; and

(3) 190 duty hours in any 28 consecutive days, spread as evenly as practicable throughout that period.

(b) The total flight time of the sectors on which an individual crew member is assigned as an operating crew member shall not exceed:

(1) 100 hours of flight time in any 28 consecutive days;

(2) 900 hours of flight time in any calendar year; and

(3) 1 000 hours of flight time in any 12 consecutive calendar months.

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

ORO.FTL.215 Positioning

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

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

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

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ORO.FTL.220 Split duty

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

(a) flight time specification schemes shall specify the following elements for split duty in accordance with the certification specifications applicable to the type of operation:

(1) the minimum duration of a break on the ground; and

(2) the possibility to extend the FDP prescribed under point ORO.FTL.205(b) taking into account the duration of the break on the ground, the facilities provided to the crew member to rest and other relevant factors;

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

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

ORO.FTL.225 Standby and duties at the airport

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

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

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

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

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

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

(f) flight time specification schemes shall specify the following elements:

(1) the maximum duration of any standby;

(2) the impact of the time spent on standby on the maximum FDP that may be assigned, taking into account facilities provided to the crew member to rest, and other relevant factors such as:

— the need for immediate readiness of the crew member,

— the interference of standby with sleep, and

— sufficient notification to protect a sleep opportunity between the call for duty and the assigned FDP;

(3) the minimum rest period following standby which does not lead to assignment of an FDP;

▼M3

(4) how time spent on standby other than airport standby shall be counted for the purpose of cumulative duty periods.

ORO.FTL.230 Reserve

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

(a) reserve shall be in the roster;

(b) flight time specification schemes shall specify the following elements:

(1) the maximum duration of any single reserve period;

(2) the number of consecutive reserve days that may be assigned to a crew member.

ORO.FTL.235 Rest periods

(a) Minimum rest period at home base.

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

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

(b) Minimum rest period away from home base.

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

(c) Reduced rest

By derogation from points (a) and (b), flight time specification schemes may reduce the minimum rest periods in accordance with the certification specifications applicable to the type of operation and taking into account the following elements:

(1) the minimum reduced rest period;

(2) the increase of the subsequent rest period; and

(3) the reduction of the FDP following the reduced rest.

(d) Recurrent extended recovery rest periods

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

▼M3

(e) Flight time specification schemes shall specify additional rest periods in accordance with the applicable certification specifications to compensate for:

(1) the effects of time zone differences and extensions of the FDP;

(2) additional cumulative fatigue due to disruptive schedules; and

(3) a change of home base.

ORO.FTL.240 Nutrition

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

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

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

(a) An operator shall maintain, for a period of 24 months:

(1) individual records for each crew member including:

(i) flight times;

(ii) start, duration and end of each duty period and FDP;

(iii) rest periods and days free of all duties; and

(iv) assigned home base;

(2) reports on extended flight duty periods and reduced rest periods.

(b) Upon request, the operator shall provide copies of individual records of flight times, duty periods and rest periods to:

(1) the crew member concerned; and

(2) to another operator, in relation to a crew member who is or becomes a crew member of the operator concerned.

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

ORO.FTL.250 Fatigue management training

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

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

▼M21

Appendix I

DECLARATION

in accordance with Commission Regulation (EU) No 965/2012 on air operations

Operator

Name:

Place in which the operator has its principal place of business or, if the operator has no principal place of business, place in which the operator is established or residing and place from which the operations are directed:

Name and contact details of the accountable manager:

Aircraft operation

Starting date of operation and applicability date of the change:

Information on aircraft, operation and continuing airworthiness management organisation ([1]):

Type(s) of aircraft, registration(s) and main base:

Aircraft MSN ([2])	Aircraft type	Aircraft registration ([3])	Main base	Type(s) of operation ([4])	Organisation responsible for the continuing airworthiness management ([5])

The operator shall obtain a prior approval ([6]) or specific approval ([7]) for certain operations before conducting such operations.

Where applicable, details of approvals held. Attach the list of specific approvals. Include:

— specific approvals granted by a third country, if applicable;

— name of operations conducted with operational credits (e.g. EFVS 200, SA CAT I, etc.).

Where applicable, details of specialised operations authorisation held (attach authorisation(s), if applicable).

Where applicable, list of alternative means of compliance (AltMoC) with references to the associated AMC they replace (attach AltMoC).

Statements

☐ The operator complies, and continues to comply, with the essential requirements set out in Annex V to Regulation (EU) 2018/1139 of the European Parliament and of the Council and with the requirements of Regulation (EU) No 965/2012.

☐ The management system documentation, including the operations manual, shall comply with the requirements of Annex III (Part-ORO), Annex V (Part-SPA), Annex VI (Part-NCC) or Annex VIII (Part-SPO) to Commission Regulation (EU) No 965/2012 and all flights shall be made in accordance with the provisions of the operations manual as required by point ORO.GEN.110(b) of Part-ORO.

☐ All operated aircraft shall hold:

— a valid certificate of airworthiness in accordance with Commission Regulation (EU) No 748/2012 or, for aircraft registered in a third country, in accordance with ICAO Annex 8; and

— when used for SPO activities, a valid lease agreement as per ORO.SPO.100.

▼M21

☐ All flight crew members shall hold a licence in accordance with Annex I to Commission Regulation (EU) No 1178/2011 as required by point ORO.FC.100(c) of Part-ORO, and cabin crew members shall, where applicable, be trained in accordance with Subpart CC of Part-ORO.
☐ (If applicable) The operator shall implement and demonstrate conformity to a recognised industry standard. Reference of the standard: Certification body: Date of the last conformity audit:
☐ The operator shall notify to the competent authority any changes in circumstances affecting its compliance with the essential requirements set out in Annex V to Regulation (EU) 2018/1139 and with the requirements of Commission Regulation (EU) No 965/2012 as declared to the competent authority through this declaration, and any changes to the information and lists of AltMoC included in and annexed to this declaration, as required by point ORO.GEN.120(a) of Part-ORO.
☐ The operator shall confirm that the information disclosed in this declaration is correct.
Date, name, and signature of the accountable manager
(1) If there is not enough space to list the required information in the declaration, the information shall be listed in a separate annex. The annex shall be dated and signed. (2) Manufacturer serial number. (3) If the aircraft is also registered with an AOC holder, specify the AOC number of the AOC holder. (4) 'Type(s) of operation' refers to the type of operations conducted with this aircraft, e.g. non-commercial operations or specialised operations, e.g. aerial photography flights, aerial advertising flights, news media flights, television and movie flights, parachute operations, skydiving, maintenance check flights. (5) Information about the organisation responsible for the continuing airworthiness management shall include the name of the organisation, its address, and the approval reference. (6) (a) operations with any defective instrument or piece of equipment or item or function, under a minimum equipment list (MEL) (points ORO.MLR.105 (b), (f), and (j), NCC.IDE.A.105, NCC.IDE.H.105, SPO.IDE.A.105, and SPO.IDE.H.105). (b) Operations requiring prior authorisation or approval, including all of the following: — for specialised operations, wet lease-in and dry lease-in of aircraft registered in a third country (point ORO.SPO.100 (c)); — high-risk commercial specialised operations (point ORO.SPO.110); — non-commercial operations with aircraft with an MOPSC of more than 19, which are performed without an operating cabin crew member (point ORO.CC.100 (d)); — use of IFR operating minima that are lower than those published by the State (points NCC.OP.110 and SPO.OP.110); — refuelling with engine(s) and/or rotors turning (point NCC.OP.157); — specialised operations (SPO) without oxygen above 10 000 ft (point SPO.OP.195). (7) Operations in accordance with Annex V (Part-SPA) to Regulation (EU) No 965/2012, including Subparts B 'Performance-based navigation (PBN) operations', C 'Operations with specified minimum navigation performance (MNPS)', D 'Operations in airspace with reduced vertical separation minima (RVSM)', E 'Low-visibility operations (LVOs) and operations with operational credits', G 'Transport of dangerous goods', K 'Helicopter offshore operations' and N 'Helicopter point-in-space approaches and departures with reduced VFR minima'.

▼B

ANNEX IV

COMMERCIAL AIR TRANSPORT OPERATIONS

[PART-CAT]

SUBPART A

GENERAL REQUIREMENTS

CAT.GEN.100 Competent authority

The competent authority shall be the authority designated by the Member State in which the operator has its principal place of business.

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SECTION 1

Motor-powered aircraft

▼M21

CAT.GEN.MPA.100 Crew responsibilities

(a) The crew member shall be responsible for the proper execution of his or her duties that are:

(1) related to the safety of the aircraft and its occupants; and

(2) specified in the instructions and procedures in the operations manual.

(b) The crew member shall:

(1) report to the commander any fault, failure, malfunction or defect which the crew member believes may affect the airworthiness or safe operation of the aircraft including emergency systems, if not already reported by another crew member;

(2) report to the commander any incident that endangered, or could have endangered, the safety of the operation, if not already reported by another crew member;

(3) comply with the relevant requirements of the operator's occurrence reporting schemes;

(4) comply with all flight and duty time limitations (FTL) and rest requirements applicable to their activities;

(5) when undertaking duties for more than one operator:

(i) maintain his or her individual records regarding flight and duty times and rest periods as referred to in the applicable FTL requirements;

(ii) provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements; and

(iii) provide each operator with the data needed regarding operations on more than one type or variant.

▼M21

(c) The crew member shall not perform duties on an aircraft:

(1) when under the influence of psychoactive substances or when unfit due to injury, fatigue, medication, sickness or other similar causes;

(2) until a reasonable time period has elapsed after deep water diving or following blood donation;

(3) if applicable medical requirements are not fulfilled;

(4) if he or she is in any doubt of being able to accomplish his or her assigned duties; or

(5) if he or she knows or suspects that he or she is suffering from fatigue as referred to in Annex V, point 7.5, to Regulation (EU) 2018/1139 or feels otherwise unfit, to the extent that the flight may be endangered.

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CAT.GEN.MPA.105 Responsibilities of the commander

(a) The commander, in addition to complying with CAT.GEN.MPA.100, shall:

(1) be responsible for the safety of all crew members, passengers and cargo on board, as soon as the commander arrives on board the aircraft, until the commander leaves the aircraft at the end of the flight;

(2) be responsible for the operation and safety of the aircraft:

(i) for aeroplanes, from the moment the aeroplane is first ready to move for the purpose of taxiing prior to take-off, until the moment it finally comes to rest at the end of the flight and the engine(s) used as primary propulsion unit(s) is(are) shut down;

(ii) for helicopters, when the rotors are turning;

(3) have authority to give all commands and take any appropriate actions for the purpose of securing the safety of the aircraft and of persons and/or property carried therein in accordance with 7.c of Annex IV to Regulation (EC) No 216/2008;

(4) have authority to disembark any person, or any part of the cargo, that may represent a potential hazard to the safety of the aircraft or its occupants;

(5) not allow a person to be carried in the aircraft who appears to be under the influence of alcohol or drugs to the extent that the safety of the aircraft or its occupants is likely to be endangered;

(6) have the right to refuse transportation of inadmissible passengers, deportees or persons in custody if their carriage increases the risk to the safety of the aircraft or its occupants;

▼B

(7) ensure that all passengers are briefed on the location of emergency exits and the location and use of relevant safety and emergency equipment;

(8) ensure that all operational procedures and checklists are complied with in accordance with the operations manual;

(9) not permit any crew member to perform any activity during critical phases of flight, except duties required for the safe operation of the aircraft;

▼M8

(10) ensure that:

(i) flight recorders are not disabled or switched off during flight;

(ii) in the event of an occurrence other than an accident or a serious incident that shall be reported according to ORO.GEN.160(a), flight recorders' recordings are not intentionally erased; and

(iii) in the event of an accident or a serious incident, or if preservation of recordings of flight recorders is directed by the investigating authority:

(A) flight recorders' recordings are not intentionally erased;

(B) flight recorders are deactivated immediately after the flight is completed; and

(C) precautionary measures to preserve the recordings of flight recorders are taken before leaving the flight crew compartment;

▼B

(11) decide on acceptance of the aircraft with unserviceabilities in accordance with the configuration deviation list (CDL) or the minimum equipment list (MEL);

▼M15

(12) ensure that the pre-flight inspection has been carried out in accordance with the requirements of Annex I (Part-M) to Regulation (EU) No 1321/2014;

(13) be satisfied that relevant emergency equipment remains easily accessible for immediate use;

(14) record, at the termination of the flight, utilisation data and all known or suspected defects of the aircraft in the aircraft technical log or journey log of the aircraft to ensure continued flight safety.

▼B

(b) The commander, or the pilot to whom conduct of the flight has been delegated, shall, in an emergency situation that requires immediate decision and action, take any action he/she considers necessary under the circumstances in accordance with 7.d of Annex IV to Regulation (EC) No 216/2008. In such cases he/she may deviate from rules, operational procedures and methods in the interest of safety.

(c) Whenever an aircraft in flight has manoeuvred in response to an airborne collision avoidance system (ACAS) resolution advisory (RA), the commander shall submit an ACAS report to the competent authority.

(d) Bird hazards and strikes:

(1) Whenever a potential bird hazard is observed, the commander shall inform the air traffic service (ATS) unit as soon as flight crew workload allows.

▼B

(2) Whenever an aircraft for which the commander is responsible suffers a bird strike that results in significant damage to the aircraft or the loss or malfunction of any essential service, the commander shall submit a written bird strike report after landing to the competent authority.

▼M15

(e) The commander shall, as soon as possible, report to the appropriate air traffic services (ATS) unit any hazardous weather or flight conditions encountered that are likely to affect the safety of other aircraft.

▼B

CAT.GEN.MPA.110 Authority of the commander

The operator shall take all reasonable measures to ensure that all persons carried in the aircraft obey all lawful commands given by the commander for the purpose of securing the safety of the aircraft and of persons or property carried therein.

CAT.GEN.MPA.115 Personnel or crew members other than cabin crew in the passenger compartment

The operator shall ensure that personnel or crew members, other than operating cabin crew members, carrying out their duties in the passenger compartment of an aircraft:

(a) are not confused by the passengers with operating cabin crew members;

(b) do not occupy required cabin crew assigned stations;

(c) do not impede operating cabin crew members in their duties.

CAT.GEN.MPA.120 Common language

The operator shall ensure that all crew members can communicate with each other in a common language.

▼M5

CAT.GEN.MPA.124 Taxiing of aircraft

The operator shall establish procedures for taxiing of aircraft in order to ensure safe operation and in order to enhance runway safety.

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CAT.GEN.MPA.125 Taxiing of aeroplanes

The operator shall ensure that an aeroplane is only taxied on the movement area of an aerodrome if the person at the controls:

(a) is an appropriately qualified pilot; or

(b) has been designated by the operator and:

(1) is trained to taxi the aircraft;

(2) is trained to use the radio telephone;

(3) has received instruction in respect of aerodrome layout, routes, signs, marking, lights, air traffic control (ATC) signals and instructions, phraseology and procedures;

(4) is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.

CAT.GEN.MPA.130 Rotor engagement — helicopters

A helicopter rotor shall only be turned under power for the purpose of flight with a qualified pilot at the controls.

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CAT.GEN.MPA.135 Admission to the flight crew compartment

(a) The operator shall ensure that no person, other than a flight crew member assigned to a flight, is admitted to, or carried in, the flight crew compartment unless that person is:

(1) an operating crew member;

(2) a representative of the competent or inspecting authority, if required to be there for the performance of his/her official duties; or

(3) permitted by and carried in accordance with instructions contained in the operations manual.

(b) The commander shall ensure that:

(1) admission to the flight crew compartment does not cause distraction or interference with the operation of the flight; and

(2) all persons carried in the flight crew compartment are made familiar with the relevant safety procedures.

(c) The commander shall make the final decision regarding the admission to the flight crew compartment.

CAT.GEN.MPA.140 Portable electronic devices

The operator shall not permit any person to use a portable electronic device (PED) on board an aircraft that could adversely affect the performance of the aircraft's systems and equipment, and shall take all reasonable measures to prevent such use.

▼M14

CAT.GEN.MPA.141 Use of electronic flight bags (EFBs)

(a) Where an EFB is used on board an aircraft, the operator shall ensure that it does not adversely affect the performance of the aircraft systems or equipment, or the ability of the flight crew member to operate the aircraft.

(b) The operator shall not use a type B EFB application unless it is approved in accordance with Subpart M of Annex V (Part-SPA).

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CAT.GEN.MPA.145 Information on emergency and survival equipment carried

The operator shall at all times have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board any of their aircraft.

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CAT.GEN.MPA.150 Ditching — aeroplanes

The operator shall only operate an aeroplane with a passenger seating configuration of more than 30 on overwater flights at a distance from land suitable for making an emergency landing, greater than 120 minutes at cruising speed, or 400 NM, whichever is less, if the aeroplane complies with the ditching provisions prescribed in the applicable certification specification or specifications.

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CAT.GEN.MPA.155 Carriage of weapons of war and munitions of war

(a) The operator shall only transport weapons of war or munitions of war by air if an approval to do so has been granted by all States whose airspace is intended to be used for the flight.

(b) Where an approval has been granted, the operator shall ensure that weapons of war and munitions of war are:

(1) stowed in the aircraft in a place that is inaccessible to passengers during flight; and

▼B

(2) in the case of firearms, unloaded.

(c) The operator shall ensure that, before a flight begins, the commander is notified of the details and location on board the aircraft of any weapons of war and munitions of war intended to be carried.

CAT.GEN.MPA.160 Carriage of sporting weapons and ammunition

(a) The operator shall take all reasonable measures to ensure that any sporting weapons intended to be carried by air are reported to the operator.

(b) The operator accepting the carriage of sporting weapons shall ensure that they are:

(1) stowed in the aircraft in a place that is inaccessible to passengers during flight; and

(2) in the case of firearms or other weapons that can contain ammunition, unloaded.

(c) Ammunition for sporting weapons may be carried in passengers' checked baggage, subject to certain limitations, in accordance with the technical instructions.

CAT.GEN.MPA.161 Carriage of sporting weapons and ammunition — alleviations

Notwithstanding CAT.GEN.MPA.160(b), for helicopters with a maximum certified take-off mass (MCTOM) of 3 175 kg or less operated by day and over routes navigated by reference to visual landmarks, a sporting weapon may be carried in a place that is accessible during flight, provided that the operator has established appropriate procedures and it is impracticable to stow it in an inaccessible stowage during flight.

CAT.GEN.MPA.165 Method of carriage of persons

The operator shall take all measures to ensure that no person is in any part of an aircraft in flight that is not designed for the accommodation of persons unless temporary access has been granted by the commander:

(a) for the purpose of taking action necessary for the safety of the aircraft or of any person, animal or goods therein; or

(b) to a part of the aircraft in which cargo or supplies are carried, being a part that is designed to enable a person to have access thereto while the aircraft is in flight.

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CAT.GEN.MPA.170 Psychoactive substances

(a) The operator shall take all reasonable measures to ensure that no person enters or is in an aircraft when under the influence of psychoactive substances to the extent that the safety of the aircraft or its occupants is likely to be endangered.

(b) The operator shall develop and implement a policy on the prevention and detection of misuse of psychoactive substances by flight and cabin crew members and by other safety-sensitive personnel under its direct control, in order to ensure that the safety of the aircraft or its occupants is not endangered.

▼M12

(c) Without prejudice to the applicable national legislation on data protection concerning testing of individuals, the operator shall develop and implement an objective, transparent and non-discriminatory procedure for the prevention and detection of cases of misuse of psychoactive substances by its flight and cabin crew and other safety-sensitive personnel.

(d) In case of a confirmed positive test result, the operator shall inform its competent authority and the authority responsible for the personnel concerned, such as a medical assessor of the licensing authority.

CAT.GEN.MPA.175 Endangering safety

(a) The operator shall take all reasonable measures to ensure that no person recklessly, intentionally or negligently acts or omits to act so as to:

(1) endanger an aircraft or person therein; or

(2) cause or permit an aircraft to endanger any person or property.

(b) The operator shall ensure that flight crew has undergone a psychological assessment before commencing line flying in order to:

(1) identify psychological attributes and suitability of the flight crew in respect of the work environment; and

(2) reduce the likelihood of negative interference with the safe operation of the aircraft.

(c) Considering the size, nature and complexity of the activity of an operator, an operator may replace the psychological assessment referred to in point (b) with an internal assessment of the psychological attributes and suitability of flight crew.

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CAT.GEN.MPA.180 Documents, manuals and information to be carried

(a) The following documents, manuals and information shall be carried on each flight, as originals or copies unless otherwise specified:

(1) the aircraft flight manual (AFM), or equivalent document(s);

(2) the original certificate of registration;

(3) the original certificate of airworthiness (CofA);

(4) the noise certificate, including an English translation, where one has been provided by the authority responsible for issuing the noise certificate;

▼M4

(5) a certified true copy of the air operator certificate (AOC), including an English translation when the AOC has been issued in another language;

(6) the operations specifications relevant to the aircraft type, issued with the AOC, including an English translation when the operations specifications have been issued in another language;

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(7) the original aircraft radio licence, if applicable;

(8) the third party liability insurance certificate(s);

(9) the journey log, or equivalent, for the aircraft;

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(10) the aircraft technical log, in accordance with Annex I (Part-M) to Regulation (EU) No 1321/2014;

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(11) details of the filed ATS flight plan, if applicable;

(12) current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

(13) procedures and visual signals information for use by intercepting and intercepted aircraft;

(14) information concerning search and rescue services for the area of the intended flight, which shall be easily accessible in the flight crew compartment;

(15) the current parts of the operations manual that are relevant to the duties of the crew members, which shall be easily accessible to the crew members;

(16) the MEL;

(17) appropriate notices to airmen (NOTAMs) and aeronautical information service (AIS) briefing documentation;

(18) appropriate meteorological information;

(19) cargo and/or passenger manifests, if applicable;

(20) mass and balance documentation;

(21) the operational flight plan, if applicable;

(22) notification of special categories of passenger (SCPs) and special loads, if applicable; and

(23) any other documentation that may be pertinent to the flight or is required by the States concerned with the flight.

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(b) Notwithstanding (a), for operations under visual flight rules (VFR) by day with other-than complex motor-powered aircraft taking off and landing at the same aerodrome or operating site within 24 hours, or remaining within a local area specified in the operations manual, the following documents and information may be retained at the aerodrome or operating site instead:

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(1) noise certificate;

(2) aircraft radio licence;

(3) journey log, or equivalent;

(4) aircraft technical log;

(5) NOTAMs and AIS briefing documentation;

(6) meteorological information;

(7) notification of SCPs and special loads, if applicable; and

(8) mass and balance documentation.

▼B

(c) Notwithstanding (a), in case of loss or theft of documents specified in (a)(2) to (a)(8), the operation may continue until the flight reaches its destination or a place where replacement documents can be provided.

CAT.GEN.MPA.185 Information to be retained on the ground

(a) The operator shall ensure that at least for the duration of each flight or series of flights:

(1) information relevant to the flight and appropriate for the type of operation is preserved on the ground;

(2) the information is retained until it has been duplicated at the place at which it will be stored; or, if this is impracticable

(3) the same information is carried in a fireproof container in the aircraft.

(b) The information referred to in (a) includes:

(1) a copy of the operational flight plan, where appropriate;

(2) copies of the relevant part(s) of the aircraft technical log;

(3) route-specific NOTAM documentation if specifically edited by the operator;

(4) mass and balance documentation if required; and

(5) special loads notification.

CAT.GEN.MPA.190 Provision of documentation and records

The commander shall, within a reasonable time of being requested to do so by a person authorised by an authority, provide to that person the documentation required to be carried on board.

▼M16

CAT.GEN.MPA.195 Handling of flight recorder recordings: preservation, production, protection and use

(a) Following an accident, a serious incident or an occurrence identified by the investigating authority, the operator of an aircraft shall preserve the original recorded data of the flight recorders for a period of 60 days or until otherwise directed by the investigating authority.

(b) The operator shall conduct operational checks and evaluations of the recordings to ensure the continued serviceability of the flight recorders which are required to be carried under this Regulation.

(c) The operator shall ensure that the recordings of flight parameters and data link communication messages required to be recorded on flight recorders are preserved. However, for the purpose of testing and maintaining those flight recorders, up to 1 hour of the oldest recorded data at the time of testing may be erased.

(d) The operator shall keep and maintain up to date documentation that presents the necessary information to convert raw flight data into flight parameters expressed in engineering units.

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(e) The operator shall make available any flight recorder recordings that have been preserved, if so determined by the competent authority.

(f) Without prejudice to Regulation (EU) No 996/2010 and Regulation (EU) 2016/679 of the European Parliament and of the Council ([1]):

(1) Except for ensuring flight recorder serviceability, audio recordings from a flight recorder shall not be disclosed or used unless all of the following conditions are fulfilled:

(i) a procedure related to the handling of such audio recordings and of their transcript is in place;

(ii) all crew members and maintenance personnel concerned have given their prior consent;

(iii) such audio recordings are used only for maintaining or improving safety.

(1a) When inspecting flight recorder audio recordings to ensure flight recorder serviceability, the operator shall protect the privacy of those audio recordings and make sure that they are not disclosed or used for purposes other than for ensuring flight recorder serviceability.

(2) Flight parameters or data link messages recorded by a flight recorder shall not be used for purposes other than for the investigation of an accident or an incident which is subject to mandatory reporting, unless such recordings meet any of the following conditions:

(i) are used by the operator for airworthiness or maintenance purposes only;

(ii) are de-identified;

(iii) are disclosed under secure procedures.

(3) Except for ensuring flight recorder serviceability, images of the flight crew compartment that are recorded by a flight recorder shall not be disclosed or used unless all of the following conditions are fulfilled:

(i) a procedure related to the handling of such image recordings is in place;

(ii) all crew members and maintenance personnel concerned have given their prior consent;

(iii) such image recordings are used only for maintaining or improving safety.

(3a) When images of the flight crew compartment that are recorded by a flight recorder are inspected for ensuring the serviceability of the flight recorder, then:

(i) those images shall not be disclosed or used for purposes other than for ensuring flight recorder serviceability;

(ii) if body parts of crew members are likely to be visible on the images, the operator shall ensure the privacy of those images.

([1]) Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (OJ L 119, 4.5.2016, p. 1).

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CAT.GEN.MPA.200 Transport of dangerous goods

(a) Unless otherwise permitted by this Annex, the transport of dangerous goods by air shall be conducted in accordance with Annex 18 to the Chicago Convention as last amended and amplified by the 'Technical instructions for the safe transport of dangerous goods by air' (ICAO Doc 9284-AN/905), including its supplements and any other addenda or corrigenda.

(b) Dangerous goods shall only be transported by an operator approved in accordance with Annex V (Part-SPA), Subpart G, except when:

(1) they are not subject to the technical instructions in accordance with Part 1 of those instructions; or

(2) they are carried by passengers or crew members, or are in baggage, in accordance with Part 8 of the technical instructions.

(c) An operator shall establish procedures to ensure that all reasonable measures are taken to prevent dangerous goods from being carried on board inadvertently.

(d) The operator shall provide personnel with the necessary information enabling them to carry out their responsibilities, as required by the technical instructions.

(e) The operator shall, in accordance with the technical instructions, report without delay to the competent authority and the appropriate authority of the State of occurrence in the event of:

(1) any dangerous goods accidents or incidents;

(2) the discovery of undeclared or misdeclared dangerous goods in cargo or mail; or

(3) the finding of dangerous goods carried by passengers or crew members, or in their baggage, when not in accordance with Part 8 of the technical instructions.

(f) The operator shall ensure that passengers are provided with information about dangerous goods in accordance with the technical instructions.

(g) The operator shall ensure that notices giving information about the transport of dangerous goods are provided at acceptance points for cargo as required by the technical instructions.

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CAT.GEN.MPA.205 Aircraft tracking system — Aeroplanes

(a) By 16 December 2018 at the latest, the operator shall establish and maintain, as part of the system for exercising operational control over the flights, an aircraft tracking system, which includes the flights eligible to (b) when performed with the following aeroplanes:

(1) aeroplanes with an MCTOM of more than 27 000 kg, with an MOPSC of more than 19, and first issued with an individual CofA before 16 December 2018, which are equipped with a capability to provide a position additional to the secondary surveillance radar transponder;

(2) all aeroplanes with an MCTOM of more than 27 000 kg, with an MOPSC of more than 19, and first issued with an individual CofA on or after 16 December 2018; and

(3) all aeroplanes with an MCTOM of more than 45 500 kg and first issued with an individual CofA on or after 16 December 2018.

(b) Flights shall be tracked by the operator from take-off to landing, except when the planned route and the planned diversion routes are fully included in airspace blocks where:

▼M8

(1) ATS surveillance service is normally provided which is supported by ATC surveillance systems locating the aircraft at time intervals with adequate duration; and

(2) the operator has provided to competent air navigation service providers necessary contact information.

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CAT.GEN.MPA.210 Location of an aircraft in distress – Aeroplanes

As of 1 January 2025, the following aeroplanes shall be equipped with robust and automatic means to accurately determine, following an accident during which the aeroplane is severely damaged, the location of the point of end of flight:

(a) all aeroplanes with an MCTOM of more than 27 000 kg, with a MOPSC of more than 19, and first issued with an individual CofA on or after 1 January 2024; and

(b) all aeroplanes with a MCTOM of more than 45 500 kg and first issued with an individual CofA on or after 1 January 2024.

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CAT.GEN.MPA.215 Support programme

(a) The operator shall enable, facilitate and ensure access to a proactive and non-punitive support programme that will assist and support flight crew in recognising, coping with, and overcoming any problem which might negatively affect their ability to safely exercise the privileges of their licence. Such access shall be made available to all flight crew.

(b) Without prejudice to applicable national legislation on the protection of individuals with regard to the processing of personal data and on the free movement of such data, the protection of the confidentiality of data shall be a precondition for an effective support programme as it encourages the use of such a programme and ensures its integrity.

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SUBPART B

OPERATING PROCEDURES

SECTION 1

Motor-powered aircraft

CAT.OP.MPA.100 Use of air traffic services

(a) The operator shall ensure that:

(1) air traffic services (ATS) appropriate to the airspace and the applicable rules of the air are used for all flights whenever available;

(2) in-flight operational instructions involving a change to the ATS flight plan, when practicable, are coordinated with the appropriate ATS unit before transmission to an aircraft.

(b) Notwithstanding (a), the use of ATS is not required unless mandated by air space requirements for:

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(1) operations under VFR by day of other-than complex motor-powered aeroplanes;

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(2) helicopters with an MCTOM of 3 175 kg or less operated by day and over routes navigated by reference to visual landmarks; or

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(3) local helicopter operations (LHOs),

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provided that search and rescue service arrangements can be maintained.

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CAT.OP.MPA.101 Altimeter check and settings

(a) The operator shall establish procedures for altimeter checking before each departure.

(b) The operator shall establish procedures for altimeter settings for all phases of flight, which shall take into account the procedures established by the State of the aerodrome or the State of the airspace, if applicable.

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CAT.OP.MPA.105 Use of aerodromes and operating sites

(a) The operator shall only use aerodromes and operating sites that are adequate for the type(s) of aircraft and operation(s) concerned.

(b) The use of operating sites shall only apply to:

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(1) other-than complex motor-powered aeroplanes; and

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(2) helicopters.

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CAT.OP.MPA.107 Adequate aerodrome

The operator shall consider an aerodrome as adequate if, at the expected time of use, the aerodrome is available and equipped with necessary ancillary services such as air traffic services (ATS), sufficient lighting, communications, meteorological reports, navigation aids and emergency services.

CAT.OP.MPA.110 Aerodrome operating minima

(a) The operator shall establish aerodrome operating minima for each departure, destination or alternate aerodrome that is planned to be used in order to ensure separation of the aircraft from terrain and obstacles and to mitigate the risk of loss of visual references during the visual flight segment of instrument approach operations.

(b) The method used to establish aerodrome operating minima shall take all the following elements into account:

(1) the type, performance, and handling characteristics of the aircraft;

(2) the equipment available on the aircraft for the purpose of navigation, acquisition of visual references, and/or control of the flight path during take-off, approach, landing, and the missed approach;

(3) any conditions or limitations stated in the aircraft flight manual (AFM);

(4) the relevant operational experience of the operator;

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(5) the dimensions and characteristics of the runways/final approach and take-off areas (FATOs) that may be selected for use;

(6) the adequacy and performance of the available visual and non-visual aids and infrastructure;

(7) the obstacle clearance altitude/height (OCA/H) for the instrument approach procedures (IAPs);

(8) the obstacles in the climb-out areas and necessary clearance margins;

(9) the composition of the flight crew, their competence and experience;

(10) the IAP;

(11) the aerodrome characteristics and the available air navigation services (ANS);

(12) any minima that may be promulgated by the State of the aerodrome;

(13) the conditions prescribed in the operations specifications including any specific approvals for low-visibility operations (LVOs) or operations with operational credits.

(14) any non-standard characteristics of the aerodrome, the IAP or the environment

(c) The operator shall specify a method of determining aerodrome operating minima in the operations manual.

(d) The method used by the operator to establish aerodrome operating minima and any change to that method shall be approved by the competent authority.

CAT.OP.MPA.115 Approach flight technique — aeroplanes

(a) All approach operations shall be flown as stabilised approach operations unless otherwise approved by the competent authority for a particular approach to a particular runway.

(b) The continuous descent final approach (CDFA) technique shall be used for approach operations using non-precision approach (NPA) procedures except for such particular runways for which the competent authority has approved another flight technique.

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CAT.OP.MPA.125 Instrument departure and approach procedures

(a) The operator shall ensure that instrument departure and approach procedures established by the State of the aerodrome are used.

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(b) Notwithstanding (a), the commander may accept an ATC clearance to deviate from a published departure or arrival route, provided obstacle clearance criteria are observed and full account is taken of the operating conditions. In any case, the final approach shall be flown visually or in accordance with the established instrument approach procedures.

(c) Notwithstanding (a), the operator may use procedures other than those referred to in (a) provided they have been approved by the State in which the aerodrome is located and are specified in the operations manual.

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CAT.OP.MPA.126 Performance-based navigation

The operator shall ensure that, when performance-based navigation (PBN) is required for the route or procedure to be flown:

(a) the relevant PBN navigation specification is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; and

(b) the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document referred above.

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CAT.OP.MPA.130 Noise abatement procedures — aeroplanes

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(a) Except for VFR operations of other-than complex motor-powered aeroplanes, the operator shall establish appropriate operating departure and arrival/approach procedures for each aeroplane type taking into account the need to minimise the effect of aircraft noise.

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(b) The procedures shall:

(1) ensure that safety has priority over noise abatement; and

(2) be simple and safe to operate with no significant increase in crew workload during critical phases of flight.

CAT.OP.MPA.131 Noise abatement procedures — helicopters

(a) The operator shall ensure that take-off and landing procedures take into account the need to minimise the effect of helicopter noise.

(b) The procedures shall:

(1) ensure that safety has priority over noise abatement; and

(2) be simple and safe to operate with no significant increase in crew workload during critical phases of flight.

CAT.OP.MPA.135 Routes and areas of operation — general

(a) The operator shall ensure that operations are only conducted along routes, or within areas, for which:

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(1) space-based facilities, ground facilities and services, including meteorological services, adequate for the planned operation are provided;

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(2) the performance of the aircraft is adequate to comply with minimum flight altitude requirements;

(3) the equipment of the aircraft meets the minimum requirements for the planned operation; and

(4) appropriate maps and charts are available.

(b) The operator shall ensure that operations are conducted in accordance with any restriction on the routes or the areas of operation specified by the competent authority.

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(c) point (a)(1) shall not apply to operations under VFR by day of other-than complex motor-powered aircraft on flights that depart from and arrive at the same aerodrome or operating site.

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CAT.OP.MPA.136 Routes and areas of operation — single-engined aeroplanes

Unless approved by the competent authority in accordance with Annex V (Part-SPA), Subpart L — SINGLE-ENGINED TURBINE AEROPLANE OPERATIONS AT NIGHT OR IN IMC (SET-IMC), the operator shall ensure that operations of single-engined aeroplanes are only conducted along routes, or within areas, where surfaces are available that permit a safe forced landing to be executed.

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CAT.OP.MPA.137 Routes and areas of operation — helicopters

The operator shall ensure that:

(a) for helicopters operated in performance class 3, surfaces are available that permit a safe forced landing to be executed, except when the helicopter has an approval to operate in accordance with CAT.POL.H.420;

(b) for helicopters operated in performance class 3 and conducting ‘coastal transit’ operations, the operations manual contains procedures to ensure that the width of the coastal corridor, and the equipment carried, is consistent with the conditions prevailing at the time.

CAT.OP.MPA.140 Maximum distance from an adequate aerodrome for two-engined aeroplanes without an ETOPS approval

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(a) Unless approved by the competent authority in accordance with Subpart F of Annex V (Part-SPA), the operator shall not operate a two-engined aeroplane over a route that contains a point further from an adequate aerodrome, under standard conditions in still air, than the appropriate distance for the given type of aeroplane among the following:

(1) for performance class A aeroplanes with a maximum operational passenger seating configuration (MOPSC) of 20 or more, the distance flown in 60 minutes at the one-engine-inoperative (OEI) cruising speed determined in accordance with point (b);

(2) for performance class A aeroplanes with an MOPSC of 19 or less, the distance flown in 120 minutes or, subject to approval by the competent authority, up to 180 minutes for turbojet aeroplanes, at the OEI cruising speed determined in accordance with point (b);

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(3) for performance class B or C aeroplanes, whichever is less:

(i) the distance flown in 120 minutes at the OEI cruising speed determined in accordance with point (b);

(ii) 300 NM.

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(b) The operator shall determine a speed for the calculation of the maximum distance to an adequate aerodrome for each two-engined aeroplane type or variant operated, not exceeding V_{MO} (maximum operating speed) based upon the true airspeed that the aeroplane can maintain with one engine inoperative.

(c) The operator shall include the following data, specific to each type or variant, in the operations manual:

(1) the determined OEI cruising speed; and

(2) the determined maximum distance from an adequate aerodrome.

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(d) To obtain the approval referred to in point (a)(2), the operator shall provide evidence that:

(1) procedures have been established for flight planning and dispatch;

(2) specific maintenance instructions and procedures to ensure the intended levels of continued airworthiness and reliability of the aeroplane including its engines have been established and included in the operator's aircraft maintenance programme in accordance with Annex I (Part-M) to Regulation (EU) No 1321/2014, including:

(i) an engine oil consumption programme;

(ii) an engine condition monitoring programme.

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CAT.OP.MPA.145 Establishment of minimum flight altitudes

(a) The operator shall establish for all route segments to be flown:

(1) minimum flight altitudes that provide the required terrain clearance, taking into account the requirements of Subpart C; and

(2) a method for the flight crew to determine those altitudes.

(b) The method for establishing minimum flight altitudes shall be approved by the competent authority.

(c) Where the minimum flight altitudes established by the operator and a State overflown differ, the higher values shall apply.

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CAT.OP.MPA.155 Carriage of special categories of passengers (SCPs)

(a) Persons requiring special conditions, assistance and/or devices when carried on a flight shall be considered as SCPs including at least:

(1) persons with reduced mobility (PRMs) who, without prejudice to Regulation (EC) No 1107/2006, are understood to be any person whose mobility is reduced due to any physical disability, sensory or locomotory, permanent or temporary, intellectual disability or impairment, any other cause of disability, or age;

(2) infants and unaccompanied children; and

(3) deportees, inadmissible passengers or prisoners in custody.

(b) SCPs shall be carried under conditions that ensure the safety of the aircraft and its occupants according to procedures established by the operator.

(c) SCPs shall not be allocated, nor occupy, seats that permit direct access to emergency exits or where their presence could:

(1) impede crew members in their duties;

(2) obstruct access to emergency equipment; or

(3) impede the emergency evacuation of the aircraft.

(d) The commander shall be notified in advance when SCPs are to be carried on board.

CAT.OP.MPA.160 Stowage of baggage and cargo

The operator shall establish procedures to ensure that:

(a) only hand baggage that can be adequately and securely stowed is taken into the passenger compartment; and

(b) all baggage and cargo on board that might cause injury or damage, or obstruct aisles and exits if displaced, is stowed so as to prevent movement.

CAT.OP.MPA.165 Passenger seating

The operator shall establish procedures to ensure that passengers are seated where, in the event that an emergency evacuation is required, they are able to assist and not hinder evacuation of the aircraft.

CAT.OP.MPA.170 Passenger briefing

The operator shall ensure that passengers are:

(a) given briefings and demonstrations relating to safety in a form that facilitates the application of the procedures applicable in the event of an emergency; and

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(b) provided with a safety briefing card on which picture-type instructions indicate the operation of safety and emergency equipment and emergency exits likely to be used by passengers.

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CAT.OP.MPA.175 Flight preparation

(a) An operational flight plan shall be completed for each intended flight based on considerations of aircraft performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes/operating sites concerned.

(b) The flight shall not be commenced unless the commander is satisfied that:

(1) all items stipulated in 2.a.3 of Annex IV to Regulation (EC) No 216/2008 concerning the airworthiness and registration of the aircraft, instrument and equipment, mass and centre of gravity (CG) location, baggage and cargo and aircraft operating limitations can be complied with;

(2) the aircraft is not operated contrary to the provisions of the configuration deviation list (CDL);

(3) the parts of the operations manual that are required for the conduct of the flight are available;

(4) the documents, additional information and forms required to be available by CAT.GEN.MPA.180 are on board;

(5) current maps, charts and associated documentation or equivalent data are available to cover the intended operation of the aircraft including any diversion that may reasonably be expected;

▼M9

(6) space-based facilities, ground facilities and services that are required for the planned flight are available and adequate;

▼M20

(7) the provisions specified in the operations manual in respect of fuel/energy, oil, oxygen, minimum safe altitudes, aerodrome operating minima and availability of alternate aerodromes, where required, can be complied with for the planned flight;

▼M9

(7a) any navigational database required for performance-based navigation is suitable and current; and

▼B

(8) any additional operational limitation can be complied with.

(c) Notwithstanding (a), an operational flight plan is not required for operations under VFR of:

▼M5

(1) other-than complex motor-powered aeroplane taking off and landing at the same aerodrome or operating site; or

▼B

(2) helicopters with an MCTOM of 3 175 kg or less, by day and over routes navigated by reference to visual landmarks in a local area as specified in the operations manual.

▼M20

CAT.OP.MPA.177 Submission of the ATS flight plan

(a) If an air traffic services (ATS) flight plan is not submitted because it is not required by the rules of the air, adequate information shall be deposited in order to permit alerting services to be activated if required.

(b) When operating from a site where it is impossible to submit an ATS flight plan, the ATS flight plan shall be transmitted as soon as possible after take-off by the commander or the operator.

CAT.OP.MPA.180 Fuel/energy scheme – aeroplanes

(a) The operator shall establish, implement, and maintain a fuel/energy scheme that:

(1) is appropriate for the type(s) of operation performed;

(2) corresponds to the capability of the operator to support its implementation; and

(3) is either:

(i) a basic fuel/energy scheme, which shall form the basis for a basic fuel/energy scheme with variations and an individual fuel/energy scheme; the basic fuel/energy scheme derives from a large-scale analysis of safety and operational data from previous performance and experience of the industry, applying scientific principles; the basic fuel/energy scheme shall ensure, in this order, a safe, effective, and efficient operation of the aircraft; or

(ii) a basic fuel/energy scheme with variations, which is a basic fuel/energy scheme where the analysis referred to in point (i) is used to establish a variation to the basic fuel/energy scheme that ensures, in this order, a safe, effective, and efficient operation of the aircraft; or

(iii) an individual fuel/energy scheme, which derives from a comparative analysis of the operator's safety and operational data, applying scientific principles; the analysis is used to establish a fuel/energy scheme with a higher or equivalent level of safety to that of the basic fuel/energy scheme that ensures, in this order, a safe, effective, and efficient operation of the aircraft.

(b) All fuel/energy schemes shall comprise:

(1) a fuel/energy planning and in-flight re-planning policy;

(2) an aerodrome selection policy; and

(3) an in-flight fuel/energy management policy.

(c) The fuel/energy scheme and any change to it shall require prior approval by the competent authority.

(d) When the operator intends to apply for an individual fuel/energy scheme, it shall:

(1) establish a baseline safety performance of its current fuel/energy scheme;

▼M20

(2) demonstrate its capability to support the implementation of the proposed individual fuel/energy scheme, including the capability to exercise adequate operational control and to ensure exchange of the relevant safety information between the operational control personnel and the flight crew; and

(3) make a safety risk assessment that demonstrates how an equivalent level of safety to that of the current fuel/energy scheme is achieved.

CAT.OP.MPA.181 Fuel/energy scheme – fuel/energy planning and in-flight re-planning policy – aeroplanes

(a) The operator shall:

(1) establish a fuel/energy planning and in-flight re-planning policy as part of the fuel/energy scheme;

(2) ensure that the aeroplane carries a sufficient amount of usable fuel/energy to safely complete the planned flight and to allow for deviations from the planned operation;

(3) develop procedures for the fuel/energy planning and in-flight re-planning policy that shall be contained in the operations manual.

(4) ensure that the fuel/energy planning of the flight is based on:

(i) current aircraft-specific data derived from a fuel/energy consumption monitoring system or, if not available;

(ii) data provided by the aeroplane manufacturer.

(b) The operator shall ensure that the planning of flights includes the operating conditions under which the flight is to be conducted; the operating conditions shall include at least:

(1) aircraft fuel/energy consumption data;

(2) anticipated masses;

(3) anticipated meteorological conditions;

(4) the effects of deferred maintenance items and/or of configuration deviations;

(5) the expected departure and arrival routing and runways; and

(6) anticipated delays.

(c) The operator shall ensure that the pre-flight calculation of the usable fuel/energy that is required for a flight includes:

(1) taxi fuel/energy that shall not be less than the amount expected to be used prior to take-off;

(2) trip fuel/energy that shall be the amount of fuel/energy that is required to enable the aeroplane to fly from take-off, or from the point of in-flight re-planning, to landing at the destination aerodrome;

(3) contingency fuel/energy that shall be the amount of fuel/energy required to compensate for unforeseen factors;

▼M20

(4) destination alternate fuel/energy:

(i) when a flight is operated with at least one destination alternate aerodrome, it shall be the amount of fuel/energy required to fly from the destination aerodrome to the destination alternate aerodrome; or

(ii) when a flight is operated with no destination alternate aerodrome, it shall be the amount of fuel/energy required to hold at the destination aerodrome, while enabling the aeroplane to perform a safe landing, and to allow for deviations from the planned operation; as a minimum, this amount shall be 15-minute fuel/energy at holding speed at 1 500 ft (450 m) above the aerodrome elevation in standard conditions, calculated according to the estimated aeroplane mass on arrival at the destination aerodrome;

(5) final reserve fuel/energy that shall be the amount of fuel/energy that is calculated at holding speed at 1 500 ft (450 m) above the aerodrome elevation in standard conditions according to the aeroplane estimated mass on arrival at the destination alternate aerodrome, or destination aerodrome when no destination alternate aerodrome is required, and shall not be less than:

(i) for aeroplanes with reciprocating engines, the fuel/energy to fly for 45 minutes; or

(ii) for turbine-engined aeroplanes, the fuel/energy to fly for 30 minutes;

(6) additional fuel/energy, if required by the type of operation; it shall be the amount of fuel/energy to enable the aeroplane to land at a fuel/energy en route alternate aerodrome (fuel/energy ERA aerodrome critical scenario) in the event of an aircraft failure that significantly increases the fuel/energy consumption at the most critical point along the route; this additional fuel/energy is required only if the minimum amount of fuel/energy that is calculated according to points (c)(2) to (c)(5) is not sufficient for such an event;

(7) extra fuel/energy to take into account anticipated delays or specific operational constraints; and

(8) discretionary fuel/energy, if required by the commander.

(d) The operator shall ensure that in-flight re-planning procedures for calculating the usable fuel/energy that is required when a flight proceeds along a route or to a destination aerodrome other than the ones originally planned include points (c)(2) to (c)(7).

CAT.OP.MPA.182 Fuel/energy scheme – aerodrome selection policy – aeroplanes

(a) At the planning stage, the operator shall ensure that once the flight has commenced, there is reasonable certainty that an aerodrome where a safe landing can be made will be available at the estimated time of use of that aerodrome.

(b) At the planning stage, to allow for a safe landing in case of an abnormal or emergency situation after take-off, the operator shall select and specify in the operational flight plan a take-off alternate aerodrome if either:

(1) the meteorological conditions at the aerodrome of departure are below the operator's established aerodrome landing minima for that operation; or

▼M20

(2) it would be impossible to return to the aerodrome of departure for other reasons.

(c) The take-off alternate aerodrome shall be located within a distance from the departure aerodrome that minimises the risk of exposure to potential abnormal or emergency situations. In selecting the take-off alternate aerodrome, the operator shall consider at least the following:

(1) actual and forecast meteorological conditions;

(2) availability and quality of the aerodrome infrastructure;

(3) navigation and landing capabilities of the aircraft in abnormal or emergency conditions, taking into account the redundancy of critical systems; and

(4) approvals held (e.g. extended range operations with two-engined aeroplanes (ETOPS), low visibility operation (LVO), etc.).

(d) At the planning stage, for each instrument flight rules (IFR) flight, the operator shall select and specify in the operational and air traffic services (ATS) flight plans one or more aerodromes so that two safe-landing options are available during normal operation when:

(1) reaching the destination aerodrome; or

(2) reaching the point of no return, to any available fuel/energy ERA aerodrome during isolated aerodrome operations; a flight to an isolated aerodrome shall not be continued past the point of no return unless a current assessment of meteorological conditions, traffic, and other operational conditions indicates that a safe landing can be made at the destination aerodrome at the estimated time of use.

The operator shall obtain prior approval from the competent authority for the use of an isolated aerodrome as destination aerodrome.

(e) The operator shall provide appropriate safety margins to flight planning to take into account a possible deterioration of the available forecast meteorological conditions at the estimated time of landing.

(f) For each IFR flight, the operator shall ensure that sufficient means are available to navigate to and land at the destination aerodrome or at any destination alternate aerodrome in the event of loss of capability for the intended approach and landing operation.

CAT.OP.MPA.185 Fuel/energy scheme – in-flight fuel/energy management policy – aeroplanes

(a) The operator shall establish procedures for in-flight fuel/energy management that ensure:

(1) continual validation of the assumptions made during the planning stage (pre-flight or in-flight re-planning, or both);

(2) re-analysis and adjustment, if necessary;

(3) that the amount of usable fuel/energy remaining on board is protected and not less than the fuel/energy that is required to proceed to an aerodrome where a safe landing can be made; and

(4) relevant fuel/energy data for the purpose of points (1), (2), and (3) shall be recorded.

▼**M20**

(b) The operator shall have procedures in place to require the commander to obtain delay information from a reliable source when unforeseen circumstances may result in landing at the destination aerodrome with less than the final reserve fuel/energy plus any:

(1) fuel/energy to proceed to an alternate aerodrome, if required; or

(2) fuel/energy required to proceed to an isolated aerodrome.

(c) The commander shall advise air traffic control (ATC) of a 'minimum fuel/energy' state by declaring 'MINIMUM FUEL' when the commander has:

(1) committed to land at a specific aerodrome; and

(2) calculated that any change to the existing clearance to that aerodrome may result in landing with less than the planned final reserve fuel/energy.

(d) The commander shall declare a situation of 'fuel/energy emergency' by broadcasting 'MAYDAY MAYDAY MAYDAY FUEL' when the usable fuel/energy that is calculated to be available upon landing at the nearest aerodrome where a safe landing can be made is less than the planned final reserve fuel/energy.

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CAT.OP.MPA.190 Fuel/energy scheme – helicopters

(a) The operator shall establish, implement, and maintain a fuel/energy scheme that comprises:

(1) a fuel/energy planning and in-flight re-planning policy; and

(2) an in-flight fuel/energy management policy.

(b) The fuel/energy scheme shall:

(1) be appropriate for the type(s) of operation performed; and

(2) correspond to the capability of the operator to support its implementation.

(c) The fuel/energy scheme and any change to it shall require prior approval by the competent authority.

CAT.OP.MPA.191 Fuel/energy scheme – Fuel/energy planning and in-flight re-planning policy – helicopters

(a) As part of the fuel/energy scheme, the operator shall establish a fuel/energy planning and in-flight re-planning policy to ensure that the aircraft carries a sufficient amount of usable fuel/energy to safely complete the planned flight and to allow for deviations from the planned operation.

(b) The operator shall ensure that the fuel/energy planning of flights is based upon at least the following elements:

(1) procedures contained in the operations manual as well as:

(i) current aircraft-specific data derived from a fuel/energy consumption monitoring system; or

(ii) data provided by the aircraft manufacturer; and

▼**M20**

(2) the operating conditions under which the flight is to be conducted including:

(i) aircraft fuel/energy consumption data;

(ii) anticipated masses;

(iii) anticipated meteorological conditions;

(iv) the effects of deferred maintenance items or of configuration deviations, or both; and

(v) procedures and restrictions introduced by air navigation service providers.

(c) The operator shall ensure that the pre-flight calculation of the usable fuel/energy that is required for a flight includes:

(1) taxi fuel/energy, which shall not be less than the amount expected to be used prior to take-off;

(2) trip fuel/energy;

(3) contingency fuel/energy;

(4) destination alternate fuel/energy if a destination alternate aerodrome is required;

(5) final reserve fuel/energy, which shall not be less than:

(i) if flying under visual flight rules (VFR) and navigating by day with reference to visual landmarks, 20-minute fuel/energy at best-range speed; or

(ii) if flying under VFR and navigating by means other than by reference to visual landmarks or at night, 30-minute fuel/energy at best-range speed; or

(iii) if flying under instrument flight rules (IFR), 30-minute fuel/energy at holding speed at 1 500 ft (450 m) above the aerodrome elevation in standard conditions, calculated according to the helicopter estimated mass on arrival at the destination alternate aerodrome or at the destination aerodrome when no destination alternate aerodrome is required;

(6) extra fuel/energy, to take into account anticipated delays or specific operational constraints; and

(7) discretionary fuel/energy, if required by the commander.

(d) The operator shall ensure that if a flight has to proceed along a route or to a destination aerodrome other than the ones originally planned, in-flight re-planning procedures for calculating the required usable fuel/energy include:

(1) trip fuel/energy for the remainder of the flight;

(2) reserve fuel/energy consisting of:

(i) contingency fuel/energy;

(ii) alternate fuel/energy if a destination alternate aerodrome is required;

(iii) final reserve fuel/energy; and

(iv) additional fuel/energy, if required by the type of operation;

▼M20

(3) extra fuel/energy, to take into account anticipated delays or specific operational constraints; and

(4) discretionary fuel/energy, if required by the commander.

(e) As an alternative to points (b) to (d), for helicopters with a maximum certified take-off mass (MCTOM) of 3 175 kg or less, flying by day and over routes navigated by reference to visual landmarks, or for local helicopter operations (LHO), the fuel/energy policy shall ensure that on completion of the flight, or series of flights, the final reserve fuel/energy is sufficient for:

(1) 30-minute flying time at best-range speed; or

(2) 20-minute flying time at best-range speed, if operating within an area providing continuous and suitable operating sites.

CAT.OP.MPA.192 Selection of aerodromes and operating sites – helicopters

(a) For flights under instrument meteorological conditions (IMC), the operator shall select a take-off alternate aerodrome within one-hour flying time at normal cruising speed if it is not possible to return to the site of departure for meteorological reasons.

(b) At the planning stage, for each instrument flight rules (IFR) flight, the operator shall select and specify in the operational and air traffic services (ATS) flight plans one or more aerodromes or operating sites so that two safe-landing options are available during normal operation, except as provided for under point SPA.HOFO.120 (b).

(c) The operator shall apply appropriate safety margins to flight planning to take into account a possible deterioration of the available forecast meteorological conditions at the estimated time of landing.

(d) For each IFR flight, the operator shall ensure that sufficient means are available to navigate to and land at the destination aerodrome or at any destination alternate aerodrome in the event of loss of capability for the intended approach and landing operation.

CAT.OP.MPA.195 Fuel/energy scheme – in-flight fuel/energy management policy – helicopters

(a) The operator shall establish procedures to ensure that in-flight fuel/energy checks and fuel/energy management are performed.

(b) The commander shall monitor the amount of usable fuel/energy remaining on board to ensure that it is protected and not less than the fuel/energy that is required to proceed to an aerodrome or operating site where a safe landing can be made.

(c) The commander shall advise air traffic control (ATC) of a ‘minimum fuel/energy’ state by declaring ‘MINIMUM FUEL’ when the commander has:

(1) committed to land at an aerodrome or operating site; and

(2) calculated that any change to the existing clearance to that aerodrome or operating site, or other air traffic delays, may result in landing with less than the planned final reserve fuel/energy.

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(d) The commander shall declare a situation of 'fuel/energy emergency' by broadcasting 'MAYDAY MAYDAY MAYDAY FUEL' when the usable fuel/energy estimated to be available upon landing at the nearest aerodrome or operating site where a safe landing can be made is less than the planned final reserve fuel/energy.

CAT.OP.MPA.200 Special refuelling or defuelling of the aircraft

(a) Special refuelling or defuelling shall only be conducted if the operator:

(1) has performed a risk assessment;

(2) has developed procedures; and

(3) has established a training programme for its personnel involved in such operations.

(b) Special refuelling or defuelling applies to:

(1) refuelling with an engine running or rotors turning;

(2) refuelling/defuelling with passengers embarking, on board, or disembarking; and

(3) refuelling/defuelling with wide-cut fuel.

(c) For aeroplanes, any special refuelling or defuelling procedures and any change to them shall require prior approval by the competent authority.

(d) For helicopters, refuelling procedures with rotors turning and any change to them shall require prior approval by the competent authority.

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CAT.OP.MPA.205 Push back and towing — aeroplanes

Push back and towing procedures specified by the operator shall be conducted in accordance with established aviation standards and procedures.

CAT.OP.MPA.210 Crew members at stations

(a) *Flight crew members*

(1) During take-off and landing each flight crew member required to be on duty in the flight crew compartment shall be at the assigned station.

(2) During all other phases of flight each flight crew member required to be on duty in the flight crew compartment shall remain at the assigned station, unless absence is necessary for the performance of duties in connection with the operation or for physiological needs, provided at least one suitably qualified pilot remains at the controls of the aircraft at all times.

(3) During all phases of flight each flight crew member required to be on duty in the flight crew compartment shall remain alert. If a lack of alertness is encountered, appropriate countermeasures shall be used. If unexpected fatigue is experienced, a controlled rest procedure, organised by the commander, may be used if workload permits. Controlled rest taken in this way shall not be considered to be part of a rest period for purposes of calculating flight time limitations nor used to justify any extension of the duty period.

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(b) *Cabin crew members*

During critical phases of flight, each cabin crew member shall be seated at the assigned station and shall not perform any activities other than those required for the safe operation of the aircraft.

CAT.OP.MPA.215 Use of headset — aeroplanes

(a) Each flight crew member required to be on duty in the flight crew compartment shall wear a headset with boom microphone or equivalent. The headset shall be used as the primary device for voice communications with ATS:

(1) when on the ground:

(i) when receiving the ATC departure clearance via voice communication; and

(ii) when engines are running;

(2) when in flight:

(i) below transition altitude; or

(ii) 10 000 ft, whichever is higher;

and

(3) whenever deemed necessary by the commander.

(b) In the conditions of (a), the boom microphone or equivalent shall be in a position that permits its use for two-way radio communications.

CAT.OP.MPA.216 Use of headset — helicopters

Each flight crew member required to be on duty in the flight crew compartment shall wear a headset with boom microphone, or equivalent, and use it as the primary device to communicate with ATS.

CAT.OP.MPA.220 Assisting means for emergency evacuation

The operator shall establish procedures to ensure that before taxiing, take-off and landing and when safe and practicable to do so, all means of assistance for emergency evacuation that deploy automatically are armed.

CAT.OP.MPA.225 Seats, safety belts and restraint systems

(a) *Crew members*

(1) During take-off and landing, and whenever decided by the commander in the interest of safety, each crew member shall be properly secured by all safety belts and restraint systems provided.

(2) During other phases of the flight, each flight crew member in the flight crew compartment shall keep the assigned station safety belt fastened while at his/her station.

(b) *Passengers*

(1) Before take-off and landing, and during taxiing, and whenever deemed necessary in the interest of safety, the commander shall be satisfied that each passenger on board occupies a seat or berth with his/her safety belt or restraint system properly secured.

▼B

(2) The operator shall make provisions for multiple occupancy of aircraft seats that is only allowed on specified seats. The commander shall be satisfied that multiple occupancy does not occur other than by one adult and one infant who is properly secured by a supplementary loop belt or other restraint device.

CAT.OP.MPA.230 Securing of passenger compartment and galley(s)

(a) The operator shall establish procedures to ensure that before taxiing, take-off and landing all exits and escape paths are unobstructed.

(b) The commander shall ensure that before take-off and landing, and whenever deemed necessary in the interest of safety, all equipment and baggage are properly secured.

CAT.OP.MPA.235 Life-jackets — helicopters

The operator shall establish procedures to ensure that, when operating a helicopter over water in performance class 3, account is taken of the duration of the flight and conditions to be encountered when deciding if life-jackets are to be worn by all occupants.

CAT.OP.MPA.240 Smoking on board

The commander shall not allow smoking on board:

(a) whenever considered necessary in the interest of safety;

(b) during refuelling and defuelling of the aircraft;

(c) while the aircraft is on the surface unless the operator has determined procedures to mitigate the risks during ground operations;

(d) outside designated smoking areas, in the aisle(s) and lavatory(ies);

(e) in cargo compartments and/or other areas where cargo is carried that is not stored in flame-resistant containers or covered by flame-resistant canvas; and

(f) in those areas of the passenger compartment where oxygen is being supplied.

▼M21

CAT.OP.MPA.245 Meteorological conditions — all aircraft

(a) On IFR flights, the commander shall only:

(1) commence the flight; or

(2) continue beyond the point from which a revised ATS flight plan applies in the event of in-flight re-planning,

when information is available indicating that the expected meteorological conditions, at the time of arrival, at the destination and/or required alternate aerodrome(s) are at or above the planning minima.

(b) On IFR flights, the commander shall only continue towards the planned destination aerodrome when the latest information available indicates that, at the expected time of arrival, the meteorological conditions at the destination, or at least one destination alternate aerodrome, are at or above the applicable aerodrome operating minima.

▼M21

(c) On VFR flights, the commander shall only commence the flight when the appropriate meteorological reports and/or forecasts indicate that the meteorological conditions along the part of the route to be flown under VFR will, at the appropriate time, be at or above the VFR limits.

CAT.OP.MPA.246 Meteorological conditions — aeroplanes

In addition to CAT.OP.MPA.245, on IFR flights with aeroplanes, the commander shall only continue beyond:

(a) the decision point when using the reduced contingency fuel/energy (RCF) procedure; or

(b) point of no return when using the isolated aerodrome procedure,

when information is available indicating that the expected meteorological conditions, at the time of arrival, at the destination and/or required alternate aerodrome(s) are at or above the applicable aerodrome operating minima.

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CAT.OP.MPA.247 Meteorological conditions — helicopters

In addition to CAT.OP.MPA.245:

▼M21

(a) On VFR flights overwater out of sight of land with helicopters, the commander shall only commence take-off when the appropriate meteorological reports and/or forecasts indicate that the ceiling will be above 600 ft by day or 1 200 ft by night.

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▼B

(c) Flight with helicopters to a helideck or elevated FATO shall only be operated when the mean wind speed at the helideck or elevated FATO is reported to be less than 60 kt.

CAT.OP.MPA.250 Ice and other contaminants — ground procedures

(a) The operator shall establish procedures to be followed when ground de-icing and anti-icing and related inspections of the aircraft are necessary to allow the safe operation of the aircraft.

(b) The commander shall only commence take-off if the aircraft is clear of any deposit that might adversely affect the performance or controllability of the aircraft, except as permitted under (a) and in accordance with the AFM.

CAT.OP.MPA.255 Ice and other contaminants — flight procedures

(a) The operator shall establish procedures for flights in expected or actual icing conditions.

(b) The commander shall only commence a flight or intentionally fly into expected or actual icing conditions if the aircraft is certified and equipped to cope with such conditions.

(c) If icing exceeds the intensity of icing for which the aircraft is certified or if an aircraft not certified for flight in known icing conditions encounters icing, the commander shall exit the icing conditions without delay, by a change of level and/or route, if necessary by declaring an emergency to ATC.

▼M20

CAT.OP.MPA.260 Fuel/energy and oil supply

The commander shall only commence a flight or continue in the event of in-flight re-planning, when satisfied that the aircraft carries at least the planned amount of usable fuel/energy and oil to safely completethe flight, taking into account the expected operating conditions.

▼M21

CAT.OP.MPA.265 Take-off conditions

Before commencing take-off, the commander shall be satisfied that:

(a) the meteorological conditions at the aerodrome or operating site and the condition of the runway/FATO intended to be used will not prevent a safe take-off and departure; and

(b) the selected aerodrome operating minima are consistent with all of the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) flight crew qualifications.

▼B

CAT.OP.MPA.270 Minimum flight altitudes

The commander or the pilot to whom conduct of the flight has been delegated shall not fly below specified minimum altitudes except when:

(a) necessary for take-off or landing; or

(b) descending in accordance with procedures approved by the competent authority.

CAT.OP.MPA.275 Simulated abnormal situations in flight

The operator shall ensure that when carrying passengers or cargo the following are not simulated:

(a) abnormal or emergency situations that require the application of abnormal or emergency procedures; or

(b) flight in IMC by artificial means.

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CAT.OP.MPA.280 [INTENTIONALLY LEFT BLANK]

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CAT.OP.MPA.285 Use of supplemental oxygen

The commander shall ensure that flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen continuously whenever the cabin altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft.

▼B

CAT.OP.MPA.290 Ground proximity detection

When undue proximity to the ground is detected by a flight crew member or by a ground proximity warning system, the pilot flying shall take corrective action immediately to establish safe flight conditions.

▼M9

CAT.OP.MPA.295 Use of airborne collision avoidance system (ACAS)

The operator shall establish operational procedures and training programmes when ACAS is installed and serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.

▼M21

CAT.OP.MPA.300 Approach and landing conditions

Before commencing an approach operation, the commander shall be satisfied that:

(a) the meteorological conditions at the aerodrome or operating site and the condition of the runway/FATO intended to be used will not prevent a safe approach, landing or go-around, considering the performance information contained in the operations manual; and

(b) the selected aerodrome operating minima are consistent with all of the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) flight crew qualifications.

▼M16

CAT.OP.MPA.301 Approach and landing conditions — helicopters

Before commencing an approach to land, the commander shall be satisfied that according to the information available to him or her, the weather at the aerodrome and the condition of the final approach and take-off area (FATO) intended to be used would not prevent a safe approach, landing or missed approach, having regard to the performance information contained in the operations manual (OM).

CAT.OP.MPA.303 In-flight check of the landing distance at time of arrival — aeroplanes

(a) No approach to land shall be continued unless the landing distance available (LDA) on the intended runway is at least 115 % of the landing distance at the estimated time of landing, determined in accordance with the performance information for the assessment of the landing distance at time of arrival (LDTA) and the approach to land is performed with performance class A aeroplanes that are certified in accordance with either of the following certification specifications, as indicated in the type-certificate:

▼**M16**

(1) CS-25 or equivalent;

(2) CS-23 at level 4 with performance level ‘High speed’ or equivalent.

(b) For performance class A aeroplanes other than those referred to in point (a), no approach to land shall be continued, except in either of the following situations:

(1) the LDA on the intended runway is at least 115 % of the landing distance at the estimated time of landing, determined in accordance with the performance information for the assessment of the LDTA;

(2) if performance information for the assessment of the LDTA is not available, the LDA on the intended runway at the estimated time of landing is at least the required landing distance determined in accordance with point CAT.POL.A.230 or point CAT.POL.A.235, as applicable.

(c) For performance class B aeroplanes, no approach to land shall be continued, except in either of the following situations:

(1) the LDA on the intended runway is at least 115 % of the landing distance at the estimated time of landing, determined in accordance with the performance information for the assessment of the LDTA;

(2) if performance information for the assessment of the LDTA is not available, the LDA on the intended runway at the estimated time of landing is at least the required landing distance determined in accordance with point CAT.POL.A.330 or point CAT.POL.A.335, as applicable.

(d) For performance class C aeroplanes, no approach to land shall be continued, except in either of the following situations:

(1) the LDA on the intended runway is at least 115 % of the landing distance at the estimated time of landing, determined in accordance with the performance information for the assessment of the LDTA;

(2) if performance information for the assessment of the LDTA is not available, the LDA on the intended runway at the estimated time of landing is at least the required landing distance determined in accordance with point CAT.POL.A.430 or point CAT.POL.A.435, as applicable.

(e) Performance information for the assessment of the LDTA shall be based on approved data contained in the AFM. When approved data contained in the AFM are insufficient in respect of the assessment of the LDTA, they shall be supplemented with other data which are either determined in accordance with the applicable certification standards for aeroplanes or determined in line with the AMCs issued by the Agency.

▼M16

(f) The operator shall specify in the OM the performance information for the assessment of the LDTA and the assumptions made for its development, including other data that, in accordance with point (e), may be used to supplement that contained in the AFM.

▼M21

CAT.OP.MPA.305 Commencement and continuation of approach

(a) For aeroplanes, if the reported visibility (VIS) or controlling RVR for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation shall not be continued:

(1) past a point at which the aeroplane is 1 000 ft above the aerodrome elevation; or

(2) into the final approach segment (FAS) if the DH or MDH is higher than 1 000 ft.

(b) For helicopters, if the reported RVR is less than 550 m and the controlling RVR for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation shall not be continued:

(1) past a point at which the helicopter is 1 000 ft above the aerodrome elevation; or

(2) into the FAS if the DH or MDH is higher than 1 000 ft.

(c) If the required visual reference is not established, then a missed approach shall be executed at or before the DA/H or the MDA/H.

(d) If the required visual reference is not maintained after DA/H or MDA/H, then a go-around shall be executed promptly.

(e) Notwithstanding point (a), in the case where no RVR is reported, and the reported VIS is less than the applicable minimum, but the converted meteorological visibility (CMV) is equal or greater than the applicable minimum, then the instrument approach can be continued to the DA/H or MDA/H.

CAT.OP.MPA.310 Operating procedures — threshold crossing height — aeroplanes

The operator shall establish operational procedures designed to ensure that an aeroplane conducting 3D instrument approach operations crosses the threshold of the runway by a safe margin, with the aeroplane in the landing configuration and attitude.

▼M16

CAT.OP.MPA.311 Reporting on runway braking action

Whenever the runway braking action encountered during the landing roll is not as good as that reported by the aerodrome operator in the runway condition report (RCR), the commander shall notify the air traffic services (ATS) by means of a special air-report (AIREP) as soon as practicable.

▼M21

CAT.OP.MPA.312 EFVS 200 operations

(a) An operator that intends to conduct EFVS 200 operations shall ensure that:

(1) the aircraft is certified for the intended operations;

(2) only runways, FATO and instrument approach procedures (IAPs) suitable for EFVS operations are used;

(3) the flight crew members are competent to conduct the intended operation, and a training and checking programme for the flight crew members and relevant personnel involved in the flight preparation is established;

(4) operating procedures are established;

(5) any relevant information is documented in the minimum equipment list (MEL);

(6) any relevant information is documented in the maintenance programme;

(7) safety assessments are carried out and performance indicators are established to monitor the level of safety of the operation; and

(8) the aerodrome operating minima take into account the capability of the system used.

(b) The operator shall not conduct EFVS 200 operations when conducting LVOs.

(c) Notwithstanding point (a)(1), the operator may use EVSs meeting the minimum criteria to conduct EFVS 200 operations, provided that this is approved by the competent authority.

▼B

CAT.OP.MPA.315 Flight hours reporting — helicopters

The operator shall make available to the competent authority the hours flown for each helicopter operated during the previous calendar year.

▼M15

CAT.OP.MPA.320 Aeroplane categories

(a) Aeroplane categories shall be based on the indicated airspeed at threshold (V_{AT}) which is equal to the stalling speed (V_{SO}) multiplied by 1,3 or one-g (gravity) stall speed (V_{S1g}) multiplied by 1,23 in the landing configuration at the maximum certified landing mass. If both V_{SO} and V_{S1g} are available, the higher resulting V_{AT} shall be used.

(b) The aeroplane categories specified in the table below shall be used.

Table 1

Aeroplane categories corresponding to V_{AT} values

Aeroplane category	V_{AT}
A	Less than 91 kt
B	From 91 to 120 kt
C	From 121 to 140 kt
D	From 141 to 165 kt
E	From 166 to 210 kt

(c) The landing configuration that is to be taken into consideration shall be specified in the operations manual.

(d) The operator may apply a lower landing mass for determining the V_{AT} if approved by the competent authority. Such a lower landing mass shall be a permanent value, independent of the changing conditions of day-to-day operations.

▼M14

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▼B

SUBPART C

AIRCRAFT PERFORMANCE AND OPERATING LIMITATIONS

SECTION 1

Aeroplanes

CHAPTER 1

General requirements

CAT.POL.A.100 Performance classes

(a) The aeroplane shall be operated in accordance with the applicable performance class requirements.

(b) Where full compliance with the applicable requirements of this Section cannot be shown due to specific design characteristics, the operator shall apply approved performance standards that ensure a level of safety equivalent to that of the appropriate chapter.

▼B

CAT.POL.A.105 General

(a) The mass of the aeroplane:

(1) at the start of the take-off; or

(2) in the event of in-flight replanning, at the point from which the revised operational flight plan applies,

shall not be greater than the mass at which the requirements of the appropriate chapter can be complied with for the flight to be undertaken. Allowance may be made for expected reductions in mass as the flight proceeds and for fuel jettisoning.

(b) The approved performance data contained in the AFM shall be used to determine compliance with the requirements of the appropriate chapter, supplemented as necessary with other data as prescribed in the relevant chapter. The operator shall specify other data in the operations manual. When applying the factors prescribed in the appropriate chapter, account may be taken of any operational factors already incorporated in the AFM performance data to avoid double application of factors.

(c) Due account shall be taken of aeroplane configuration, environmental conditions and the operation of systems that have an adverse effect on performance.

▼M16

(d) The operator shall take account of charting accuracy when assessing the take-off requirements of the applicable chapters.

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CHAPTER 2

Performance class A

CAT.POL.A.200 General

(a) The approved performance data in the AFM shall be supplemented as necessary with other data if the approved performance data in the AFM is insufficient in respect of items such as:

(1) accounting for reasonably expected adverse operating conditions such as take-off and landing on contaminated runways; and

(2) consideration of engine failure in all flight phases.

(b) For wet and contaminated runways, performance data determined in accordance with applicable standards on certification of large aeroplanes or equivalent shall be used.

(c) The use of other data referred to in (a) and equivalent requirements referred to in (b) shall be specified in the operations manual.

▼B

CAT.POL.A.205 Take-off

(a) The take-off mass shall not exceed the maximum take-off mass specified in the AFM for the pressure altitude and the ambient temperature at the aerodrome of departure.

(b) The following requirements shall be met when determining the maximum permitted take-off mass:

(1) the accelerate-stop distance shall not exceed the accelerate-stop distance available (ASDA);

(2) the take-off distance shall not exceed the take-off distance available, with a clearway distance not exceeding half of the take-off run available (TORA);

(3) the take-off run shall not exceed the TORA;

(4) a single value of V_1 shall be used for the rejected and continued take-off; and

(5) on a wet or contaminated runway, the take-off mass shall not exceed that permitted for a take-off on a dry runway under the same conditions.

(c) When showing compliance with (b), the following shall be taken into account:

(1) the pressure altitude at the aerodrome;

(2) the ambient temperature at the aerodrome;

(3) the runway surface condition and the type of runway surface;

(4) the runway slope in the direction of take-off;

(5) not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component; and

(6) the loss, if any, of runway length due to alignment of the aeroplane prior to take-off.

CAT.POL.A.210 Take-off obstacle clearance

(a) The net take-off flight path shall be determined in such a way that the aeroplane clears all obstacles by a vertical distance of at least 35 ft or by a horizontal distance of at least 90 m plus 0,125 × D, where D is the horizontal distance the aeroplane has travelled from the end of the take-off distance available (TODA) or the end of the take-off distance if a turn is scheduled before the end of the TODA. For aeroplanes with a wingspan of less than 60 m, a horizontal obstacle clearance of half the aeroplane wingspan plus 60 m, plus 0,125 × D may be used.

▼B

(b) When showing compliance with (a):

(1) The following items shall be taken into account:

(i) the mass of the aeroplane at the commencement of the take-off run;

(ii) the pressure altitude at the aerodrome;

(iii) the ambient temperature at the aerodrome; and

(iv) not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component.

(2) Track changes shall not be allowed up to the point at which the net take-off flight path has achieved a height equal to one half the wingspan but not less than 50 ft above the elevation of the end of the TORA. Thereafter, up to a height of 400 ft it is assumed that the aeroplane is banked by no more than 15°. Above 400 ft height bank angles greater than 15°, but not more than 25° may be scheduled.

(3) Any part of the net take-off flight path in which the aeroplane is banked by more than 15° shall clear all obstacles within the horizontal distances specified in (a), (b)(6) and (b)(7) by a vertical distance of at least 50 ft.

(4) Operations that apply increased bank angles of not more than 20° between 200 ft and 400 ft, or not more than 30° above 400 ft, shall be carried out in accordance with CAT.POL.A.240.

(5) Adequate allowance shall be made for the effect of bank angle on operating speeds and flight path including the distance increments resulting from increased operating speeds.

(6) For cases where the intended flight path does not require track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:

(i) 300 m, if the pilot is able to maintain the required navigational accuracy through the obstacle accountability area; or

(ii) 600 m, for flights under all other conditions.

(7) For cases where the intended flight path requires track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:

(i) 600 m, if the pilot is able to maintain the required navigational accuracy through the obstacle accountability area; or

▼B

(ii) 900 m, for flights under all other conditions.

(c) The operator shall establish contingency procedures to satisfy the requirements in (a) and (b) and to provide a safe route, avoiding obstacles, to enable the aeroplane to either comply with the en-route requirements of CAT.POL.A.215, or land at either the aerodrome of departure or at a take-off alternate aerodrome.

CAT.POL.A.215 En-route — one-engine-inoperative (OEI)

(a) The OEI en-route net flight path data shown in the AFM, appropriate to the meteorological conditions expected for the flight, shall allow demonstration of compliance with (b) or (c) at all points along the route. The net flight path shall have a positive gradient at 1 500 ft above the aerodrome where the landing is assumed to be made after engine failure. In meteorological conditions requiring the operation of ice protection systems, the effect of their use on the net flight path shall be taken into account.

▼M16

(b) The gradient of the en-route net flight path shall be positive at least 1 000 ft above all terrain and obstructions along the route within 9,3 km (5 NM) on either side of the intended track.

(c) The en-route net flight path shall permit the aeroplane to continue flight from the cruising altitude to an aerodrome where a landing can be made in accordance with point CAT.POL.A.230 or CAT.POL.A.235, as appropriate. The en-route net flight path shall clear vertically, by at least 2 000 ft, all terrain and obstructions along the route within 9,3 km (5 NM) on either side of the intended track, taking into account the following elements:

(1) the engine is assumed to fail at the most critical point along the route;

(2) account is taken of the effects of winds on the flight path;

▼M27

(3) fuel jettisoning is permitted to an extent consistent with reaching the aerodrome where the aeroplane is assumed to land after engine failure with the required fuel reserves in accordance with point CAT.OP.MPA.181, appropriate for an alternate aerodrome, if a safe procedure is used;

▼M16

(4) the aerodrome, where the aeroplane is assumed to land after engine failure, shall meet the following criteria:

(i) the performance requirements for the expected landing mass are met;

(ii) weather reports or forecasts and runway condition reports indicate that a safe landing can be accomplished at the estimated time of landing;

(5) if the AFM does not contain en-route net flight path data, the gross OEI en-route flight path shall be reduced by a climb gradient of 1,1 % for two-engined aeroplanes, 1,4 % for three-engined aeroplanes, and 1,6 % for four-engined aeroplanes.

(d) The operator shall increase the width margins provided for in points (b) and (c) to 18,5 km (10 NM) if the navigational accuracy does not meet at least navigation specification RNAV 5.

▼M16

CAT.POL.A.220 En route — aeroplanes with three or more engines, two engines inoperative

(a) An aeroplane that has three or more engines shall not be away from an aerodrome at which the requirements of points CAT.POL.A.230 or CAT.POL.A.235(a) for the expected landing mass are met accordingly, at any point along the intended track for more than 90 minutes, with all engines operating at cruising power or thrust, as appropriate, at standard temperature in still air, unless points (b) to (f) of this point are complied with.

(b) The two-engines-inoperative en-route net flight path data shall allow the aeroplane to continue the flight, in the expected meteorological conditions, from the point where two engines are assumed to fail simultaneously to an aerodrome at which it is possible to land and come to a complete stop when using the prescribed procedure for a landing with two engines inoperative. The en-route net flight path shall clear vertically, by at least 2 000 ft, all terrain and obstructions along the route within 9,3 km (5 NM) on either side of the intended track. At altitudes and in meteorological conditions that require ice protection systems to be operable, the effect of their use on the en-route net flight path data shall be taken into account. If the navigational accuracy does not meet at least navigation specification RNAV 5, the operator shall increase the prescribed width margin provided for in the second sentence to 18,5 km (10 NM).

(c) The two engines shall be assumed to fail at the most critical point of that portion of the route where the aeroplane is operated for more than 90 minutes, with all engines operating at cruising power or thrust, as appropriate, at standard temperature in still air, away from the aerodrome referred to in point (a).

(d) The net flight path shall have a positive gradient at 1 500 ft above the aerodrome where the landing is assumed to be made after the failure of two engines.

(e) Fuel jettisoning shall be permitted to an extent consistent with reaching the aerodrome with the required fuel reserves referred to in point (f), if a safe procedure is used.

▼M20

(f) The expected mass of the aeroplane at the point where the two engines are assumed to fail shall not be less than that which would include sufficient fuel/energy to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at an altitude of at least 1 500 ft (450 m) directly over the landing area, and thereafter, to fly for 15 minutes at cruising power or thrust, as appropriate.

▼B

CAT.POL.A.225 Landing — destination and alternate aerodromes

(a) The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) shall not exceed the maximum landing mass specified for the altitude and the ambient temperature expected for the estimated time of landing at the destination aerodrome and alternate aerodrome.

▼M16

CAT.POL.A.230 Landing — dry runways

(a) The landing mass of the aeroplane determined in accordance with point CAT.POL.A.105(a) for the estimated time of landing at the destination aerodrome and at any alternate aerodrome shall allow a full-stop landing from 50 ft above the threshold:

(1) for turbojet-powered aeroplanes, within 60 % of the landing distance available (LDA);

(2) for turbopropeller-powered aeroplanes, within 70 % of the LDA;

(3) by way of derogation from points (a)(1) and (a)(2), for aeroplanes that are approved for reduced landing distance operations under point CAT.POL.A.255, within 80 % of the LDA.

(b) For steep approach operations, the operator shall use the landing distance data factored in accordance with point (a)(1) or (a)(2), as applicable, based on a screen height of less than 60 ft, but not less than 35 ft, and shall comply with point CAT.POL.A.245.

(c) For short landing operations, the operator shall use the landing distance data factored in accordance with point (a)(1) or (a)(2), as applicable, and shall comply with point CAT.POL.A.250.

(d) When determining the landing mass, the operator shall take into account the following:

(1) not more than 50 % of the headwind component or not less than 150 % of the tailwind component;

(2) corrections as provided in the AFM.

▼M27

(e) For dispatching the aeroplane, the aeroplane shall:

(1) land on the most favourable runway, in still air; and

(2) land on the runway most likely to be assigned, considering the probable wind speed and direction, the ground-handling characteristics of the aeroplane and other conditions such as landing aids and terrain.

▼M16

(f) If the operator is unable to comply with point (e)(2) for the destination aerodrome, the aeroplane shall only be dispatched if an alternate aerodrome is designated that allows full compliance with one of the following:

(1) points (a) to (d), if the runway at the estimated time of arrival is dry;

(2) points CAT.POL.A.235(a) to (d), if the runway at the estimated time of arrival is wet or contaminated.

CAT.POL.A.235 Landing — wet and contaminated runways

(a) When the appropriate weather reports or forecasts, or both, indicate that the runway at the estimated time of arrival may be wet, the LDA shall be one of the following distances:

(1) a landing distance provided in the AFM for use on wet runways at time of dispatch, but not less than that required by point CAT.POL.A.230(a)(1) or (a)(2), as applicable;

(2) if a landing distance is not provided in the AFM for use on wet runways at time of dispatch, at least 115 % of the required landing distance, determined in accordance with point CAT.POL.A.230(a)(1) or (a)(2), as applicable;

▼M16

(3) a landing distance shorter than that required by point (a)(2), but not less than that required by point CAT.POL.A.230(a)(1) or (a)(2), as applicable, if the runway has specific friction-improving characteristics and the AFM includes specific additional information for landing distance on that runway type;

(4) by way of derogation from points (a)(1), (a)(2) and (a)(3), for aeroplanes that are approved for reduced landing distance operations under point CAT.POL.A.255, the landing distance determined in accordance with point CAT.POL.A.255(b)(2)(v)(B).

(b) When the appropriate weather reports or forecasts indicate that the runway at the estimated time of arrival may be contaminated, the LDA shall be one of the following distances:

(1) at least the landing distance determined in accordance with point (a), or at least 115 % of the landing distance determined in accordance with approved contaminated landing distance data or equivalent, whichever is greater;

(2) on specially prepared winter runways, a landing distance shorter than that required by point (b)(1), but not less than that required by point (a), may be used if the AFM includes specific additional information about landing distances on contaminated runways. Such landing distance shall be at least 115 % of the landing distance contained in the AFM.

(c) By way of derogation from point (b), the increment of 15 % needs not to be applied if it is already included in the approved landing distance data or equivalent.

(d) For points (a) and (b), the criteria of points CAT.POL.A.230(b), (c) and (d) shall apply accordingly.

▼M27

(e) For dispatching the aeroplane, the aeroplane shall:

(1) land on the most favourable runway, in still air; and

(2) land on the runway most likely to be assigned, considering the probable wind speed and direction, the ground-handling characteristics of the aeroplane and other conditions such as landing aids and terrain.

▼M16

(f) If the operator is unable to comply with point (e)(1) for a destination aerodrome where the appropriate weather reports or forecasts indicate that the runway at the estimated time of arrival may be contaminated and where a landing depends upon a specific wind component, the aeroplane shall only be dispatched if two alternate aerodromes are designated.

(g) If the operator is unable to comply with point (e)(2) for the destination aerodrome where the appropriate weather reports or forecasts indicate that the runway at the estimated time of arrival may be wet or contaminated, the aeroplane shall only be dispatched if an alternate aerodrome is designated.

(h) For points (f) and (g), the designated alternate aerodrome or aerodromes shall allow compliance with one of the following:

(1) points CAT.POL.A.230(a) to (d), if the runway at the estimated time of arrival is dry;

(2) points CAT.POL.A.235(a) to (d), if the runway at the estimated time of arrival is wet or contaminated.

▼B

CAT.POL.A.240 Approval of operations with increased bank angles

(a) Operations with increased bank angles require prior approval by the competent authority.

(b) To obtain the approval, the operator shall provide evidence that the following conditions are met:

(1) the AFM contains approved data for the required increase of operating speed and data to allow the construction of the flight path considering the increased bank angles and speeds;

(2) visual guidance is available for navigation accuracy;

(3) weather minima and wind limitations are specified for each runway; and

▼M9

(4) the flight crew has obtained adequate knowledge of the route to be flown and of the procedures to be used in accordance with Subpart FC of Part-ORO.

▼B

CAT.POL.A.245 Approval of steep approach operations

(a) Steep approach operations using glideslope angles of 4,5° or more and with screen heights of less than 60 ft, but not less than 35 ft, require prior approval by the competent authority.

(b) To obtain the approval, the operator shall provide evidence that the following conditions are met:

(1) the AFM states the maximum approved glideslope angle, any other limitations, normal, abnormal or emergency procedures for the steep approach as well as amendments to the field length data when using steep approach criteria;

(2) for each aerodrome at which steep approach operations are to be conducted:

(i) a suitable glide path reference system comprising at least a visual glide path indicating system shall be available;

(ii) weather minima shall be specified; and

(iii) the following items shall be taken into consideration:

(A) the obstacle situation;

(B) the type of glide path reference and runway guidance;

(C) the minimum visual reference to be required at decision height (DH) and MDA;

(D) available airborne equipment;

(E) pilot qualification and special aerodrome familiarisation;

(F) AFM limitations and procedures; and

(G) missed approach criteria.

▼B

CAT.POL.A.250 Approval of short landing operations

(a) Short landing operations require prior approval by the competent authority.

(b) To obtain the approval, the operator shall provide evidence that the following conditions are met:

(1) the distance used for the calculation of the permitted landing mass may consist of the usable length of the declared safe area plus the declared LDA;

(2) the State of the aerodrome has determined a public interest and operational necessity for the operation, either due to the remoteness of the aerodrome or to physical limitations relating to extending the runway;

(3) the vertical distance between the path of the pilot's eye and the path of the lowest part of the wheels, with the aeroplane established on the normal glide path, does not exceed 3 m;

(4) RVR/VIS minimum shall not be less than 1 500 m and wind limitations are specified in the operations manual;

(5) minimum pilot experience, training and special aerodrome familiarisation requirements are specified and met;

(6) the crossing height over the beginning of the usable length of the declared safe area is 50 ft;

(7) the use of the declared safe area is approved by the State of the aerodrome;

(8) the usable length of the declared safe area does not exceed 90 m;

(9) the width of the declared safe area is not less than twice the runway width or twice the wing span, whichever is greater, centred on the extended runway centre line;

(10) the declared safe area is clear of obstructions or depressions that would endanger an aeroplane undershooting the runway and no mobile object is permitted on the declared safe area while the runway is being used for short landing operations;

(11) the slope of the declared safe area does not exceed 5 % upward nor 2 % downward in the direction of landing; and

▼M16

(11a) reduced required landing distance operations in accordance with CAT.POL.A.255 are prohibited;

▼B

(12) additional conditions, if specified by the competent authority, taking into account aeroplane type characteristics, orographic characteristics in the approach area, available approach aids and missed approach/balked landing considerations.

▼M16

CAT.POL.A.255 Approval of reduced required landing distance operations

(a) An aeroplane operator may conduct landing operations within 80 % of the landing distance available (LDA) if it complies with the following conditions:

(1) the airplane has an MOPSC of 19 or less;

▼**M16**

(2) the airplane has an eligibility statement for reduced required landing distance in the AFM;

(3) the airplane is used in non-scheduled on-demand commercial air transport (CAT) operations;

(4) the landing mass of the aeroplane allows a full-stop landing within that reduced landing distance;

(5) the operator has obtained a prior approval of the competent authority.

(b) To obtain the approval referred to in point (a)(5), the operator shall provide evidence of either of the following circumstances:

(1) that a risk assessment has been conducted to demonstrate that a level of safety equivalent to that intended by point CAT.POL.A.230(a)(1) or (2), as applicable, is achieved;

(2) that the following conditions are met:

(i) special-approach procedures, such as steep approaches, planned screen heights higher than 60 ft or lower than 35 ft, low-visibility operations, approaches outside stabilised approach criteria approved under point CAT.OP.MPA.115(a), are prohibited;

(ii) short landing operations in accordance with point CAT.POL.A.250 are prohibited;

(iii) landing on contaminated runways is prohibited;

(iv) an adequate training, checking and monitoring process for the flight crew is established;

(v) an aerodrome landing analysis programme (ALAP) is established by the operator to ensure that the following conditions are met:

(A) no tailwind is forecast at the expected time of arrival;

(B) if the runway is forecast to be wet at the expected time of arrival, the landing distance at dispatch shall either be determined in accordance with point CAT.OP.MPA.303(a) or (b) as applicable, or shall be 115 % of the landing distance determined for dry runways, whichever is longer;

(C) no forecast contaminated runway conditions exist at the expected time of arrival;

(D) no forecast adverse weather conditions exist at the expected time of arrival;

(vi) all the equipment that affects landing performance is operative before commencing the flight;

(vii) the flight crew is composed of at least two qualified and trained pilots that have recency in reduced required landing distance operations;

(viii) based on the prevailing conditions for the intended flight, the commander shall make the final decision to conduct reduced required landing distance operations and may decide not to do so when he or she considers that to be in the interest of safety;

(ix) additional aerodrome conditions, if specified by the competent authority that has certified the aerodrome, taking into account orographic characteristics of the approach area, available approach aids, missed-approach and balked-landing considerations.

▼B

CHAPTER 3

Performance class B

CAT.POL.A.300 General

▼M10

(a) Unless approved by the competent authority in accordance with Annex V (Part-SPA), Subpart L — SINGLE-ENGINED TURBINE AEROPLANE OPERATIONS AT NIGHT OR IN IMC (SET-IMC), the operator shall not operate a single-engined aeroplane:

(1) at night; or

(2) in IMC, except under special VFR.

▼B

(b) The operator shall treat two-engined aeroplanes that do not meet the climb requirements of CAT.POL.A.340 as single-engined aeroplanes.

CAT.POL.A.305 Take-off

(a) The take-off mass shall not exceed the maximum take-off mass specified in the AFM for the pressure altitude and the ambient temperature at the aerodrome of departure.

(b) The unfactored take-off distance, specified in the AFM, shall not exceed:

(1) when multiplied by a factor of 1,25, the take-off run available (TORA); or

(2) when stop way and/or clearway is available, the following:

(i) the TORA;

(ii) when multiplied by a factor of 1,15, the take-off distance available (TODA); or

(iii) when multiplied by a factor of 1,3, the ASDA.

(c) When showing compliance with (b), the following shall be taken into account:

(1) the mass of the aeroplane at the commencement of the take-off run;

(2) the pressure altitude at the aerodrome;

(3) the ambient temperature at the aerodrome;

(4) the runway surface condition and the type of runway surface;

(5) the runway slope in the direction of take-off; and

(6) not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component.

▼B

CAT.POL.A.310 Take-off obstacle clearance — multi-engined aeroplanes

(a) The take-off flight path of aeroplanes with two or more engines shall be determined in such a way that the aeroplane clears all obstacles by a vertical distance of at least 50 ft, or by a horizontal distance of at least 90 m plus 0,125 × D, where D is the horizontal distance travelled by the aeroplane from the end of the TODA or the end of the take-off distance if a turn is scheduled before the end of the TODA, except as provided in (b) and (c). For aeroplanes with a wingspan of less than 60 m, a horizontal obstacle clearance of half the aeroplane wingspan plus 60 m plus 0,125 × D may be used. It shall be assumed that:

(1) the take-off flight path begins at a height of 50 ft above the surface at the end of the take-off distance required by CAT.POL.A.305(b) and ends at a height of 1 500 ft above the surface;

(2) the aeroplane is not banked before the aeroplane has reached a height of 50 ft above the surface, and thereafter the angle of bank does not exceed 15°;

(3) failure of the critical engine occurs at the point on the all engine take-off flight path where visual reference for the purpose of avoiding obstacles is expected to be lost;

(4) the gradient of the take-off flight path from 50 ft to the assumed engine failure height is equal to the average all-engines gradient during climb and transition to the en-route configuration, multiplied by a factor of 0,77; and

(5) the gradient of the take-off flight path from the height reached in accordance with (a)(4) to the end of the take-off flight path is equal to the OEI en-route climb gradient shown in the AFM.

(b) For cases where the intended flight path does not require track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:

(1) 300 m, if the flight is conducted under conditions allowing visual course guidance navigation, or if navigational aids are available enabling the pilot to maintain the intended flight path with the same accuracy; or

(2) 600 m, for flights under all other conditions.

(c) For cases where the intended flight path requires track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:

(1) 600 m, for flights under conditions allowing visual course guidance navigation; or

(2) 900 m, for flights under all other conditions.

(d) When showing compliance with (a) to (c), the following shall be taken into account:

(1) the mass of the aeroplane at the commencement of the take-off run;

(2) the pressure altitude at the aerodrome;

(3) the ambient temperature at the aerodrome; and

▼B

(4) not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component.

▼M4

(e) The requirements in (a)(3), (a)(4), (a)(5), (b)(2) and (c)(2) shall not be applicable to VFR operations by day.

▼B

CAT.POL.A.315 En-route — multi-engined aeroplanes

(a) The aeroplane, in the meteorological conditions expected for the flight and in the event of the failure of one engine, with the remaining engines operating within the maximum continuous power conditions specified, shall be capable of continuing flight at or above the relevant minimum altitudes for safe flight stated in the operations manual to a point of 1 000 ft above an aerodrome at which the performance requirements can be met.

(b) It shall be assumed that, at the point of engine failure:

(1) the aeroplane is not flying at an altitude exceeding that at which the rate of climb equals 300 ft per minute with all engines operating within the maximum continuous power conditions specified; and

(2) the en-route gradient with OEI shall be the gross gradient of descent or climb, as appropriate, respectively increased by a gradient of 0,5 %, or decreased by a gradient of 0,5 %.

▼M10

CAT.POL.A.320 En-route — single-engined aeroplanes

(a) In the meteorological conditions expected for the flight, and in the event of engine failure, the aeroplane shall be capable of reaching a place at which a safe forced landing can be made, unless the operator is approved by the competent authority in accordance with Annex V (Part-SPA), Subpart L — SINGLE-ENGINED TURBINE AEROPLANE OPERATIONS AT NIGHT OR IN IMC (SET-IMC) and makes use of a risk period.

(b) For the purposes of point (a), it shall be assumed that, at the point of engine failure:

(1) the aeroplane is not flying at an altitude exceeding that at which the rate of climb equals 300 ft per minute, with the engine operating within the maximum continuous power conditions specified; and

(2) the en-route gradient is the gross gradient of descent increased by a gradient of 0,5 %.

▼B

CAT.POL.A.325 Landing — destination and alternate aerodromes

The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) shall not exceed the maximum landing mass specified for the altitude and the ambient temperature expected at the estimated time of landing at the destination aerodrome and alternate aerodrome.

▼M16

CAT.POL.A.330 Landing — dry runways

(a) The landing mass of the aeroplane determined in accordance with point CAT.POL.A.105(a) for the estimated time of landing at the destination aerodrome and at any alternate aerodrome shall allow a full-stop landing from 50 ft above the threshold within 70 % of the LDA.

(b) By way of derogation from point (a), and where point CAT.POL.A.355 is complied with, the landing mass of the aeroplane determined in accordance with point CAT.POL.A.105(a) for the estimated time of landing at the destination aerodrome shall be such as to allow a full-stop landing from 50 ft above the threshold within 80 % of the LDA.

(c) When determining the landing mass, the operator shall take the following into account:

(1) the altitude at the aerodrome;

(2) not more than 50 % of the headwind component or not less than 150 % of the tailwind component;

(3) the type of runway surface;

(4) the runway slope in the direction of landing.

(d) For steep approach operations, the operator shall use landing distance data factored in accordance with point (a), based on a screen height of less than 60 ft, but not less than 35 ft, and comply with point CAT.POL.A.345.

(e) For short landing operations, the operator shall use landing distance data factored in accordance with point (a), and comply with point CAT.POL.A.350.

(f) For dispatching the aeroplane, the aeroplane shall either:

(1) land on the most favourable runway, in still air;

(2) land on the runway most likely to be assigned considering the probable wind speed and direction, the ground-handling characteristics of the aeroplane and other conditions such as landing aids and terrain.

(g) If the operator is unable to comply with point (f)(2) for the destination aerodrome, the aeroplane shall only be dispatched if an alternate aerodrome is designated that permits full compliance with points (a) to (f).

CAT.POL.A.335 Landing — wet and contaminated runways

(a) When the appropriate weather reports or forecasts indicate that the runway at the estimated time of arrival may be wet, the LDA shall be one of the following distances:

(1) a landing distance provided in the AFM for use on wet runways at time of dispatch, but not less than that required by point CAT.POL.A.330;

▼M16

(2) if a landing distance is not provided in the AFM for use on wet runways at time of dispatch, at least 115 % of the required landing distance, determined in accordance with point CAT.POL.A.330(a);

(3) a landing distance shorter than that required by point (a)(2), but not less than that required by point CAT.POL.A.330(a), as applicable, if the runway has specific friction improving characteristics and the AFM includes specific additional information for landing distance on that runway type;

(4) by way of derogation from points (a)(1), (a)(2) and (a)(3), for aeroplanes that are approved for reduced landing distance operations under point CAT.POL.A.355, the landing distance determined in accordance with point CAT.POL.A.355(b)(7)(iii).

(b) When the appropriate weather reports or forecasts indicate that the runway at the estimated time of arrival may be contaminated, the landing distance shall not exceed the LDA. The operator shall specify in the operations manual the landing distance data to be applied.

▼B

CAT.POL.A.340 Take-off and landing climb requirements

The operator of a two-engined aeroplane shall fulfil the following take-off and landing climb requirements.

(a) *Take-off climb*

(1) All engines operating

(i) The steady gradient of climb after take-off shall be at least 4 % with:

(A) take-off power on each engine;

(B) the landing gear extended, except that if the landing gear can be retracted in not more than seven seconds, it may be assumed to be retracted;

(C) the wing flaps in the take-off position(s); and

(D) a climb speed not less than the greater of 1,1 V_{MC} (minimum control speed on or near ground) and 1,2 V_{S1} (stall speed or minimum steady flight speed in the landing configuration).

(2) OEI

(i) The steady gradient of climb at an altitude of 400 ft above the take-off surface shall be measurably positive with:

(A) the critical engine inoperative and its propeller in the minimum drag position;

(B) the remaining engine at take-off power;

(C) the landing gear retracted;

(D) the wing flaps in the take-off position(s); and

(E) a climb speed equal to that achieved at 50 ft.

▼B

(ii) The steady gradient of climb shall be not less than 0,75 % at an altitude of 1 500 ft above the take-off surface with:

(A) the critical engine inoperative and its propeller in the minimum drag position;

(B) the remaining engine at not more than maximum continuous power;

(C) the landing gear retracted;

(D) the wing flaps retracted; and

(E) a climb speed not less than 1,2 V_{S1}.

(b) *Landing climb*

(1) All engines operating

(i) The steady gradient of climb shall be at least 2,5 % with:

(A) not more than the power or thrust that is available eight seconds after initiation of movement of the power controls from the minimum flight idle position;

(B) the landing gear extended;

(C) the wing flaps in the landing position; and

(D) a climb speed equal to V_{REF} (reference landing speed).

(2) OEI

(i) The steady gradient of climb shall be not less than 0,75 % at an altitude of 1 500 ft above the landing surface with:

(A) the critical engine inoperative and its propeller in the minimum drag position;

(B) the remaining engine at not more than maximum continuous power;

(C) the landing gear retracted;

(D) the wing flaps retracted; and

(E) a climb speed not less than 1,2 V_{S1}.

CAT.POL.A.345 Approval of steep approach operations

(a) Steep approach operations using glideslope angles of 4,5° or more and with screen heights of less than 60 ft, but not less than 35 ft, require prior approval by the competent authority.

(b) To obtain the approval, the operator shall provide evidence that the following conditions are met:

(1) the AFM states the maximum approved glideslope angle, any other limitations, normal, abnormal or emergency procedures for the steep approach as well as amendments to the field length data when using steep approach criteria; and

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(2) for each aerodrome at which steep approach operations are to be conducted:

(i) a suitable glide path reference system, comprising at least a visual glide path indicating system, is available;

(ii) weather minima are specified; and

(iii) the following items are taken into consideration:

(A) the obstacle situation;

(B) the type of glide path reference and runway guidance;

(C) the minimum visual reference to be required at DH and MDA;

(D) available airborne equipment;

(E) pilot qualification and special aerodrome familiarisation;

(F) AFM limitations and procedures; and

(G) missed approach criteria.

CAT.POL.A.350 Approval of short landing operations

(a) Short landing operations require prior approval by the competent authority.

(b) To obtain the approval, the operator shall provide evidence that the following conditions are met:

(1) the distance used for the calculation of the permitted landing mass may consist of the usable length of the declared safe area plus the declared LDA;

(2) the use of the declared safe area is approved by the State of the aerodrome;

(3) the declared safe area is clear of obstructions or depressions that would endanger an aeroplane undershooting the runway and no mobile object is permitted on the declared safe area while the runway is being used for short landing operations;

(4) the slope of the declared safe area does not exceed 5 % upward nor 2 % downward slope in the direction of landing;

(5) the usable length of the declared safe area does not exceed 90 m;

(6) the width of the declared safe area is not less than twice the runway width, centred on the extended runway centreline;

(7) the crossing height over the beginning of the usable length of the declared safe area is not less than 50 ft;

(8) weather minima are specified for each runway to be used and are not less than the greater of VFR or NPA minima;

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(9) pilot experience, training and special aerodrome familiarisation requirements are specified and met;

(10) additional conditions, if specified by the competent authority, taking into account the aeroplane type characteristics, orographic characteristics in the approach area, available approach aids and missed approach/balked landing considerations.

▼M16

CAT.POL.A.355 Approval of reduced required landing distance operations

(a) Operations with a landing mass of the aeroplane that allows a full-stop landing within 80 % of the landing distance available (LDA) require prior approval by the competent authority. Such approval shall be obtained for each runway on which operations with reduced required landing distance are conducted.

(b) To obtain the approval referred to in point (a), the operator shall conduct a risk assessment to demonstrate that a level of safety equivalent to that intended by point CAT.POL.A.330(a) is achieved and at least the following conditions are met:

(1) the State of the aerodrome has determined a public interest and operational necessity for the operation, either due to the remoteness of the aerodrome or to physical limitations relating to the extension of the runway;

(2) short landing operations in accordance with point CAT.POL.A.350 and approaches outside stabilised approach criteria approved under point CAT.OP.MPA.115(a) are prohibited;

(3) landing on contaminated runways is prohibited;

(4) a specific control procedure of the touchdown area is defined in the operations manual (OM) and implemented; this procedure shall include adequate go-around and balked-landing instructions when touchdown in the defined area cannot be achieved;

(5) an adequate aerodrome training and checking programme for the flight crew is established;

(6) the flight crew is qualified and has recency in reduced required landing distance operations at the aerodrome concerned;

(7) an aerodrome landing analysis programme (ALAP) is established by the operator to ensure that the following conditions are met:

(i) no tailwind is forecast at the expected time of arrival;

(ii) if the runway is forecast to be wet at the expected time of arrival, the landing distance at dispatch shall either be determined in accordance with point CAT.OP.MPA.303(c), or shall be 115 % of the landing distance determined for dry runways, whichever is longer;

(iii) no forecast contaminated runway conditions exist at the expected time of arrival;

(iv) no forecast adverse weather conditions exist at the expected time of arrival;

▼M16

(8) operational procedures are established to ensure that:

(i) all the equipment that affects landing performance and landing distance is operative before commencing the flight;

(ii) deceleration devices are correctly used by the flight crew;

(9) specific maintenance instructions and operational procedures are established for the aeroplane's deceleration devices to enhance the reliability of those systems;

(10) the final approach and landing are conducted under visual meteorological conditions (VMC) only;

(11) additional aerodrome conditions, if specified by the competent authority that has certified the aerodrome, taking into account orographic characteristics of the approach area, available approach aids, missed-approach and balked-landing considerations.

▼B

CHAPTER 4

Performance class C

CAT.POL.A.400 Take-off

(a) The take-off mass shall not exceed the maximum take-off mass specified in the AFM for the pressure altitude and the ambient temperature at the aerodrome of departure.

(b) For aeroplanes that have take-off field length data contained in their AFM that do not include engine failure accountability, the distance from the start of the take-off roll required by the aeroplane to reach a height of 50 ft above the surface with all engines operating within the maximum take-off power conditions specified, when multiplied by a factor of either:

(1) 1,33 for aeroplanes having two engines;

(2) 1,25 for aeroplanes having three engines; or

(3) 1,18 for aeroplanes having four engines,

shall not exceed the take-off run available (TORA) at the aerodrome at which the take-off is to be made.

(c) For aeroplanes that have take-off field length data contained in their AFM which accounts for engine failure, the following requirements shall be met in accordance with the specifications in the AFM:

(1) the accelerate-stop distance shall not exceed the ASDA;

(2) the take-off distance shall not exceed the take-off distance available (TODA), with a clearway distance not exceeding half of the TORA;

(3) the take-off run shall not exceed the TORA;

(4) a single value of V_1 for the rejected and continued take-off shall be used; and

(5) on a wet or contaminated runway the take-off mass shall not exceed that permitted for a take-off on a dry runway under the same conditions.

(d) The following shall be taken into account:

(1) the pressure altitude at the aerodrome;

(2) the ambient temperature at the aerodrome;

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(3) the runway surface condition and the type of runway surface;

(4) the runway slope in the direction of take-off;

(5) not more that 50 % of the reported headwind component or not less than 150 % of the reported tailwind component; and

(6) the loss, if any, of runway length due to alignment of the aeroplane prior to take-off.

CAT.POL.A.405 Take-off obstacle clearance

(a) The take-off flight path with OEI shall be determined such that the aeroplane clears all obstacles by a vertical distance of at least 50 ft plus 0,01 × D, or by a horizontal distance of at least 90 m plus 0,125 × D, where D is the horizontal distance the aeroplane has travelled from the end of the TODA. For aeroplanes with a wingspan of less than 60 m, a horizontal obstacle clearance of half the aeroplane wingspan plus 60 m plus 0,125 × D may be used.

(b) The take-off flight path shall begin at a height of 50 ft above the surface at the end of the take-off distance required by ►M4 CAT.POL.A.400(b) or (c) ◄, as applicable, and end at a height of 1 500 ft above the surface.

(c) When showing compliance with (a), the following shall be taken into account:

(1) the mass of the aeroplane at the commencement of the take-off run;

(2) the pressure altitude at the aerodrome;

(3) the ambient temperature at the aerodrome; and

(4) not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component.

(d) Track changes shall not be allowed up to that point of the take-off flight path where a height of 50 ft above the surface has been achieved. Thereafter, up to a height of 400 ft it is assumed that the aeroplane is banked by no more than 15°. Above 400 ft height bank angles greater than 15°, but not more than 25°, may be scheduled. Adequate allowance shall be made for the effect of bank angle on operating speeds and flight path, including the distance increments resulting from increased operating speeds.

(e) For cases that do not require track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:

(1) 300 m, if the pilot is able to maintain the required navigational accuracy through the obstacle accountability area; or

(2) 600 m, for flights under all other conditions.

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(f) For cases that do require track changes of more than 15°, the operator does not need to consider those obstacles that have a lateral distance greater than:

(1) 600 m, if the pilot is able to maintain the required navigational accuracy through the obstacle accountability area; or

(2) 900 m, for flights under all other conditions.

(g) The operator shall establish contingency procedures to satisfy (a) to (f) and to provide a safe route, avoiding obstacles, to enable the aeroplane to either comply with the en-route requirements of CAT.POL.A.410, or land at either the aerodrome of departure or at a take-off alternate aerodrome.

CAT.POL.A.410 En-route — all engines operating

(a) In the meteorological conditions expected for the flight, at any point on its route or on any planned diversion therefrom, the aeroplane shall be capable of a rate of climb of at least 300 ft per minute with all engines operating within the maximum continuous power conditions specified at:

(1) the minimum altitudes for safe flight on each stage of the route to be flown, or of any planned diversion therefrom, specified in or calculated from the information contained in the operations manual relating to the aeroplane; and

(2) the minimum altitudes necessary for compliance with the conditions prescribed in CAT.POL.A.415 and 420, as appropriate.

CAT.POL.A.415 En-route — OEI

(a) In the meteorological conditions expected for the flight, in the event of any one engine becoming inoperative at any point on its route or on any planned diversion therefrom and with the other engine(s) operating within the maximum continuous power conditions specified, the aeroplane shall be capable of continuing the flight from the cruising altitude to an aerodrome where a landing can be made in accordance with CAT.POL.A.430 or CAT.POL.A.435, as appropriate. The aeroplane shall clear obstacles within 9,3 km (5 NM) either side of the intended track by a vertical interval of at least:

(1) 1 000 ft, when the rate of climb is zero or greater; or

(2) 2 000 ft, when the rate of climb is less than zero.

(b) The flight path shall have a positive slope at an altitude of 450 m (1 500 ft) above the aerodrome where the landing is assumed to be made after the failure of one engine.

(c) The available rate of climb of the aeroplane shall be taken to be 150 ft per minute less than the gross rate of climb specified.

▼M16

(d) The width margins provided for in point (a) shall be increased to 18,5 km (10 NM) if the navigational accuracy does not meet at least navigation specification RNAV 5.

▼M27

(e) Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome where the aeroplane is assumed to land after engine failure with the required fuel reserves in accordance with point CAT.OP.MPA.181, appropriate for an alternate aerodrome, if a safe procedure is used.

▼M16

CAT.POL.A.420 En route — aeroplanes with three or more engines, two engines inoperative

(a) An aeroplane that has three or more engines shall not be away from an aerodrome at which the requirements of point CAT.POL.A.430 for the expected landing mass are met, at any point along the intended track for more than 90 minutes with all engines operating at cruising power or thrust, as appropriate, at standard temperature in still air, unless points (b) to (e) of this point are complied with.

(b) The two-engines-inoperative flight path shall permit the aeroplane to continue the flight, in the expected meteorological conditions, clearing all obstacles within 9,3 km (5 NM) on either side of the intended track by a vertical interval of at least 2 000 ft, to an aerodrome at which the performance requirements applicable for the expected landing mass are met.

(c) The two engines shall be assumed to fail at the most critical point of that portion of the route where the aeroplane is operated for more than 90 minutes, with all engines operating at cruising power or thrust, as appropriate, at standard temperature in still air, away from the aerodrome referred to in point (a).

▼M20

(d) The expected mass of the aeroplane at the point where the two engines are assumed to fail shall not be less than that which would include sufficient fuel/energy to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at an altitude of at least 1 500 ft (450 m) directly over the landing area, and thereafter, to fly for 15 minutes at cruising power or thrust, as appropriate.

▼M16

(e) The available rate of climb of the aeroplane shall be 150 ft per minute less than that specified.

(f) The width margins provided for in point (b) shall be increased to 18,5 km (10 NM) if the navigational accuracy does not meet at least navigation specification RNAV 5.

(g) Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves in accordance with point (d), if a safe procedure is used.

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CAT.POL.A.425 Landing — destination and alternate aerodromes

The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) shall not exceed the maximum landing mass specified in the AFM for the altitude and, if accounted for in the AFM, the ambient temperature expected for the estimated time of landing at the destination aerodrome and alternate aerodrome.

CAT.POL.A.430 Landing — dry runways

(a) The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) for the estimated time of landing at the destination aerodrome and any alternate aerodrome shall allow a full stop landing from 50 ft above the threshold within 70 % of the LDA taking into account:

(1) the altitude at the aerodrome;

(2) not more than 50 % of the headwind component or not less than 150 % of the tailwind component;

(3) the type of runway surface; and

▼M16

(4) the runway slope in the direction of landing.

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(b) For dispatching the aeroplane it shall be assumed that:

(1) the aeroplane will land on the most favourable runway in still air; and

(2) the aeroplane will land on the runway most likely to be assigned considering the probable wind speed and direction, the ground handling characteristics of the aeroplane and other conditions such as landing aids and terrain.

(c) If the operator is unable to comply with (b)(2) for the destination aerodrome, the aeroplane shall only be dispatched if an alternate aerodrome is designated that permits full compliance with (a) and (b).

CAT.POL.A.435 Landing — wet and contaminated runways

▼M16

(a) When the appropriate weather reports or forecasts indicate that the runway at the estimated time of arrival may be wet, the LDA shall be one of the following distances:

(1) a landing distance provided in the AFM for use on wet runways at time of dispatch, but not less than that required by point CAT.POL.A.430;

(2) if a landing distance is not provided in the AFM for use on wet runways at time of dispatch, at least 115 % of the required landing distance, determined in accordance with point CAT.POL.A.430.

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(b) When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be contaminated, the landing distance shall not exceed the LDA. The operator shall specify in the operations manual the landing distance data to be applied.

SECTION 2

Helicopters

CHAPTER 1

General requirements

CAT.POL.H.100 Applicability

(a) Helicopters shall be operated in accordance with the applicable performance class requirements.

(b) Helicopters shall be operated in performance class 1:

(1) when operated to/from aerodromes or operating sites located in a congested hostile environment, except when operated to/from a public interest site (PIS) in accordance with CAT.POL.H.225; or

(2) when having an MOPSC of more than 19, except when operated to/from a helideck in performance class 2 under an approval in accordance with CAT.POL.H.305.

(c) Unless otherwise prescribed by (b), helicopters that have an MOPSC of 19 or less but more than nine shall be operated in performance class 1 or 2.

(d) Unless otherwise prescribed by (b), helicopters that have an MOPSC of nine or less shall be operated in performance class 1, 2 or 3.

CAT.POL.H.105 General

(a) The mass of the helicopter:

(1) at the start of the take-off; or

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(2) in the event of in-flight replanning, at the point from which the revised operational flight plan applies,

shall not be greater than the mass at which the applicable requirements of this Section can be complied with for the flight to be undertaken, taking into account expected reductions in mass as the flight proceeds and such fuel jettisoning as is provided for in the relevant requirement.

(b) The approved performance data contained in the AFM shall be used to determine compliance with the requirements of this Section, supplemented as necessary with other data as prescribed in the relevant requirement. The operator shall specify such other data in the operations manual. When applying the factors prescribed in this Section, account may be taken of any operational factors already incorporated in the AFM performance data to avoid double application of factors.

(c) When showing compliance with the requirements of this Section, account shall be taken of the following parameters:

(1) mass of the helicopter;

(2) the helicopter configuration;

(3) the environmental conditions, in particular:

(i) pressure altitude and temperature;

(ii) wind:

(A) except as provided in (C), for take-off, take-off flight path and landing requirements, accountability for wind shall be no more than 50 % of any reported steady headwind component of 5 kt or more;

(B) where take-off and landing with a tailwind component is permitted in the AFM, and in all cases for the take-off flight path, not less than 150 % of any reported tailwind component shall be taken into account; and

(C) where precise wind measuring equipment enables accurate measurement of wind velocity over the point of take-off and landing, wind components in excess of 50 % may be established by the operator, provided that the operator demonstrates to the competent authority that the proximity to the FATO and accuracy enhancements of the wind measuring equipment provide an equivalent level of safety;

(4) the operating techniques; and

(5) the operation of any systems that have an adverse effect on performance.

CAT.POL.H.110 Obstacle accountability

(a) For the purpose of obstacle clearance requirements, an obstacle located beyond the FATO, in the take-off flight path, or the missed approach flight path shall be considered if its lateral distance from the nearest point on the surface below the intended flight path is not further than the following:

(1) For operations under VFR:

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(i) half of the minimum width defined in the AFM — or, when no width is defined, ‘0,75 × D’, where D is the largest dimension of the helicopter when the rotors are turning;

(ii) plus, the greater of ‘0,25 × D’ or ‘3 m’;

(iii) plus:

(A) 0,10 × distance DR for operations under VFR by day; or

(B) 0,15 × distance DR for operations under VFR at night.

(2) For operations under IFR:

(i) ‘1,5 D’ or 30 m, whichever is greater, plus:

(A) 0,10 × distance DR, for operations under IFR with accurate course guidance;

(B) 0,15 × distance DR, for operations under IFR with standard course guidance; or

(C) 0,30 × distance DR for operations under IFR without course guidance.

(ii) When considering the missed approach flight path, the divergence of the obstacle accountability area only applies after the end of the take-off distance available.

(3) For operations with initial take-off conducted visually and converted to IFR/IMC at a transition point, the criteria required in (1) apply up to the transition point, and the criteria required in (2) apply after the transition point. The transition point cannot be located before the end of the take-off distance required for helicopters (TODRH) operating in performance class 1 or before the defined point after take-off (DPATO) for helicopters operating in performance class 2.

(b) For take-off using a back-up or a lateral transition procedure, for the purpose of obstacle clearance requirements, an obstacle located in the back-up or lateral transition area shall be considered if its lateral distance from the nearest point on the surface below the intended flight path is not further than:

(1) half of the minimum width defined in the AFM or, when no width is defined, ‘0,75 × D’;

(2) plus the greater of ‘0,25 × D’ or ‘3 m’;

(3) plus:

(i) for operations under VFR by day 0,10 × the distance travelled from the back of the FATO, or

(ii) for operations under VFR at night 0,15 × the distance travelled from the back of the FATO.

(c) Obstacles may be disregarded if they are situated beyond:

(1) 7 × rotor radius (R) for day operations, if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;

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(2) 10 × R for night operations, if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;

(3) 300 m if navigational accuracy can be achieved by appropriate navigation aids; or

(4) 900 m in all other cases.

CHAPTER 2

Performance class 1

CAT.POL.H.200 General

Helicopters operated in performance class 1 shall be certified in category A or equivalent as determined by the Agency.

CAT.POL.H.205 Take-off

(a) The take-off mass shall not exceed the maximum take-off mass specified in the AFM for the procedure to be used.

(b) The take-off mass shall be such that:

(1) it is possible to reject the take-off and land on the FATO in case of the critical engine failure being recognised at or before the take-off decision point (TDP);

(2) the rejected take-off distance required (RTODRH) does not exceed the rejected take-off distance available (RTODAH); and

(3) the TODRH does not exceed the take-off distance available (TODAH).

(4) Notwithstanding (b)(3), the TODRH may exceed the TODAH if the helicopter, with the critical engine failure recognised at TDP can, when continuing the take-off, clear all obstacles to the end of the TODRH by a vertical margin of not less than 10,7 m (35 ft).

(c) When showing compliance with (a) and (b), account shall be taken of the appropriate parameters of CAT.POL.H.105(c) at the aerodrome or operating site of departure.

(d) That part of the take-off up to and including TDP shall be conducted in sight of the surface such that a rejected take-off can be carried out.

(e) For take-off using a backup or lateral transition procedure, with the critical engine failure recognition at or before the TDP, all obstacles in the back-up or lateral transition area shall be cleared by an adequate margin.

CAT.POL.H.210 Take-off flight path

(a) From the end of the TODRH with the critical engine failure recognised at the TDP:

(1) The take-off mass shall be such that the take-off flight path provides a vertical clearance, above all obstacles located in the climb path, of not less than 10,7 m (35 ft) for operations under VFR and 10,7 m (35 ft) + 0,01 × distance DR for operations under IFR. Only obstacles as specified in CAT.POL.H.110 have to be considered.

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(2) Where a change of direction of more than 15° is made, adequate allowance shall be made for the effect of bank angle on the ability to comply with the obstacle clearance requirements. This turn is not to be initiated before reaching a height of 61 m (200 ft) above the take-off surface unless it is part of an approved procedure in the AFM.

(b) When showing compliance with (a), account shall be taken of the appropriate parameters of CAT.POL.H.105(c) at the aerodrome or operating site of departure.

CAT.POL.H.215 En-route — critical engine inoperative

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(a) The mass of the helicopter and the flight path at all points along the route, with the critical engine inoperative and the meteorological conditions expected for the flight, shall permit compliance with any of the following points:

(1) when it is intended that the flight will be conducted at any time out of sight of the surface, the mass of the helicopter permits a rate of climb of at least 50 ft/minute with the critical engine inoperative at an altitude of at least 300 m (1 000 ft), or 600 m (2 000 ft) in areas of mountainous terrain, above all relevant terrain and obstacles along the route;

(2) when it is intended that the flight will be conducted without the surface in sight, the flight path permits the helicopter to continue flight from the cruising altitude to a height of 300 m (1 000 ft) above a landing site where a landing can be made in accordance with point CAT.POL.H.220; the flight path clears vertically, by at least 300 m (1 000 ft) or 600 m (2 000 ft) in areas of mountainous terrain, all relevant terrain and obstacles along the route; Drift-down techniques may be used;

(3) when it is intended that the flight will be conducted in VMC with the surface in sight, the flight path permits the helicopter to continue flight from the cruising altitude to a height of 300 m (1 000 ft) above a landing site where a landing can be made in accordance with point CAT.POL.H.220, without flying at any time below the appropriate minimum flight altitude; Obstacles shall be considered within a distance on either side of the route as specified for the purpose of determination of the minimum flight altitude in VFR.

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(b) When showing compliance with (a)(2) or (a)(3):

(1) the critical engine is assumed to fail at the most critical point along the route;

(2) account is taken of the effects of winds on the flight path;

(3) fuel jettisoning is planned to take place only to an extent consistent with reaching the aerodrome or operating site with the required fuel reserves and using a safe procedure; and

(4) fuel jettisoning is not planned below 1 000 ft above terrain.

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CAT.POL.H.220 Landing

(a) The landing mass of the helicopter at the estimated time of landing shall not exceed the maximum mass specified in the AFM for the procedure to be used.

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(b) In the event of the critical engine failure being recognised at any point at or before the landing decision point (LDP), it is possible either to land and stop within the FATO, or to perform a balked landing and clear all obstacles in the flight path by a vertical margin of 10,7 m (35 ft). Only obstacles as specified in CAT.POL.H.110 have to be considered.

(c) In the event of the critical engine failure being recognised at any point at or after the LDP, it is possible to:

(1) clear all obstacles in the approach path; and

(2) land and stop within the FATO.

(d) When showing compliance with (a) to (c), account shall be taken of the appropriate parameters of CAT.POL.H.105(c) for the estimated time of landing at the destination aerodrome or operating site, or any alternate if required.

(e) That part of the landing from the LDP to touchdown shall be conducted in sight of the surface.

CAT.POL.H.225 Helicopter operations to/from a public interest site

(a) Operations to/from a public interest site (PIS) may be conducted in performance class 2, without complying with CAT.POL.H.310(b) or CAT.POL.H.325(b), provided that all of the following are complied with:

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(1) the site was established as a public interest site before 1 July 2002, or the site was established as a public interest site before 28 October 2014 and a derogation from this point granted under Article 6(6) has been notified to the Commission and the Agency before 14 June 2023;

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(2) the size of the PIS or obstacle environment does not permit compliance with the requirements for operation in performance class 1;

(3) the operation is conducted with a helicopter with an MOPSC of six or less;

(4) the operator complies with CAT.POL.H.305(b)(2) and (b)(3);

(5) the helicopter mass does not exceed the maximum mass specified in the AFM for a climb gradient of 8 % in still air at the appropriate take-off safety speed (V_{TOSS}) with the critical engine inoperative and the remaining engines operating at an appropriate power rating; and

(6) the operator has obtained prior approval for the operation from the competent authority. Before such operations take place in another Member State, the operator shall obtain an endorsement from the competent authority of that State.

(b) Site-specific procedures shall be established in the operations manual to minimise the period during which there would be danger to helicopter occupants and persons on the surface in the event of an engine failure during take-off and landing.

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(c) The operations manual shall contain all the following for each PIS: a diagram or annotated photograph that shows the main aspects, the dimensions, the non-conformance with the performance class 1 requirements, the main hazards and the contingency plan should an incident occur.

(d) The operator shall keep the information provided in point (c) up to date and shall notify any changes to it to the competent authority. When operations take place in another Member State, the operator shall also notify the authority of that State.

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CHAPTER 3

Performance class 2

CAT.POL.H.300 General

Helicopters operated in performance class 2 shall be certified in category A or equivalent as determined by the Agency.

CAT.POL.H.305 Operations without an assured safe forced landing capability

(a) Operations without an assured safe forced landing capability during the take-off and landing phases shall only be conducted if the operator has been granted an approval by the competent authority.

(b) To obtain and maintain such approval the operator shall:

(1) conduct a risk assessment, specifying:

(i) the type of helicopter; and

(ii) the type of operations;

(2) implement the following set of conditions:

(i) attain and maintain the helicopter/engine modification standard defined by the manufacturer;

(ii) conduct the preventive maintenance actions recommended by the helicopter or engine manufacturer;

(iii) include take-off and landing procedures in the operations manual, where they do not already exist in the AFM;

(iv) specify training for flight crew; and

(v) provide a system for reporting to the manufacturer loss of power, engine shutdown or engine failure events;

and

(3) implement a usage monitoring system (UMS).

CAT.POL.H.310 Take-off

(a) The take-off mass shall not exceed the maximum mass specified for a rate of climb of 150 ft/min at 300 m (1 000 ft) above the level of the aerodrome or operating site with the critical engine inoperative and the remaining engine(s) operating at an appropriate power rating.

(b) For operations other than those specified in CAT.POL.H.305, the take-off shall be conducted such that a safe forced landing can be executed until the point where safe continuation of the flight is possible.

(c) For operations in accordance with CAT.POL.H.305, in addition to the requirements of (a):

(1) the take-off mass shall not exceed the maximum mass specified in the AFM for an all engines operative out of ground effect (AEO OGE) hover in still air with all engines operating at an appropriate power rating; or

(2) for operations from a helideck:

(i) with a helicopter that has an MOPSC of more than 19; or

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(ii) any helicopter operated from a helideck located in a hostile environment,

the take-off mass shall take into account: the procedure; deck-edge miss and drop down appropriate to the height of the helideck with the critical engine(s) inoperative and the remaining engines operating at an appropriate power rating.

(d) When showing compliance with (a) to (c), account shall be taken of the appropriate parameters of CAT.POL.H.105(c) at the point of departure.

(e) That part of the take-off before the requirement of CAT.POL.H.315 is met shall be conducted in sight of the surface.

CAT.POL.H.315 Take-off flight path

From the defined point after take-off (DPATO) or, as an alternative, no later than 200 ft above the take-off surface, with the critical engine inoperative, the requirements of CAT.POL.H.210(a)(1), (a)(2) and (b) shall be complied with.

CAT.POL.H.320 En-route — critical engine inoperative

The requirement of CAT.POL.H.215 shall be complied with.

CAT.POL.H.325 Landing

(a) The landing mass at the estimated time of landing shall not exceed the maximum mass specified for a rate of climb of 150 ft/min at 300 m (1 000 ft) above the level of the aerodrome or operating site with the critical engine inoperative and the remaining engine(s) operating at an appropriate power rating.

(b) If the critical engine fails at any point in the approach path:

(1) a balked landing can be carried out meeting the requirement of CAT.POL.H.315; or

(2) for operations other than those specified in CAT.POL.H.305, the helicopter can perform a safe forced landing.

(c) For operations in accordance with CAT.POL.H.305, in addition to the requirements of (a):

(1) the landing mass shall not exceed the maximum mass specified in the AFM for an AEO OGE hover in still air with all engines operating at an appropriate power rating; or

(2) for operations to a helideck:

(i) with a helicopter that has an MOPSC of more than 19; or

(ii) any helicopter operated to a helideck located in a hostile environment,

the landing mass shall take into account the procedure and drop down appropriate to the height of the helideck with the critical engine inoperative and the remaining engine(s) operating at an appropriate power rating.

(d) When showing compliance with (a) to (c), account shall be taken of the appropriate parameters of CAT.POL.H.105(c) at the destination aerodrome or any alternate, if required.

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(e) That part of the landing after which the requirement of (b)(1) cannot be met shall be conducted in sight of the surface.

CHAPTER 4

Performance class 3

CAT.POL.H.400 General

(a) Helicopters operated in performance class 3 shall be certified in category A or equivalent as determined by the Agency, or category B.

(b) Operations shall only be conducted in a non-hostile environment, except:

(1) when operating in accordance with CAT.POL.H.420; or

(2) for the take-off and landing phase, when operating in accordance with (c).

(c) Provided the operator is approved in accordance with CAT.POL.H.305, operations may be conducted to/from an aerodrome or operating site located outside a congested hostile environment without an assured safe forced landing capability:

(1) during take-off, before reaching V_y (speed for best rate of climb) or 200 ft above the take-off surface; or

(2) during landing, below 200 ft above the landing surface.

(d) Operations shall not be conducted:

(1) out of sight of the surface;

(2) at night;

(3) when the ceiling is less than 600 ft; or

(4) when the visibility is less than 800 m.

CAT.POL.H.405 Take-off

(a) The take-off mass shall be the lower of:

(1) the MCTOM; or

(2) the maximum take-off mass specified for a hover in ground effect with all engines operating at take-off power, or if conditions are such that a hover in ground effect is not likely to be established, the take-off mass specified for a hover out of ground effect with all engines operating at take-off power.

(b) Except as provided in CAT.POL.H.400(b), in the event of an engine failure the helicopter shall be able to perform a safe forced landing.

CAT.POL.H.410 En-route

(a) The helicopter shall be able, with all engines operating within the maximum continuous power conditions, to continue along its intended route or to a planned diversion without flying at any point below the appropriate minimum flight altitude.

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(b) Except as provided in CAT.POL.H.420, in the event of an engine failure the helicopter shall be able to perform a safe forced landing.

CAT.POL.H.415 Landing

(a) The landing mass of the helicopter at the estimated time of landing shall be the lower of:

(1) the maximum certified landing mass; or

(2) the maximum landing mass specified for a hover in ground effect, with all engines operating at take-off power, or if conditions are such that a hover in ground effect is not likely to be established, the landing mass for a hover out of ground effect with all engines operating at take-off power.

(b) Except as provided in CAT.POL.H.400(b), in the event of an engine failure, the helicopter shall be able to perform a safe forced landing.

CAT.POL.H.420 Helicopter operations over a hostile environment located outside a congested area

(a) Operations over a non-congested hostile environment without a safe forced landing capability with turbine-powered helicopters with an MOPSC of six or less shall only be conducted if the operator has been granted an approval by the competent authority, following a safety risk assessment performed by the operator. Before such operations take place in another Member State, the operator shall obtain an endorsement from the competent authority of that State.

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(b) To obtain and maintain such approval, the operator shall:

(1) only conduct the operations referred to in point (a) in the areas and under the conditions specified in the approval;

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(3) substantiate that helicopter limitations, or other justifiable considerations, preclude the use of the appropriate performance criteria;

(4) be approved in accordance with point CAT.POL.H.305(b).

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(c) Notwithstanding CAT.IDE.H.240, such operations may be conducted without supplemental oxygen equipment, provided the cabin altitude does not exceed 10 000 ft for a period in excess of 30 minutes and never exceeds 13 000 ft pressure altitude.

SECTION 3

Mass and balance

CHAPTER 1

Motor-powered aircraft

CAT.POL.MAB.100 Mass and balance, loading

(a) During any phase of operation, the loading, mass and centre of gravity (CG) of the aircraft shall comply with the limitations specified in the AFM, or the operations manual if more restrictive.

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(b) The operator shall establish the mass and the CG of any aircraft by actual weighing prior to initial entry into service and thereafter at intervals of four years if individual aircraft masses are used, or nine years if fleet masses are used. The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented. Aircraft shall be reweighed if the effect of modifications on the mass and balance is not accurately known.

(c) The weighing shall be accomplished by the manufacturer of the aircraft or by an approved maintenance organisation.

(d) The operator shall determine the mass of all operating items and crew members included in the aircraft dry operating mass by weighing or by using standard masses. The influence of their position on the aircraft's CG shall be determined.

(e) The operator shall establish the mass of the traffic load, including any ballast, by actual weighing or by determining the mass of the traffic load in accordance with standard passenger and baggage masses.

(f) In addition to standard masses for passengers and checked baggage, the operator can use standard masses for other load items, if it demonstrates to the competent authority that these items have the same mass or that their masses are within specified tolerances.

(g) The operator shall determine the mass of the fuel load by using the actual density or, if not known, the density calculated in accordance with a method specified in the operations manual.

(h) The operator shall ensure that the loading of:

(1) its aircraft is performed under the supervision of qualified personnel; and

(2) traffic load is consistent with the data used for the calculation of the aircraft mass and balance.

(i) The operator shall comply with additional structural limits such as the floor strength limitations, the maximum load per running metre, the maximum mass per cargo compartment and the maximum seating limit. For helicopters, in addition, the operator shall take account of in-flight changes in loading.

(j) The operator shall specify, in the operations manual, the principles and methods involved in the loading and in the mass and balance system that meet the requirements contained in (a) to (i). This system shall cover all types of intended operations.

CAT.POL.MAB.105 Mass and balance data and documentation

(a) The operator shall establish mass and balance data and produce mass and balance documentation prior to each flight specifying the load and its distribution. The mass and balance documentation shall enable the commander to determine that the load and its distribution is such that the mass and balance limits of the aircraft are not exceeded. The mass and balance documentation shall contain the following information:

(1) Aircraft registration and type;

(2) Flight identification, number and date;

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(3) Name of the commander;

(4) Name of the person who prepared the document;

(5) Dry operating mass and the corresponding CG of the aircraft:

(i) for performance class B aeroplanes and for helicopters the CG position may not need to be on the mass and balance documentation if, for example, the load distribution is in accordance with a pre-calculated balance table or if it can be shown that for the planned operations a correct balance can be ensured, whatever the real load is;

(6) Mass of the fuel at take-off and the mass of trip fuel;

(7) Mass of consumables other than fuel, if applicable;

(8) Load components including passengers, baggage, freight and ballast;

(9) Take-off mass, landing mass and zero fuel mass;

(10) Applicable aircraft CG positions; and

(11) The limiting mass and CG values.

The information above shall be available in flight planning documents or mass and balance systems. Some of this information may be contained in other documents readily available for use.

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(b) Where mass and balance data and documentation is generated by a computerised mass and balance system, the operator shall:

(1) verify the integrity of the output data to ensure that the data are within AFM limitations; and

(2) specify the instructions and procedures for its use in its operations manual.

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(c) The person supervising the loading of the aircraft shall confirm by hand signature or equivalent that the load and its distribution are in accordance with the mass and balance documentation given to the commander. The commander shall indicate his/her acceptance by hand signature or equivalent.

(d) The operator shall specify procedures for last minute changes to the load to ensure that:

(1) any last minute change after the completion of the mass and balance documentation is brought to the attention of the commander and entered in the flight planning documents containing the mass and balance documentation;

(2) the maximum last minute change allowed in passenger numbers or hold load is specified; and

(3) new mass and balance documentation is prepared if this maximum number is exceeded.

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SUBPART D

INSTRUMENTS, DATA, EQUIPMENT

SECTION 1

Aeroplanes

CAT.IDE.A.100 Instruments and equipment — general

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(a) Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements except for the following items:

(1) Spare fuses;

(2) Independent portable lights;

(3) An accurate time piece;

(4) Chart holder;

(5) First-aid kits;

(6) Emergency medical kit;

(7) Megaphones;

(8) Survival and signalling equipment;

(9) Sea anchors and equipment for mooring; and

(10) Child restraint devices.

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(b) Instruments and equipment not required under this Annex (Part-CAT) as well as any other equipment which is not required under this Regulation, but carried on a flight, shall comply with the following requirements:

(1) the information provided by those instruments, equipment or accessories shall not be used by the flight crew members to comply with Annex II to Regulation (EU) 2018/1139 or points CAT.IDE.A.330, CAT.IDE.A.335, CAT.IDE.A.340 and CAT.IDE.A.345 of this Annex;

(2) the instruments and equipment shall not affect the airworthiness of the aeroplane, even in the case of failures or malfunction.

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(c) If equipment is to be used by one flight crew member at his/her station during flight, it ►M4 shall ◄ be readily operable from that station. When a single item of equipment is required to be operated by more than one flight crew member it ►M4 shall ◄ be installed so that the equipment is readily operable from any station at which the equipment is required to be operated.

(d) Those instruments that are used by any flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision that he/she normally assumes when looking forward along the flight path.

(e) All required emergency equipment shall be easily accessible for immediate use.

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CAT.IDE.A.105 Minimum equipment for flight

A flight shall not be commenced when any of the aeroplane's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

(a) the aeroplane is operated in accordance with the operator's MEL; or

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(b) the operator is approved by the competent authority to operate the aeroplane within the constraints of the master minimum equipment list ('MMEL') in accordance with point ORO.MLR.105(j) of Annex III.

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CAT.IDE.A.110 Spare electrical fuses

(a) Aeroplanes shall be equipped with spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are allowed to be replaced in flight.

(b) The number of spare fuses that are required to be carried shall be the higher of:

(1) 10 % of the number of fuses of each rating; or

(2) three fuses for each rating.

CAT.IDE.A.115 Operating lights

(a) Aeroplanes operated by day shall be equipped with:

(1) an anti-collision light system;

(2) lighting supplied from the aeroplane's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aeroplane;

(3) lighting supplied from the aeroplane's electrical system to provide illumination in all passenger compartments; and

(4) an independent portable light for each required crew member readily accessible to crew members when seated at their designated stations.

(b) Aeroplanes operated at night shall in addition be equipped with:

(1) navigation/position lights;

(2) two landing lights or a single light having two separately energised filaments; and

(3) lights to conform with the International Regulations for Preventing Collisions at Sea if the aeroplane is operated as a seaplane.

CAT.IDE.A.120 Equipment to clear windshield

Aeroplanes with an MCTOM of more than 5 700 kg shall be equipped at each pilot station with a means to maintain a clear portion of the windshield during precipitation.

CAT.IDE.A.125 Operations under VFR by day — flight and navigational instruments and associated equipment

(a) Aeroplanes operated under VFR by day shall be equipped with the following equipment, available at the pilot's station:

(1) A means of measuring and displaying:

(i) Magnetic heading;

(ii) Time in hours, minutes, and seconds;

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(iii) Barometric altitude;

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(iv) Indicated airspeed;

(v) Vertical speed;

(vi) Turn and slip;

(vii) Attitude;

(viii) Heading;

(ix) Outside air temperature; and

(x) Mach number whenever speed limitations are expressed in terms of Mach number.

(2) A means of indicating when the supply of power to the required flight instruments is not adequate.

(b) Whenever two pilots are required for the operation, an additional separate means of displaying the following shall be available for the second pilot:

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(1) Barometric altitude;

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(2) Indicated airspeed;

(3) Vertical speed;

(4) Turn and slip;

(5) Attitude; and

(6) Heading.

(c) A means for preventing malfunction of the airspeed indicating systems due to condensation or icing shall be available for:

(1) aeroplanes with an MCTOM of more than 5 700 kg or an MOPSC of more than nine; and

(2) aeroplanes first issued with an individual CofA on or after 1 April 1999.

(d) Single engine aeroplanes first issued with an individual CofA before 22 May 1995 are exempted from the requirements of (a)(1)(vi), (a)(1)(vii), (a)(1)(viii) and (a)(1)(ix) if the compliance would require retrofitting.

CAT.IDE.A.130 Operations under IFR or at night — flight and navigational instruments and associated equipment

Aeroplanes operated under VFR at night or under IFR shall be equipped with the following equipment, available at the pilot's station:

(a) A means of measuring and displaying:

(1) Magnetic heading;

(2) Time in hours, minutes and seconds;

(3) Indicated airspeed;

(4) Vertical speed;

(5) Turn and slip, or in the case of aeroplanes equipped with a standby means of measuring and displaying attitude, slip;

(6) Attitude;

(7) Stabilised heading;

(8) Outside air temperature; and

(9) Mach number whenever speed limitations are expressed in terms of Mach number.

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(b) Two means of measuring and displaying barometric altitude.

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(c) A means of indicating when the supply of power to the required flight instruments is not adequate.

(d) A means for preventing malfunction of the airspeed indicating systems required in (a)(3) and (h)(2) due to condensation or icing.

(e) A means of annunciating to the flight crew the failure of the means required in (d) for aeroplanes:

(1) issued with an individual CofA on or after 1 April 1998; or

(2) issued with an individual CofA before 1 April 1998 with an MCTOM of more than 5 700 kg, and with an MOPSC of more than nine.

(f) Except for propeller-driven aeroplanes with an MCTOM of 5 700 kg or less, two independent static pressure systems.

(g) One static pressure system and one alternate source of static pressure for propeller-driven aeroplanes with an MCTOM of 5 700 kg or less.

(h) Whenever two pilots are required for the operation, a separate means of displaying for the second pilot:

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(1) Barometric altitude;

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(2) Indicated airspeed;

(3) Vertical speed;

(4) Turn and slip;

(5) Attitude; and

(6) Stabilised heading.

(i) A standby means of measuring and displaying attitude capable of being used from either pilot's station for aeroplanes with an MCTOM of more than 5 700 kg or an MOPSC of more than nine that:

(1) is powered continuously during normal operation and, after a total failure of the normal electrical generating system, is powered from a source independent from the normal electrical generating system;

(2) provides reliable operation for a minimum of 30 minutes after total failure of the normal electrical generating system, taking into account other loads on the emergency power supply and operational procedures;

(3) operates independently of any other means of measuring and displaying attitude;

(4) is operative automatically after total failure of the normal electrical generating system;

(5) is appropriately illuminated during all phases of operation, except for aeroplanes with an MCTOM of 5 700 kg or less, already registered in a Member State on 1 April 1995 and equipped with a standby attitude indicator in the left-hand instrument panel;

(6) is clearly evident to the flight crew when the standby attitude indicator is being operated by emergency power; and

(7) where the standby attitude indicator has its own dedicated power supply, has an associated indication, either on the instrument or on the instrument panel, when this supply is in use.

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(j) A chart holder in an easily readable position that can be illuminated for night operations.

CAT.IDE.A.135 Additional equipment for single-pilot operation under IFR

Aeroplanes operated under IFR with a single-pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

CAT.IDE.A.140 Altitude alerting system

(a) The following aeroplanes shall be equipped with an altitude alerting system:

(1) turbine propeller powered aeroplanes with an MCTOM of more than 5 700 kg or having an MOPSC of more than nine; and

(2) aeroplanes powered by turbo-jet engines.

(b) The altitude alerting system shall be capable of:

(1) alerting the flight crew when approaching a preselected altitude; and

(2) alerting the flight crew by at least an aural signal, when deviating from a preselected altitude.

(c) Notwithstanding (a), aeroplanes with an MCTOM of 5 700 kg or less, having an MOPSC of more than nine, first issued with an individual CofA before 1 April 1972 and already registered in a Member State on 1 April 1995 are exempted from being equipped with an altitude alerting system.

CAT.IDE.A.150 Terrain awareness warning system (TAWS)

(a) Turbine-powered aeroplanes having an MCTOM of more than 5 700 kg or an MOPSC of more than nine shall be equipped with a TAWS that meets the requirements for Class A equipment as specified in an acceptable standard.

(b) Reciprocating-engine-powered aeroplanes with an MCTOM of more than 5 700 kg or an MOPSC of more than nine shall be equipped with a TAWS that meets the requirement for Class B equipment as specified in an acceptable standard.

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(c) Turbine-powered aeroplanes for which the individual certificate of airworthiness (CofA) was first issued after 1 January 2019 and having an MCTOM of 5 700 kg or less and an MOPSC of six to nine shall be equipped with a TAWS that meets the requirements for Class B equipment, as specified in an acceptable standard.

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CAT.IDE.A.155 Airborne collision avoidance system (ACAS)

Unless otherwise provided for by Regulation (EU) No 1332/2011, turbine-powered aeroplanes with an MCTOM of more than 5 700 kg or an MOPSC of more than 19 shall be equipped with ACAS II.

CAT.IDE.A.160 Airborne weather detecting equipment

The following shall be equipped with airborne weather detecting equipment when operated at night or in IMC in areas where thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route:

(a) pressurised aeroplanes;

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(b) non-pressurised aeroplanes with an MCTOM of more than 5 700 kg; and

(c) non-pressurised aeroplanes with an MOPSC of more than nine.

CAT.IDE.A.165 Additional equipment for operations in icing conditions at night

(a) Aeroplanes operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

(b) The means to illuminate the formation of ice shall not cause glare or reflection that would handicap crew members in the performance of their duties.

CAT.IDE.A.170 Flight crew interphone system

Aeroplanes operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

CAT.IDE.A.175 Crew member interphone system

Aeroplanes with an MCTOM of more than 15 000 kg, or with an MOPSC of more than 19 shall be equipped with a crew member interphone system, except for aeroplanes first issued with an individual CofA before 1 April 1965 and already registered in a Member State on 1 April 1995.

CAT.IDE.A.180 Public address system

Aeroplanes with an MOPSC of more than 19 shall be equipped with a public address system.

CAT.IDE.A.185 Cockpit voice recorder

(a) The following aeroplanes shall be equipped with a cockpit voice recorder (CVR):

(1) aeroplanes with an MCTOM of more than 5 700 kg; and

(2) multi-engined turbine-powered aeroplanes with an MCTOM of 5 700 kg or less, with an MOPSC of more than nine and first issued with an individual CofA on or after 1 January 1990.

▼M8

(b) Until 31 December 2018, the CVR shall be capable of retaining the data recorded during at least:

(1) the preceding 2 hours in the case of aeroplanes referred to in (a)(1) when the individual CofA has been issued on or after 1 April 1998;

(2) the preceding 30 minutes for aeroplanes referred to in (a)(1) when the individual CofA has been issued before 1 April 1998; or

(3) the preceding 30 minutes, in the case of aeroplanes referred to in (a)(2).

(c) By 1 January 2019 at the latest, the CVR shall be capable of retaining the data recorded during at least:

▼M18

(1) the preceding 25 hours for aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2022; or

▼M8

(2) the preceding 2 hours in all other cases.

▼M8

(d) By 1 January 2019 at the latest, the CVR shall record on means other than magnetic tape or magnetic wire.

(e) The CVR shall record with reference to a timescale:

(1) voice communications transmitted from or received in the flight crew compartment by radio;

(2) flight crew members' voice communications using the interphone system and the public address system, if installed;

(3) the aural environment of the flight crew compartment, including without interruption:

(i) for aeroplanes first issued with an individual CofA on or after 1 April 1998, the audio signals received from each boom and mask microphone in use;

(ii) for aeroplanes referred to in (a)(2) and first issued with an individual CofA before 1 April 1998, the audio signals received from each boom and mask microphone, where practicable;

(4) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

(f) The CVR shall start to record prior to the aeroplane moving under its own power and shall continue to record until the termination of the flight when the aeroplane is no longer capable of moving under its own power. In addition, in the case of aeroplanes issued with an individual CofA on or after 1 April 1998, the CVR shall start automatically to record prior to the aeroplane moving under its own power and continue to record until the termination of the flight when the aeroplane is no longer capable of moving under its own power.

(g) In addition to (f), depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight, in the case of:

(1) aeroplanes referred to in (a)(1) and issued with an individual CofA on or after 1 April 1998; or

(2) aeroplanes referred to in (a)(2).

(h) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 16 June 2018 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

▼M16

(i) Aeroplanes with an MCTOM of over 27 000 kg and first issued with an individual CofA on or after 5 September 2022 shall be equipped with an alternate power source to which the CVR and the cockpit-mounted area microphone are switched automatically in the event that all other power to the CVR is interrupted.

▼B

CAT.IDE.A.190 Flight data recorder

(a) The following aeroplanes shall be equipped with a flight data recorder (FDR) that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available:

(1) aeroplanes with an MCTOM of more than 5 700 kg and first issued with an individual CofA on or after 1 June 1990;

▼B

(2) turbine-engined aeroplanes with an MCTOM of more than 5 700 kg and first issued with an individual CofA before 1 June 1990; and

(3) multi-engined turbine-powered aeroplanes with an MCTOM of 5 700 kg or less, with an MOPSC of more than nine and first issued with an individual CofA on or after 1 April 1998.

(b) The FDR shall record:

(1) time, altitude, airspeed, normal acceleration and heading and be capable of retaining the data recorded during at least the preceding 25 hours for aeroplanes referred to in (a)(2) with an MCTOM of less than 27 000 kg;

(2) the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power and configuration of lift and drag devices and be capable of retaining the data recorded during at least the preceding 25 hours, for aeroplanes referred to in (a)(1) with an MCTOM of less than 27 000 kg and first issued with an individual CofA before 1 January 2016;

(3) the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power, configuration and operation and be capable of retaining the data recorded during at least the preceding 25 hours, for aeroplanes referred to in (a)(1) and (a)(2) with an MCTOM of over 27 000 kg and first issued with an individual CofA before 1 January 2016;

(4) the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power and configuration of lift and drag devices and be capable of retaining the data recorded during at least the preceding 10 hours, in the case of aeroplanes referred to in (a)(3) and first issued with an individual CofA before 1 January 2016; or

(5) the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power, configuration and operation and be capable of retaining the data recorded during at least the preceding 25 hours, for aeroplanes referred to in (a)(1) and (a)(3) and first issued with an individual CofA on or after 1 January 2016.

(c) Data shall be obtained from aeroplane sources that enable accurate correlation with information displayed to the flight crew.

(d) The FDR shall start to record the data prior to the aeroplane being capable of moving under its own power and shall stop after the aeroplane is incapable of moving under its own power. In addition, in the case of aeroplanes issued with an individual CofA on or after 1 April 1998, the FDR shall start automatically to record the data prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is incapable of moving under its own power.

▼M8

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 16 June 2018 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

▼M16

CAT.IDE.A.191 Lightweight flight recorder

(a) Turbine-engined aeroplanes with an MCTOM of 2 250 kg or more and aeroplanes with an MOPSC of more than 9 shall be equipped with a flight recorder if all of the following conditions are met:

(1) they are not within the scope of point CAT.IDE.A.190(a);

(2) they are first issued with an individual CofA on or after 5 September 2022.

(b) The flight recorder shall record, by means of flight data or images, information that is sufficient to determine the flight path and aircraft speed.

(c) The flight recorder shall be capable of retaining the flight data and the images recorded during at least the preceding 5 hours.

(d) The flight recorder shall automatically start to record prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is no longer capable of moving under its own power.

(e) If the flight recorder records images or audio of the flight crew compartment, then a function shall be provided which can be operated by the commander and which modifies image and audio recordings made before the operation of that function, so that those recordings cannot be retrieved using normal replay or copying techniques.

▼B

CAT.IDE.A.195 Data link recording

(a) Aeroplanes first issued with an individual CofA on or after 8 April 2014 that have the capability to operate data link communications and are required to be equipped with a CVR, shall record on a recorder, where applicable:

(1) data link communication messages related to ATS communications to and from the aeroplane, including messages applying to the following applications:

(i) data link initiation;

(ii) controller-pilot communication;

(iii) addressed surveillance;

(iv) flight information;

(v) as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

(vi) as far as is practicable, given the architecture of the system, aircraft operational control data; and

(vii) as far as is practicable, given the architecture of the system, graphics;

(2) information that enables correlation to any associated records related to data link communications and stored separately from the aeroplane; and

(3) information on the time and priority of data link communications messages, taking into account the system's architecture.

(b) The recorder shall use a digital method of recording and storing data and information and a method for retrieving that data. The recording method shall allow the data to match the data recorded on the ground.

▼B

(c) The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in CAT.IDE.A.185.

▼M8

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 16 June 2018 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

▼M20

(e) The requirements applicable to the start and stop logic of the data link recorder are the same as the requirements applicable to the start and stop logic of the cockpit voice recorder (CVR) that are contained in point CAT.IDE.A.185.

▼B

CAT.IDE.A.200 Combination recorder

Compliance with CVR and FDR requirements may be achieved by:

(a) one flight data and cockpit voice combination recorder in the case of aeroplanes required to be equipped with a CVR or an FDR;

(b) one flight data and cockpit voice combination recorder in the case of aeroplanes with an MCTOM of 5 700 kg or less and required to be equipped with a CVR and an FDR; or

(c) two flight data and cockpit voice combination recorders in the case of aeroplanes with an MCTOM of more than 5 700 kg and required to be equipped with a CVR and an FDR.

CAT.IDE.A.205 Seats, seat safety belts, restraint systems and child restraint devices

(a) Aeroplanes shall be equipped with:

(1) a seat or berth for each person on board who is aged 24 months or more;

(2) a seat belt on each passenger seat and restraining belts for each berth except as specified in (3);

▼M15

(3) a seat belt with upper torso restraint system on each passenger seat and restraining belts on each berth in the case of aeroplanes with an MCTOM of 5 700 kg or less and with an MOPSC of nine or less, having an individual CofA first issued on or after 8 April 2015;

▼B

(4) a child restraint device (CRD) for each person on board younger than 24 months;

(5) a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration:

(i) on each flight crew seat and on any seat alongside a pilot's seat;

(ii) on each observer seat located in the flight crew compartment;

(6) a seat belt with upper torso restraint system on each seat for the minimum required cabin crew.

▼M9

(b) A seat belt with upper torso restraint system shall have:

(1) a single point release;

▼M9

(2) on the seats for the minimum required cabin crew, two shoulder straps and a seat belt that may be used independently; and

▼M15

(3) on flight crew members' seats and on any seat alongside a pilot's seat, either of the following:

(i) two shoulder straps and a seat belt that may be used independently;

(ii) a diagonal shoulder strap and a seat belt that may be used independently for the following aeroplanes:

(A) aeroplanes with an MCTOM of 5 700 kg or less and with an MOPSC of nine or less that are compliant with the emergency landing dynamic conditions defined in the applicable certification specification;

(B) aeroplanes with an MCTOM of 5 700 kg or less and with an MOPSC of nine or less that are not compliant with the emergency landing dynamic conditions defined in the applicable certification specification and having an individual CofA first issued before 28 October 2014;

(C) aeroplanes certified in accordance with CS-VLA or equivalent and CS-LSA or equivalent.

▼B

CAT.IDE.A.210 Fasten seat belt and no smoking signs

Aeroplanes in which not all passenger seats are visible from the flight crew seat(s) shall be equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

CAT.IDE.A.215 Internal doors and curtains

Aeroplanes shall be equipped with:

(a) in the case of aeroplanes with an MOPSC of more than 19, a door between the passenger compartment and the flight crew compartment, with a placard indicating ‘crew only’ and a locking means to prevent passengers from opening it without the permission of a member of the flight crew;

(b) a readily accessible means for opening each door that separates a passenger compartment from another compartment that has emergency exits;

(c) a means for securing in the open position any doorway or curtain separating the passenger compartment from other areas that need to be accessed to reach any required emergency exit from any passenger seat;

(d) a placard on each internal door or adjacent to a curtain that is the means of access to a passenger emergency exit, to indicate that it ►M4 shall ◄ be secured open during take-off and landing; and

(e) a means for any member of the crew to unlock any door that is normally accessible to passengers and that can be locked by passengers.

CAT.IDE.A.220 First-aid kit

(a) Aeroplanes shall be equipped with first-aid kits, in accordance with Table 1.

Table 1

Number of first-aid kits required

Number of passenger seats installed	Number of first-aid kits required
0-100	1
101-200	2

▼B

Number of passenger seats installed	Number of first-aid kits required
201-300	3
301-400	4
401-500	5
501 or more	6

(b) First-aid kits shall be:

(1) readily accessible for use; and

(2) kept up to date.

CAT.IDE.A.225 Emergency medical kit

(a) Aeroplanes with an MOPSC of more than 30 shall be equipped with an emergency medical kit when any point on the planned route is more than 60 minutes flying time at normal cruising speed from an aerodrome at which qualified medical assistance could be expected to be available.

(b) The commander shall ensure that drugs are only administered by appropriately qualified persons.

(c) The emergency medical kit referred to in (a) shall be:

(1) dust and moisture proof;

(2) carried in a way that prevents unauthorised access; and

(3) kept up to date.

CAT.IDE.A.230 First-aid oxygen

(a) Pressurised aeroplanes operated at pressure altitudes above 25 000 ft, in the case of operations for which a cabin crew member is required, shall be equipped with a supply of undiluted oxygen for passengers who, for physiological reasons, might require oxygen following a cabin depressurisation.

▼M16

(b) The oxygen supply referred to in (a) shall be sufficient for the remainder of the flight after cabin depressurisation when the cabin altitude exceeds 8 000 ft but does not exceed 15 000 ft, for at least 2 % of the passengers carried, but in no case for less than one person.

▼B

(c) There shall be a sufficient number of dispensing units, but in no case less than two, with a means for cabin crew to use the supply.

▼M16

(d) The first-aid oxygen equipment shall be capable of generating a mass flow to each person.

▼B

CAT.IDE.A.235 Supplemental oxygen — pressurised aeroplanes

(a) Pressurised aeroplanes operated at pressure altitudes above 10 000 ft shall be equipped with supplemental oxygen equipment that is capable of storing and dispensing the oxygen supplies in accordance with Table 1.

▼B

(b) Pressurised aeroplanes operated at pressure altitudes above 25 000 ft shall be equipped with:

(1) quick donning types of masks for flight crew members;

(2) sufficient spare outlets and masks or portable oxygen units with masks distributed evenly throughout the passenger compartment, to ensure immediate availability of oxygen for use by each required cabin crew member;

(3) an oxygen dispensing unit connected to oxygen supply terminals immediately available to each cabin crew member, additional crew member and occupants of passenger seats, wherever seated; and

(4) a device to provide a warning indication to the flight crew of any loss of pressurisation.

(c) In the case of pressurised aeroplanes first issued with an individual CofA after 8 November 1998 and operated at pressure altitudes above 25 000 ft, or operated at pressure altitudes at, or below 25 000 ft under conditions that would not allow them to descend safely to 13 000 ft within four minutes, the individual oxygen dispensing units referred to in (b)(3) shall be automatically deployable.

(d) The total number of dispensing units and outlets referred to in (b)(3) and (c) shall exceed the number of seats by at least 10 %. The extra units shall be evenly distributed throughout the passenger compartment.

(e) Notwithstanding (a), the oxygen supply requirements for cabin crew member(s), additional crew member(s) and passenger(s), in the case of aeroplanes not certified to fly at altitudes above 25 000 ft, may be reduced to the entire flying time between 10 000 ft and 13 000 ft cabin pressure altitudes for all required cabin crew members and for at least 10 % of the passengers if, at all points along the route to be flown, the aeroplane is able to descend safely within four minutes to a cabin pressure altitude of 13 000 ft.

(f) The required minimum supply in Table 1, row 1 item (b)(1) and row 2, shall cover the quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certified operating altitude to 10 000 ft in 10 minutes and followed by 20 minutes at 10 000 ft.

(g) The required minimum supply in Table 1, row 1 item 1(b)(2), shall cover the quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certified operating altitude to 10 000 ft in 10 minutes followed by 110 minutes at 10 000 ft.

(h) The required minimum supply in Table 1, row 3, shall cover the quantity of oxygen necessary for a constant rate of descent from the aeroplane's maximum certified operating altitude to 15 000 ft in 10 minutes.

▼B

Table 1

Oxygen minimum requirements for pressurised aeroplanes

Supply for	Duration and cabin pressure altitude
1. Occupants of flight crew compartment seats on flight crew compartment duty	(a) The entire flying time when the cabin pressure altitude exceeds 13 000 ft. (b) The remainder of the flying time when the cabin pressure altitude exceeds 10 000 ft but does not exceed 13 000 ft, after the initial 30 minutes at these altitudes, but in no case less than: (1) 30 minutes' supply for aeroplanes certified to fly at altitudes not exceeding 25 000 ft; and (2) 2 hours' supply for aeroplanes certified to fly at altitudes of more than 25 000 ft.
2. Required cabin crew members	(a) The entire flying time when the cabin pressure altitude exceeds 13 000 ft, but not less than 30 minutes' supply. (b) The remainder of the flying time when the cabin pressure altitude exceeds 10 000 ft but does not exceed 13 000 ft, after the initial 30 minutes at these altitudes.
3. 100 % of passengers (*)	The entire flying time when the cabin pressure altitude exceeds 15 000 ft, but in no case less than 10 minutes' supply.
4. 30 % of passengers (*)	The entire flying time when the cabin pressure altitude exceeds 14 000 ft but does not exceed 15 000 ft.
5. 10 % of passengers (*)	The remainder of the flying time when the cabin pressure altitude exceeds 10 000 ft but does not exceed 14 000 ft, after the initial 30 minutes at these altitudes.

(*) Passenger numbers in Table 1 refer to passengers actually carried on board, including persons younger than 24 months.

CAT.IDE.A.240 Supplemental oxygen — non-pressurised aeroplanes

Non-pressurised aeroplanes operated at pressure altitudes above 10 000 ft shall be equipped with supplemental oxygen equipment capable of storing and dispensing the oxygen supplies in accordance with Table 1.

▼B

Table 1

Oxygen minimum requirements for non-pressurised aeroplanes

Supply for	Duration and cabin pressure altitude
1. Occupants of flight crew compartment seats on flight crew compartment duty and crew members assisting flight crew in their duties	The entire flying time at pressure altitudes above 10 000 ft.
2. Required cabin crew members	The entire flying time at pressure altitudes above 13 000 ft and for any period exceeding 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.
3. Additional crew members and 100 % of passengers (*)	The entire flying time at pressure altitudes above 13 000 ft.
4. 10 % of passengers (*)	The entire flying time after 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.

(*) Passenger numbers in Table 1 refer to passengers actually carried on board, including persons younger than 24 months.

CAT.IDE.A.245 Crew protective breathing equipment

(a) All pressurised aeroplanes and those unpressurised aeroplanes with an MCTOM of more than 5 700 kg or having an MOPSC of more than 19 seats shall be equipped with protective breathing equipment (PBE) to protect the eyes, nose and mouth and to provide for a period of at least 15 minutes:

(1) oxygen for each flight crew member on duty in the flight crew compartment;

(2) breathing gas for each required cabin crew member, adjacent to his/her assigned station; and

(3) breathing gas from a portable PBE for one member of the flight crew, adjacent to his/her assigned station, in the case of aeroplanes operated with a flight crew of more than one and no cabin crew member.

(b) A PBE intended for flight crew use shall be installed in the flight crew compartment and be accessible for immediate use by each required flight crew member at his/her assigned station.

(c) A PBE intended for cabin crew use shall be installed adjacent to each required cabin crew member station.

▼M15

(d) Aeroplanes shall be equipped with an additional portable PBE installed adjacent to the hand fire extinguisher referred to in points CAT.IDE.A.250 (b) and (c), or adjacent to the entrance of the cargo compartment, in case the hand fire extinguisher is installed in a cargo compartment.

▼B

(e) A PBE while in use shall not prevent the use of the means of communication referred to in CAT.IDE.A.170, CAT.IDE.A.175, CAT.IDE.A.270 and CAT.IDE.A.330.

▼B

CAT.IDE.A.250 Hand fire extinguishers

(a) Aeroplanes shall be equipped with at least one hand fire extinguisher in the flight crew compartment.

(b) At least one hand fire extinguisher shall be located in, or readily accessible for use in, each galley not located on the main passenger compartment.

(c) At least one hand fire extinguisher shall be available for use in each class A or class B cargo or baggage compartment and in each class E cargo compartment that is accessible to crew members in flight.

(d) The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

(e) Aeroplanes shall be equipped with at least a number of hand fire extinguishers in accordance with Table 1, conveniently located to provide adequate availability for use in each passenger compartment.

Table 1

Number of hand fire extinguishers

MOPSC	Number of extinguishers
7-30	1
31-60	2
61-200	3
201-300	4
301-400	5
401-500	6
501-600	7
601 or more	8

CAT.IDE.A.255 Crash axe and crowbar

(a) Aeroplanes with an MCTOM of more than 5 700 kg or with an MOPSC of more than nine shall be equipped with at least one crash axe or crowbar located in the flight crew compartment.

(b) In the case of aeroplanes with an MOPSC of more than 200, an additional crash axe or crowbar shall be installed in or near the rearmost galley area.

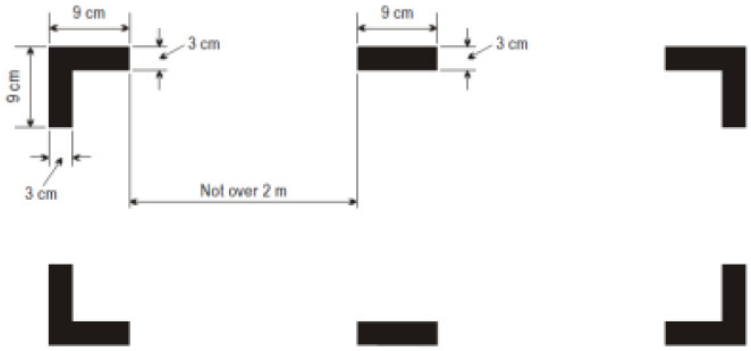
(c) Crash axes and crowbars located in the passenger compartment shall not be visible to passengers.

CAT.IDE.A.260 Marking of break-in points

If areas of the aeroplane's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.

▼M4

Figure 1



▼B

CAT.IDE.A.265 Means for emergency evacuation

(a) Aeroplanes with passenger emergency exit sill heights of more than 1,83 m (6 ft) above the ground shall be equipped at each of those exits with a means to enable passengers and crew to reach the ground safely in an emergency.

(b) Notwithstanding (a), such means are not required at overwing exits if the designated place on the aeroplane structure at which the escape route terminates is less than 1,83 m (6 ft) from the ground with the aeroplane on the ground, the landing gear extended, and the flaps in the take-off or landing position, whichever flap position is higher from the ground.

(c) Aeroplanes required to have a separate emergency exit for the flight crew for which the lowest point of the emergency exit is more than 1,83 m (6 ft) above the ground shall have a means to assist all flight crew members in descending to reach the ground safely in an emergency.

(d) The heights referred to in (a) and (c) shall be measured:

(1) with the landing gear extended; and

(2) after the collapse of, or failure to extend of, one or more legs of the landing gear, in the case of aeroplanes with a type certificate issued after 31 March 2000.

CAT.IDE.A.270 Megaphones

Aeroplanes with an MOPSC of more than 60 and carrying at least one passenger shall be equipped with the following quantities of portable battery-powered megaphones readily accessible for use by crew members during an emergency evacuation:

(a) For each passenger deck:

Table 1

Number of megaphones

Passenger seating configuration	Number of megaphones
61 to 99	1
100 or more	2

▼B

(b) For aeroplanes with more than one passenger deck, in all cases when the total passenger seating configuration is more than 60, at least one megaphone.

CAT.IDE.A.275 Emergency lighting and marking

(a) Aeroplanes with an MOPSC of more than nine shall be equipped with an emergency lighting system having an independent power supply to facilitate the evacuation of the aeroplane.

(b) In the case of aeroplanes with an MOPSC of more than 19, the emergency lighting system, referred to in (a) shall include:

(1) sources of general cabin illumination;

(2) internal lighting in floor level emergency exit areas;

(3) illuminated emergency exit marking and locating signs;

(4) in the case of aeroplanes for which the application for the type certificate or equivalent was filed before 1 May 1972, when operated by night, exterior emergency lighting at all overwing exits and at exits where descent assist means are required;

(5) in the case of aeroplanes for which the application for the type certificate or equivalent was filed after 30 April 1972, when operated by night, exterior emergency lighting at all passenger emergency exits; and

(6) in the case of aeroplanes for which the type certificate was first issued on or after 31 December 1957, floor proximity emergency escape path marking system(s) in the passenger compartments.

▼M15

(c) For aeroplanes with an MOPSC of 19 or less and type certified on the basis of the Agency's certification specification, the emergency lighting system referred to in point (a) shall include the equipment referred to in points (1), (2) and (3) of point (b).

(d) For aeroplanes with an MOPSC of 19 or less that are not certified on the basis of the Agency's certification specification, the emergency lighting system referred to in point (a) shall include the equipment referred to in point (b)(1).

▼B

(e) Aeroplanes with an MOPSC of nine or less, operated at night, shall be equipped with a source of general cabin illumination to facilitate the evacuation of the aeroplane.

CAT.IDE.A.280 Emergency locator transmitter (ELT)

▼M8

(a) With an MOPSC of more than 19 shall be equipped with at least:

(1) two ELTs, one of which shall be automatic, or one ELT and one aircraft localisation means meeting the requirement of CAT.GEN.MPA.210, in the case of aeroplanes first issued with an individual CofA after 1 July 2008; or

(2) one automatic ELT or two ELTs of any type or one aircraft localisation means meeting the requirement of CAT.GEN.MPA.210, in the case of aeroplanes first issued with an individual CofA on or before 1 July 2008.

▼M8

(b) Aeroplanes with an MOPSC of 19 or less shall be equipped with at least:

(1) one automatic ELT or one aircraft localisation means meeting the requirement of CAT.GEN.MPA.210, in the case of aeroplanes first issued with an individual CofA after 1 July 2008; or

(2) one ELT of any type or one aircraft localisation means meeting the requirement of CAT.GEN.MPA.210, in the case of aeroplanes first issued with an individual CofA on or before 1 July 2008.

▼B

(c) An ELT of any type shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

CAT.IDE.A.285 Flight over water

(a) The following aeroplanes shall be equipped with a life-jacket for each person on board or equivalent flotation device for each person on board younger than 24 months, stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided:

(1) landplanes operated over water at a distance of more than 50 NM from the shore or taking off or landing at an aerodrome where the take-off or approach path is so disposed over water that there would be a likelihood of a ditching; and

(2) seaplanes operated over water.

(b) Each life-jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

▼M15

(c) Seaplanes operated over water shall be equipped with the following:

(1) a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the seaplane on water, appropriate to its size, mass and handling characteristics;

(2) equipment for making the sound signals as prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

▼B

(d) Aeroplanes operated over water at a distance away from land suitable for making an emergency landing, greater than that corresponding to:

(1) 120 minutes at cruising speed or 400 NM, whichever is the lesser, in the case of aeroplanes capable of continuing the flight to an aerodrome with the critical engine(s) becoming inoperative at any point along the route or planned diversions; or

(2) for all other aeroplanes, 30 minutes at cruising speed or 100 NM, whichever is the lesser,

shall be equipped with the equipment specified in (e).

(e) Aeroplanes complying with (d) shall carry the following equipment:

▼B

(1) life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in an emergency, and being of sufficient size to accommodate all the survivors in the event of a loss of one raft of the largest rated capacity;

(2) a survivor locator light in each life-raft;

(3) life-saving equipment to provide the means for sustaining life, as appropriate for the flight to be undertaken; and

(4) at least two survival ELTs (ELT(S)).

▼M8

(f) By 1 January 2019 at the latest, aeroplanes with an MCTOM of more than 27 000 kg and with an MOPSC of more than 19 and all aeroplanes with an MCTOM of more than 45 500 kg shall be fitted with a securely attached underwater locating device that operates at a frequency of 8,8 kHz ± 1 kHz, unless:

(1) the aeroplane is operated over routes on which it is at no point at a distance of more than 180 NM from the shore; or

(2) the aeroplane is equipped with robust and automatic means to accurately determine, following an accident where the aeroplane is severely damaged, the location of the point of end of flight.

▼B

CAT.IDE.A.305 Survival equipment

(a) Aeroplanes operated over areas in which search and rescue would be especially difficult shall be equipped with:

(1) signalling equipment to make the distress signals;

(2) at least one ELT(S); and

(3) additional survival equipment for the route to be flown taking account of the number of persons on board.

(b) The additional survival equipment specified in (a)(3) does not need to be carried when the aeroplane:

(1) remains within a distance from an area where search and rescue is not especially difficult corresponding to:

(i) 120 minutes at one-engine-inoperative (OEI) cruising speed for aeroplanes capable of continuing the flight to an aerodrome with the critical engine(s) becoming inoperative at any point along the route or planned diversion routes; or

(ii) 30 minutes at cruising speed for all other aeroplanes;

(2) remains within a distance no greater than that corresponding to 90 minutes at cruising speed from an area suitable for making an emergency landing, for aeroplanes certified in accordance with the applicable airworthiness standard.

CAT.IDE.A.325 Headset

(a) Aeroplanes shall be equipped with a headset with a boom or throat microphone or equivalent for each flight crew member at their assigned station in the flight crew compartment.

(b) Aeroplanes operated under IFR or at night shall be equipped with a transmit button on the manual pitch and roll control for each required flight crew member.

▼B

CAT.IDE.A.330 Radio communication equipment

(a) Aeroplanes shall be equipped with the radio communication equipment required by the applicable airspace requirements.

(b) The radio communication equipment shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

CAT.IDE.A.335 Audio selector panel

Aeroplanes operated under IFR shall be equipped with an audio selector panel operable from each required flight crew member station.

CAT.IDE.A.340 Radio equipment for operations under VFR over routes navigated by reference to visual landmarks

Aeroplanes operated under VFR over routes navigated by reference to visual landmarks shall be equipped with radio communication equipment necessary under normal radio propagation conditions to fulfil the following:

(a) communicate with appropriate ground stations;

(b) communicate with appropriate ATC stations from any point in controlled airspace within which flights are intended; and

(c) receive meteorological information.

▼M16

CAT.IDE.A.345 Communication, navigation and surveillance equipment for operations under IFR or under VFR over routes not navigated by reference to visual landmarks

(a) Aeroplanes operated under IFR or under VFR over routes that cannot be navigated by reference to visual landmarks shall be equipped with radio communication, navigation and surveillance equipment in accordance with the applicable airspace requirements.

▼B

(b) Radio communication equipment shall include at least two independent radio communication systems necessary under normal operating conditions to communicate with an appropriate ground station from any point on the route, including diversions.

▼M15

(c) Notwithstanding point (b), aeroplanes operated for short haul operations in the North Atlantic high-level (NAT HLA) airspace and not crossing the North Atlantic shall be equipped with at least one long range communication system, in case alternative communication procedures are published for the airspace concerned.

▼B

(d) Aeroplanes shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with the flight plan.

(e) Aeroplanes operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodrome.

▼M9

(f) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

▼B

CAT.IDE.A.350 Transponder

Aeroplanes shall be equipped with a pressure altitude reporting secondary surveillance radar (SSR) transponder and any other SSR transponder capability required for the route being flown.

▼M9

CAT.IDE.A.355 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.

▼B

SECTION 2

Helicopters

CAT.IDE.H.100 Instruments and equipment — general

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(a) Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements, except for the following items:

(1) independent portable lights;

(2) an accurate time piece;

(3) chart holder;

(4) first-aid kit;

(5) megaphones;

(6) survival and signalling equipment;

(7) sea anchors and equipment for mooring;

(8) child restraint devices.

(b) Instruments and equipment not required under this Annex (Part-CAT) as well as any other equipment which is not required under this Regulation, but carried on a flight, shall comply with the following requirements:

(1) the information provided by those instruments, equipment or accessories shall not be used by the flight crew members to comply with Annex II to Regulation (EU) 2018/1139 or points CAT.IDE.H.330, CAT.IDE.H.335, CAT.IDE.H.340 and CAT.IDE.H.345 of this Annex;

(2) the instruments and equipment shall not affect the airworthiness of the helicopter, even in the case of failures or malfunction.

▼B

(c) If equipment is to be used by one flight crew member at his/her station during flight, it ►M4 shall ◄ be readily operable from that station. When a single item of equipment is required to be operated by more than one flight crew member it ►M4 shall ◄ be installed so that the equipment is readily operable from any station at which the equipment is required to be operated.

(d) Those instruments that are used by any flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision that he/she normally assumes when looking forward along the flight path.

(e) All required emergency equipment shall be easily accessible for immediate use.

CAT.IDE.H.105 Minimum equipment for flight

A flight shall not be commenced when any of the helicopter's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

(a) the helicopter is operated in accordance with the operator's MEL; or

▼M15

(b) the operator is approved by the competent authority to operate the helicopter within the constraints of the MMEL in accordance with point ORO.MLR.105(j) of Annex III.

▼B

CAT.IDE.H.115 Operating lights

(a) Helicopters operated under VFR by day shall be equipped with an anti-collision light system.

(b) Helicopters operated at night or under IFR shall, in addition to (a), be equipped with:

(1) lighting supplied from the helicopter's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the helicopter;

(2) lighting supplied from the helicopter's electrical system to provide illumination in all passenger compartments;

(3) an independent portable light for each required crew member readily accessible to crew members when seated at their designated stations;

(4) navigation/position lights;

(5) two landing lights of which at least one is adjustable in flight so as to illuminate the ground in front of and below the helicopter and the ground on either side of the helicopter; and

(6) lights to conform with the International Regulations for Preventing Collisions at Sea if the helicopter is amphibious.

CAT.IDE.H.125 Operations under VFR by day — flight and navigational instruments and associated equipment

(a) Helicopters operated under VFR by day shall be equipped with the following equipment, available at the pilot's station:

(1) A means of measuring and displaying:

▼B

(i) Magnetic heading;

(ii) Time in hours, minutes, and seconds;

▼M15

(iii) Barometric altitude;

▼B

(iv) Indicated airspeed;

(v) Vertical speed;

(vi) Slip; and

(vii) Outside air temperature.

(2) A means of indicating when the supply of power to the required flight instruments is not adequate.

(b) Whenever two pilots are required for the operation, an additional separate means of displaying the following shall be available for the second pilot:

▼M15

(1) Barometric altitude;

▼B

(2) Indicated airspeed;

(3) Vertical speed; and

(4) Slip.

(c) Helicopters with an MCTOM of more than 3 175 kg or any helicopter operating over water when out of sight of land or when the visibility is less than 1 500 m, shall be equipped with a means of measuring and displaying:

(1) Attitude; and

(2) Heading.

(d) A means for preventing malfunction of the airspeed indicating systems due to condensation or icing shall be available for helicopters with an MCTOM of more than 3 175 kg or an MOPSC of more than nine.

CAT.IDE.H.130 Operations under IFR or at night — flight and navigational instruments and associated equipment

Helicopters operated under VFR at night or under IFR shall be equipped with the following equipment, available at the pilot's station:

(a) A means of measuring and displaying:

(1) Magnetic heading;

(2) Time in hours, minutes and seconds;

(3) Indicated airspeed;

(4) Vertical speed;

(5) Slip;

(6) Attitude;

(7) Stabilised heading; and

(8) Outside air temperature.

▼M15

(b) Two means of measuring and displaying barometric altitude. For single-pilot operations under VFR at night one pressure altimeter may be substituted by a radio altimeter.

▼B

(c) A means of indicating when the supply of power to the required flight instruments is not adequate.

(d) A means of preventing malfunction of the airspeed indicating systems required in (a)(3) and (h)(2) due to either condensation or icing.

(e) A means of annunciating to the flight crew the failure of the means required in (d) for helicopters:

(1) issued with an individual CofA on or after 1 August 1999; or

(2) issued with an individual CofA before 1 August 1999 with an MCTOM of more than 3 175 kg, and with an MOPSC of more than nine.

(f) A standby means of measuring and displaying attitude that:

(1) is powered continuously during normal operation and, in the event of a total failure of the normal electrical generating system, is powered from a source independent of the normal electrical generating system;

(2) operates independently of any other means of measuring and displaying attitude;

(3) is capable of being used from either pilot's station;

(4) is operative automatically after total failure of the normal electrical generating system;

(5) provides reliable operation for a minimum of 30 minutes or the time required to fly to a suitable alternate landing site when operating over hostile terrain or offshore, whichever is greater, after total failure of the normal electrical generating system, taking into account other loads on the emergency power supply and operational procedures;

(6) is appropriately illuminated during all phases of operation; and

(7) is associated with a means to alert the flight crew when operating under its dedicated power supply, including when operated by emergency power.

(g) An alternate source of static pressure for the means of measuring altitude, airspeed and vertical speed.

(h) Whenever two pilots are required for the operation, a separate means for displaying for the second pilot:

▼M15

(1) Barometric altitude;

▼B

(2) Indicated airspeed;

(3) Vertical speed;

(4) Slip;

(5) Attitude; and

(6) Stabilised heading.

▼B

(i) For IFR operations, a chart holder in an easily readable position that can be illuminated for night operations.

CAT.IDE.H.135 Additional equipment for single-pilot operation under IFR

Helicopters operated under IFR with a single-pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

CAT.IDE.H.145 Radio altimeters

(a) Helicopters on flights over water shall be equipped with a radio altimeter capable of emitting an audio warning below a pre-set height and a visual warning at a height selectable by the pilot, when operating:

(1) out of sight of the land;

(2) in a visibility of less than 1 500 m;

(3) at night; or

(4) at a distance from land corresponding to more than three minutes at normal cruising speed.

CAT.IDE.H.160 Airborne weather detecting equipment

Helicopters with an MOPSC of more than nine and operated under IFR or at night shall be equipped with airborne weather detecting equipment when current weather reports indicate that thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route to be flown.

CAT.IDE.H.165 Additional equipment for operations in icing conditions at night

(a) Helicopters operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

(b) The means to illuminate the formation of ice shall not cause glare or reflection that would handicap crew members in the performance of their duties.

CAT.IDE.H.170 Flight crew interphone system

Helicopters operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

CAT.IDE.H.175 Crew member interphone system

Helicopters shall be equipped with a crew member interphone system when carrying a crew member other than a flight crew member.

CAT.IDE.H.180 Public address system

(a) Helicopters with an MOPSC of more than nine shall be equipped with a public address system, with the exception of (b).

(b) Notwithstanding (a) helicopters with an MOPSC of more than nine and less than 20 are exempted from having a public address system, if:

▼B

(1) the helicopter is designed without a bulkhead between pilot and passengers; and

(2) the operator is able to demonstrate that when in flight, the pilot's voice is audible and intelligible at all passengers' seats.

CAT.IDE.H.185 Cockpit voice recorder

(a) The following helicopter types shall be equipped with a cockpit voice recorder (CVR):

(1) all helicopters with an MCTOM of more than 7 000 kg; and

(2) helicopters with an MCTOM of more than 3 175 kg and first issued with an individual CofA on or after 1 January 1987.

(b) The CVR shall be capable of retaining the data recorded during at least:

(1) the preceding two hours for helicopters referred to in (a)(1) and (a)(2), when first issued with an individual CofA on or after 1 January 2016;

(2) the preceding one hour for helicopters referred to in (a)(1), when first issued with an individual CofA on or after 1 August 1999 and before 1 January 2016;

(3) the preceding 30 minutes for helicopters referred to in (a)(1), when first issued with an individual CofA before 1 August 1999; or

(4) the preceding 30 minutes for helicopters referred to in (a)(2), when first issued with an individual CofA before 1 January 2016.

▼M8

(c) By 1 January 2019 at the latest, the CVR shall record on means other than magnetic tape or magnetic wire.

(d) The CVR shall record with reference to a timescale:

(1) voice communications transmitted from or received in the flight crew compartment by radio;

(2) flight crew members' voice communications using the interphone system and the public address system, if installed;

(3) the aural environment of the flight crew compartment, including without interruption:

(i) for helicopters first issued with an individual CofA on or after 1 August 1999, the audio signals received from each crew microphone;

(ii) for helicopters first issued with an individual CofA before 1 August 1999, the audio signals received from each crew microphone, where practicable;

(4) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

▼M8

(e) The CVR shall start to record prior to the helicopter moving under its own power and shall continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power.

(f) In addition to (e), for helicopters referred to in (a)(2) issued with an individual CofA on or after 1 August 1999:

(1) the CVR shall start automatically to record prior to the helicopter moving under its own power and continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power; and

(2) depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

(g) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

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CAT.IDE.H.190 Flight data recorder

(a) The following helicopters shall be equipped with an FDR that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available:

(1) helicopters with an MCTOM of more than 3 175 kg and first issued with an individual CofA on or after 1 August 1999;

(2) helicopters with an MCTOM of more than 7 000 kg, or an MOPSC of more than nine, and first issued with an individual CofA on or after 1 January 1989 but before 1 August 1999.

(b) The FDR shall record the parameters required to determine accurately the:

(1) flight path, speed, attitude, engine power, operation and configuration and be capable of retaining the data recorded during at least the preceding 10 hours, for helicopters referred to in (a)(1) and first issued with an individual CofA on or after 1 January 2016;

(2) flight path, speed, attitude, engine power and operation and be capable of retaining the data recorded during at least the preceding eight hours, for helicopters referred to in (a)(1) and first issued with an individual CofA before 1 January 2016;

(3) flight path, speed, attitude, engine power and operation and be capable of retaining the data recorded during at least the preceding five hours, for helicopters referred to in (a)(2).

(c) Data shall be obtained from helicopter sources that enable accurate correlation with information displayed to the flight crew.

▼B

(d) The FDR shall automatically start to record the data prior to the helicopter being capable of moving under its own power and shall stop automatically after the helicopter is incapable of moving under its own power.

▼M8

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

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CAT.IDE.H.191 Lightweight flight recorder

(a) Turbine-engined helicopters with an MCTOM of 2 250 kg or more shall be equipped with a flight recorder if all of the following conditions are met:

(1) they are not within the scope of point CAT.IDE.H.190(a);

(2) they are first issued with an individual CofA on or after 5 September 2022.

(b) The flight recorder shall record, by means of flight data or images, information that is sufficient to determine the flight path and aircraft speed.

(c) The flight recorder shall be capable of retaining the flight data and the images recorded during at least the preceding 5 hours.

(d) The flight recorder shall automatically start to record prior to the helicopter being capable of moving under its own power and shall stop automatically after the helicopter is no longer capable of moving under its own power.

(e) If the flight recorder records images or audio of the flight crew compartment, then a function shall be provided which can be operated by the commander and which modifies image and audio recordings made before the operation of that function, so that those recordings cannot be retrieved using normal replay or copying techniques.

▼B

CAT.IDE.H.195 Data link recording

(a) Helicopters first issued with an individual CofA on or after 8 April 2014 that have the capability to operate data link communications and are required to be equipped with a CVR, shall record on a recorder, where applicable:

(1) data link communication messages related to ATS communications to and from the helicopter, including messages applying to the following applications:

(i) data link initiation;

(ii) controller-pilot communication;

(iii) addressed surveillance;

(iv) flight information;

▼B

(v) as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

(vi) as far as is practicable, given the architecture of the system, aircraft operational control data;

(vii) as far as is practicable, given the architecture of the system, graphics;

(2) information that enables correlation to any associated records related to data link communications and stored separately from the helicopter; and

(3) information on the time and priority of data link communications messages, taking into account the system's architecture.

(b) The recorder shall use a digital method of recording and storing data and information and a method of readily retrieving that data shall be available. The recording method shall allow the data to match the data recorded on the ground.

(c) The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in CAT.IDE.H.185.

▼M8

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

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(e) The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in CAT.IDE.H.185(d) and (e).

CAT.IDE.H.200 Flight data and cockpit voice combination recorder

Compliance with CVR and FDR requirements may be achieved by the carriage of one combination recorder.

CAT.IDE.H.205 Seats, seat safety belts, restraint systems and child restraint devices

(a) Helicopters shall be equipped with:

(1) a seat or berth for each person on board who is aged 24 months or more;

(2) a seat belt on each passenger seat and restraining belts for each berth;

▼B

(3) for helicopters first issued with an individual CofA on or after 1 August 1999, a safety belt with upper torso restraint system for use on each passenger seat for each passenger aged 24 months or more;

(4) a child restraint device (CRD) for each person on board younger than 24 months;

(5) a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration on each flight crew seat;

(6) a seat belt with upper torso restraint system on each seat for the minimum required cabin crew.

(b) A seat belt with upper torso restraint system shall:

(1) have a single point release; and

(2) on flight crew seats and on the seats for the minimum required cabin crew include two shoulder straps and a seat belt that may be used independently.

CAT.IDE.H.210 Fasten seat belt and no smoking signs

Helicopters in which not all passenger seats are visible from the flight crew seat(s) shall be equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

CAT.IDE.H.220 First-aid kits

(a) Helicopters shall be equipped with at least one first-aid kit.

(b) First-aid kits shall be:

(1) readily accessible for use;

(2) kept up to date.

CAT.IDE.H.240 Supplemental oxygen — non-pressurised helicopters

Non-pressurised helicopters operated at pressure altitudes above 10 000 ft shall be equipped with supplemental oxygen equipment capable of storing and dispensing the oxygen supplies in accordance with the following tables.

▼B

Table 1

Oxygen minimum requirements for complex non-pressurised helicopters

Supply for	Duration and cabin pressure altitude
1. Occupants of flight crew compartment seats on flight crew compartment duty and crew members assisting flight crew in their duties	The entire flying time at pressure altitudes above 10 000 ft.
2. Required cabin crew members	The entire flying time at pressure altitudes above 13 000 ft and for any period exceeding 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.
3. Additional crew members and 100 % of passengers (*)	The entire flying time at pressure altitudes above 13 000 ft.
4. 10 % of passengers (*)	The entire flying time after 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.

(*) Passenger numbers in Table 1 refer to passengers actually carried on board including persons younger than 24 months.

Table 2

Oxygen minimum requirements for other-than-complex non-pressurised helicopters

Supply for	Duration and cabin pressure altitude
1. Occupants of flight crew compartment seats on flight crew compartment duty, crew members assisting flight crew in their duties, and required cabin crew members	The entire flying time at pressure altitudes above 13 000 ft and for any period exceeding 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.
2. Additional crew members and 100 % of passengers (*)	The entire flying time at pressure altitudes above 13 000 ft.
3. 10 % of passengers (*)	The entire flying time after 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.

(*) Passenger numbers in Table 2 refer to passengers actually carried on board including persons younger than 24 months.

CAT.IDE.H.250 Hand fire extinguishers

(a) Helicopters shall be equipped with at least one hand fire extinguisher in the flight crew compartment.

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(b) At least one hand fire extinguisher shall be located in, or readily accessible for use in, each galley not located on the main passenger compartment.

(c) At least one hand fire extinguisher shall be available for use in each cargo compartment that is accessible to crew members in flight.

(d) The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

(e) The helicopter shall be equipped with at least a number of hand fire extinguishers in accordance with Table 1, conveniently located to provide adequate availability for use in each passenger compartment.

Table 1

Number of hand fire extinguishers

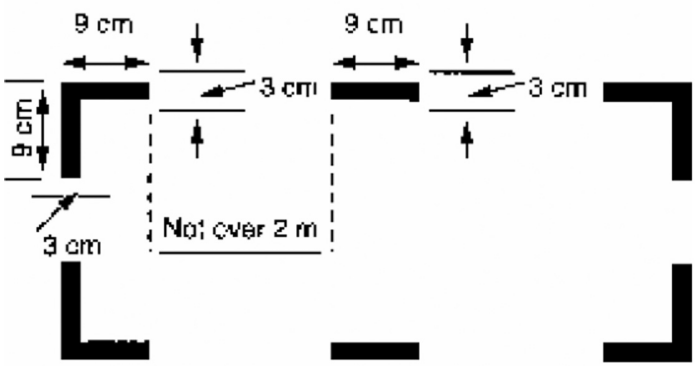
MOPSC	Number of extinguishers
7-30	1
31-60	2
61-200	3

CAT.IDE.H.260 Marking of break-in points

If areas of the helicopter's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.

Figure 1

Marking of break-in points



CAT.IDE.H.270 Megaphones

Helicopters with an MOPSC of more than 19 shall be equipped with one portable battery-powered megaphone readily accessible for use by crew members during an emergency evacuation.

CAT.IDE.H.275 Emergency lighting and marking

(a) Helicopters with an MOPSC of more than 19 shall be equipped with:

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(1) an emergency lighting system having an independent power supply to provide a source of general cabin illumination to facilitate the evacuation of the helicopter; and

(2) emergency exit marking and locating signs visible in daylight or in the dark.

(b) Helicopters shall be equipped with emergency exit markings visible in daylight or in the dark when operated:

(1) in performance class 1 or 2 on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;

(2) in performance class 3 on a flight over water at a distance corresponding to more than three minutes flying time at normal cruising speed.

CAT.IDE.H.280 Emergency locator transmitter (ELT)

(a) Helicopters shall be equipped with at least one automatic ELT.

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(c) An ELT of any type shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

CAT.IDE.H.290 Life-jackets

(a) Helicopters shall be equipped with a life-jacket for each person on board or equivalent floatation device for each person on board younger than 24 months, stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided, when operated in:

(1) performance class 1 or 2 on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;

(2) performance class 3 on a flight over water beyond autorotational distance from land;

(3) performance class 2 or 3 when taking off or landing at an aerodrome or operating site where the take-off or approach path is over water.

(b) Each life-jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

▼M9

CAT.IDE.H.295 Crew survival suits

Each crew member shall wear a survival suit when operating in performance class 3 on a flight over water beyond autorotational distance or safe forced landing distance from land, when the weather report or forecasts available to the commander indicate that the sea temperature will be less than plus 10 °C during the flight.

▼B

CAT.IDE.H.300 Life-rafts, survival ELTs and survival equipment on extended overwater flights

Helicopters operated:

(a) in performance class 1 or 2 on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;

▼B

(b) in performance class 3 on a flight over water at a distance corresponding to more than three minutes flying time at normal cruising speed, shall be equipped with:

(1) in the case of a helicopter carrying less than 12 persons, at least one life-raft with a rated capacity of not less than the maximum number of persons on board, stowed so as to facilitate its ready use in an emergency;

(2) in the case of a helicopter carrying more than 11 persons, at least two life-rafts, stowed so as to facilitate their ready use in an emergency, sufficient together to accommodate all persons capable of being carried on board and, if one is lost, the remaining life-raft(s) having, the overload capacity sufficient to accommodate all persons on the helicopter;

(3) at least one survival ELT (ELT(S)) for each required life-raft; and

(4) life-saving equipment, including means of sustaining life, as appropriate to the flight to be undertaken.

CAT.IDE.H.305 Survival equipment

Helicopters operated over areas in which search and rescue would be especially difficult shall be equipped with:

(a) signalling equipment to make distress signals;

(b) at least one ELT(S); and

(c) additional survival equipment for the route to be flown taking account of the number of persons on board.

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CAT.IDE.H.315 Helicopters certified for operating on water — miscellaneous equipment

Helicopters certified for operating on water shall be equipped with:

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(a) a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the helicopter on water, appropriate to its size, mass and handling characteristics; and

▼B

(b) equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

▼M15

CAT.IDE.H.320 All helicopters on flights over water — ditching

(a) Helicopters shall be designed for landing on water or certified for ditching in accordance with the relevant certification specification when operated in performance class 1 or 2 on a flight over water in a hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruise speed.

(b) Helicopters shall be designed for landing on water or certified for ditching in accordance with the relevant certification specification or fitted with emergency flotation equipment when operated in:

(1) performance class 1 or 2 on a flight over water in a non-hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruise speed;

▼M15

(2) performance class 2, when taking off or landing over water, except in the case of helicopter emergency medical services ('HEMS') operations, where for the purpose of minimising exposure, the landing or take-off at a HEMS operating site located in a congested environment is conducted over water;

(3) performance class 3 on a flight over water beyond safe forced landing distance from land.

▼B

CAT.IDE.H.325 Headset

Whenever a radio communication and/or radio navigation system is required, helicopters shall be equipped with a headset with boom microphone or equivalent and a transmit button on the flight controls for each required pilot and/or crew member at his/her assigned station.

CAT.IDE.H.330 Radio communication equipment

(a) Helicopters shall be equipped with the radio communication equipment required by the applicable airspace requirements.

(b) The radio communication equipment shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

CAT.IDE.H.335 Audio selector panel

Helicopters operated under IFR shall be equipped with an audio selector panel operable from each required flight crew member station.

CAT.IDE.H.340 Radio equipment for operations under VFR over routes navigated by reference to visual landmarks

Helicopters operated under VFR over routes that can be navigated by reference to visual landmarks shall be equipped with radio communication equipment necessary under normal radio propagation conditions to fulfil the following:

(a) communicate with appropriate ground stations;

(b) communicate with appropriate ATC stations from any point in controlled airspace within which flights are intended; and

(c) receive meteorological information.

▼M16

CAT.IDE.H.345 Communication, navigation and surveillance equipment for operations under IFR or under VFR over routes not navigated by reference to visual landmarks

(a) Helicopters operated under IFR or under VFR over routes that cannot be navigated by reference to visual landmarks shall be equipped with radio communication, navigation and surveillance equipment in accordance with the applicable airspace requirements.

▼B

(b) Radio communication equipment shall include at least two independent radio communication systems necessary under normal operating conditions to communicate with an appropriate ground station from any point on the route, including diversions.

(c) Helicopters shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with the flight plan.

▼B

(d) Helicopters operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodromes.

▼M9

(e) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

▼B

CAT.IDE.H.350 Transponder

Helicopters shall be equipped with a pressure altitude reporting secondary surveillance radar (SSR) transponder and any other SSR transponder capability required for the route being flown.

▼M9

CAT.IDE.H.355 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.

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▼M11

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ANNEX V

SPECIFIC APPROVALS

[PART-SPA]

SUBPART A

GENERAL REQUIREMENTS

▼M30

SPA.GEN.100 Competent authority

(a) The competent authority for the issuing of a specific approval shall be:

(1) for a commercial operator of aeroplanes or helicopters, the authority of the Member State where the operator has its principal place of business;

(2) for a non-commercial operator of aeroplanes or helicopters, the authority of the Member State where the operator has its principal place of business, is established or resides;

(3) for an IAM operator of VTOL-capable aircraft (VCA), the authority of the Member State where the operator has its principal place of business or resides.

(b) Notwithstanding point (a)(2), for a non-commercial operator that uses an aeroplane or a helicopter registered in a third country, the applicable requirements under this Annex for the approval of the following operations shall not apply if that approval is issued by a third-country State of Registry:

(1) performance-based navigation (PBN);

(2) minimum navigation performance specifications (MNPS);

(3) reduced vertical separation minima (RVSM) airspace;

(4) low-visibility operations (LVOs).

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SPA.GEN.105 Application for a specific approval

(a) The operator applying for the initial issue of a specific approval shall provide to the competent authority the documentation required in the applicable Subpart, together with the following information:

(1) the name, address and mailing address of the applicant;

(2) a description of the intended operation.

(b) The operator shall provide the following evidence to the competent authority:

(1) compliance with the requirements of the applicable Subpart;

▼M2

(2) that the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012 are taken into account.

▼B

(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

▼M1

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.

▼B

SPA.GEN.115 Changes to a specific approval

When the conditions of a specific approval are affected by changes, the operator shall provide the relevant documentation to the competent authority and obtain prior approval for the operation.

▼M2

SPA.GEN.120 Continued validity of a specific approval

Specific approvals shall be issued for an unlimited duration and shall remain valid subject to the operator remaining in compliance with the requirements associated with the specific approval and taking into account the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012.

▼B

SUBPART B

PERFORMANCE-BASED NAVIGATION (PBN) OPERATIONS

▼M9

SPA.PBN.100 PBN operations

(a) An approval is required for each of the following PBN specifications:

(1) RNP AR APCH; and

(2) RNP 0.3 for helicopter operation.

(b) An approval for RNP AR APCH operations shall allow operations on public instrument approach procedures which meet the applicable ICAO procedure design criteria.

(c) A procedure-specific approval for RNP AR APCH or RNP 0.3 shall be required for private instrument approach procedures or any public instrument approach procedure that does not meet the applicable ICAO procedure design criteria, or where required by the Aeronautical Information Publication (AIP) or the competent authority.

SPA.PBN.105 PBN operational approval

To obtain a PBN specific approval from the competent authority, the operator shall provide evidence that:

(a) the relevant airworthiness approval, suitable for the intended PBN operation, is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval;

(b) a training programme for the flight crew members and relevant personnel involved in the flight preparation has been established;

(c) a safety assessment has been carried out;

(d) operating procedures have been established specifying:

(1) the equipment to be carried, including its operating limitations and appropriate entries in the minimum equipment list (MEL);

(2) flight crew composition, qualification and experience;

▼M9

(3) normal, abnormal and contingency procedures; and

(4) electronic navigation data management.

(e) a list of reportable events has been specified; and

(f) a management RNP monitoring programme has been established for RNP AR APCH operations, if applicable.

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SUBPART C

OPERATIONS WITH SPECIFIED MINIMUM NAVIGATION PERFORMANCE (MNPS)

▼M30

SPA.MNPS.100 MNPS operations

Aeroplanes and helicopters shall only be operated in designated minimum navigation performance specifications (MNPS) airspace in accordance with regional supplementary procedures, where MNPS are established, if the operator has been granted an approval by the competent authority to conduct such operations.

▼B

SPA.MNPS.105 MNPS operational approval

To obtain an MNPS operational approval from the competent authority, the operator shall provide evidence that:

(a) the navigation equipment meets the required performance;

(b) navigation displays, indicators and controls are visible and operable by either pilot seated at his/her duty station;

(c) a training programme for the flight crew members involved in these operations has been established;

(d) operating procedures have been established specifying:

(1) the equipment to be carried, including its operating limitations and appropriate entries in the MEL;

(2) flight crew composition and experience requirements;

(3) normal procedures;

(4) contingency procedures including those specified by the authority responsible for the airspace concerned;

(5) monitoring and incident reporting.

SUBPART D

OPERATIONS IN AIRSPACE WITH REDUCED VERTICAL SEPARATION MINIMA (RVSM)

▼M30

SPA.RVSM.100 RVSM operations

Aeroplanes and helicopters shall only be operated in designated airspace where a reduced vertical separation minimum of 300 m (1 000 ft) applies between flight level (FL) 290 and FL 410, inclusive, if the operator has been granted an approval by the competent authority to conduct such operations.

▼B

SPA.RVSM.105 RVSM operational approval

To obtain an RVSM operational approval from the competent authority, the operator shall provide evidence that:

(a) the RVSM airworthiness approval has been obtained;

(b) procedures for monitoring and reporting height-keeping errors have been established;

(c) a training programme for the flight crew members involved in these operations has been established;

(d) operating procedures have been established specifying:

(1) the equipment to be carried, including its operating limitations and appropriate entries in the MEL;

(2) flight crew composition and experience requirements;

(3) flight planning;

(4) pre-flight procedures;

(5) procedures prior to RVSM airspace entry;

(6) in-flight procedures;

(7) post-flight procedures;

(8) incident reporting;

(9) specific regional operating procedures.

SPA.RVSM.110 RVSM equipment requirements

Aircraft used for operations in RVSM airspace shall be equipped with:

(a) two independent altitude measurement systems;

(b) an altitude alerting system;

(c) an automatic altitude control system;

(d) a secondary surveillance radar (SSR) transponder with altitude reporting system that can be connected to the altitude measurement system in use for altitude control.

SPA.RVSM.115 RVSM height-keeping errors

(a) The operator shall report recorded or communicated occurrences of height-keeping errors caused by malfunction of aircraft equipment or of operational nature, equal to or greater than:

(1) a total vertical error (TVE) of ± 90 m (± 300 ft);

(2) an altimetry system error (ASE) of ± 75 m (± 245 ft); and

(3) an assigned altitude deviation (AAD) of ± 90 m (± 300 ft).

▼B

(b) Reports of such occurrences shall be sent to the competent authority within 72 hours. Reports shall include an initial analysis of causal factors and measures taken to prevent repeat occurrences.

(c) When height-keeping errors are recorded or received, the operator shall take immediate action to rectify the conditions that caused the errors and provide follow-up reports, if requested by the competent authority.

SUBPART E

▼M21

LOW-VISIBILITY OPERATIONS (LVOS) AND OPERATIONS WITH OPERATIONAL CREDITS

▼M30

SPA.LVO.100 Low-visibility operations and operations with operational credits

An operator of aeroplanes or helicopters shall conduct the following operations only if they are approved by the competent authority:

(a) take-off operations with visibility conditions of less than 400 m RVR;

(b) instrument approach operations in low-visibility conditions; and

(c) operations with operational credits, except for EFVS 200 operations, which shall not be subject to a specific approval.

▼M21

SPA.LVO.105 Specific approval criteria

To obtain a specific approval as required by SPA.LVO.100, the operator shall demonstrate that:

(a) for low-visibility approach operations, LVTO operations in an RVR less than 125 m, and operations with operational credits, the aircraft has been certified for the intended operations;

(b) the flight crew members are competent to conduct the intended operation and a training and checking programme for the flight crew members and relevant personnel involved in the flight preparation has been established, in accordance with SPA.LVO.120;

(c) operating procedures for the intended operations have been established;

(d) any relevant changes to the minimum equipment list (MEL) have been made;

(e) any relevant changes to the maintenance programme have been made;

(f) procedures have been established to ensure the suitability of aerodromes, including instrument flight procedures, for the intended operations, in accordance with SPA.LVO.110; and

(g) for the intended operations, a safety assessment has been carried out, and performance indicators have been established to monitor the level of safety.

SPA.LVO.110 Aerodrome-related requirements, including instrument flight procedures

The operator shall ensure that only aerodromes, including instrument flight procedures, suitable for the intended operations are used for LVOs and operations with operational credits.

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▼M21

SPA.LVO.120 Flight crew competence

(a) The operator shall ensure that the flight crew is competent to conduct the intended operations.

(b) The operator shall ensure that each flight crew member successfully completes training and checking for all types of LVOs and operations with operational credits for which an approval has been granted. Such training and checking shall:

(1) include initial and recurrent training and checking;

(2) include normal, abnormal and emergency procedures;

(3) be tailored to the type of technologies used in the intended operations; and

(4) take into account the human factor risks associated with the intended operations.

(c) The operator shall keep records of the training and qualifications of the flight crew members.

(d) The training and checking shall be conducted by appropriately qualified personnel. In the case of flight and flight simulation training and checking, the personnel providing the training and conducting the checks shall be qualified in accordance with Annex I (Part-FCL) to Regulation (EU) No 1178/2011.

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SPA.LVO.125 Operating procedures

(a) The operator shall establish procedures and instructions to be used for LVOs. These procedures and instructions shall be included in the operations manual or procedures manual and contain the duties of flight crew members during taxiing, take-off, approach, flare, landing, rollout and missed approach operations, as appropriate.

(b) Prior to commencing an LVO, the pilot-in-command/commander shall be satisfied that:

(1) the status of the visual and non-visual facilities is sufficient;

(2) appropriate LVPs are in force according to information received from air traffic services (ATS);

(3) flight crew members are properly qualified.

SPA.LVO.130 Minimum equipment

(a) The operator shall include the minimum equipment that has to be serviceable at the commencement of an LVO in accordance with the aircraft flight manual (AFM) or other approved document in the operations manual or procedures manual, as applicable.

(b) The pilot-in-command/commander shall be satisfied that the status of the aircraft and of the relevant airborne systems is appropriate for the specific operation to be conducted.

SUBPART F

EXTENDED RANGE OPERATIONS WITH TWO-ENGINED AEROPLANES (ETOPS)

SPA.ETOPS.100 ETOPS

In commercial air transport operations, two-engined aeroplanes shall only be operated beyond the threshold distance determined in accordance with CAT.OP.MPA.140 if the operator has been granted an ETOPS operational approval by the competent authority.

▼B

SPA.ETOPS.105 ETOPS operational approval

To obtain an ETOPS operational approval from the competent authority, the operator shall provide evidence that:

(a) the aeroplane/engine combination holds an ETOPS type design and reliability approval for the intended operation;

(b) a training programme for the flight crew members and all other operations personnel involved in these operations has been established and the flight crew members and all other operations personnel involved are suitably qualified to conduct the intended operation;

(c) the operator's organisation and experience are appropriate to support the intended operation;

(d) operating procedures have been established.

SPA.ETOPS.110 ETOPS en-route alternate aerodrome

(a) An ETOPS en-route alternate aerodrome shall be considered adequate, if, at the expected time of use, the aerodrome is available and equipped with necessary ancillary services such as air traffic services (ATS), sufficient lighting, communications, weather reporting, navigation aids and emergency services and has at least one instrument approach procedure available.

(b) Prior to conducting an ETOPS flight, the operator shall ensure that an ETOPS en-route alternate aerodrome is available, within either the operator's approved diversion time, or a diversion time based on the MEL generated serviceability status of the aeroplane, whichever is shorter.

(c) The operator shall specify any required ETOPS en-route alternate aerodrome(s) in the operational flight plan and ATS flight plan.

SPA.ETOPS.115 ETOPS en-route alternate aerodrome planning minima

(a) The operator shall only select an aerodrome as an ETOPS en-route alternate aerodrome when the appropriate weather reports or forecasts, or any combination thereof, indicate that, between the anticipated time of landing until one hour after the latest possible time of landing, conditions will exist at or above the planning minima calculated by adding the additional limits of Table 1.

(b) The operator shall include in the operations manual the method for determining the operating minima at the planned ETOPS en-route alternate aerodrome.

Table 1

Planning minima for the ETOPS en-route alternate aerodrome

Type of approach	Planning minima
Precision approach	DA/H + 200 ft RVR/VIS + 800 m (*)
Non-precision approach or Circling approach	MDA/H + 400 ft (*) RVR/VIS + 1 500 m

(*) VIS: visibility; MDA/H: minimum descent altitude/height.

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SUBPART G

TRANSPORT OF DANGEROUS GOODS

▼M30

SPA.DG.100 Transport of dangerous goods

Except as provided for in Annex IV (Part-CAT), Annex VI (Part-NCC), Annex VII (Part-NCO), Annex VIII (Part-SPO) and Annex IX (Part-IAM) to this Regulation, the operator shall only transport dangerous goods by air if it has been approved by the competent authority.

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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;

▼M15

(e) ensure that a copy of the information to the pilot-in-command or the commander is retained on the ground and that that copy, or the information contained in it, is readily accessible to the flight operations officer, flight dispatcher, or the designated ground personnel responsible for their part of the flight operations, until after the completion of the flight to which the information refers;

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(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 ►M4 Regulation (EU) No 748/2012 ◄.

▼M15

(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 discernible during all phases of NVIS flight.

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(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:

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(1) a back-up or secondary power source for the night vision goggles (NVG);

(2) a helmet with the appropriate NVG attachment.

▼M28

(e) All required NVG on an NVIS flight shall be of the same filter class and shall provide for sufficiently equivalent visual acuity.

▼B

(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

▼M21

(a) Operations shall not be conducted below the weather minima for the type of night operations being conducted.

▼B

(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.

▼B

(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.

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SPA.HHO.110 Equipment requirements for HHO

(a) The installation of all helicopter hoist equipment other than a simple PCDS, including any radio equipment to comply with point 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 provided for by Regulation (EU) No 1321/2014.

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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.

▼B

(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.

▼B

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.

▼M28

SPA.HEMS.105 HEMS HEC operations

(a) HEMS HEC operations may be conducted with either of the following:

(1) a helicopter hoist, under the conditions prescribed in Subpart I (Helicopter Hoist Operations);

(2) a cargo sling, under the conditions prescribed in point (b).

(b) For HEMS HEC operations conducted with a cargo sling, the operator shall:

(1) comply with the requirements of point SPO.SPEC.HEC.105 of Annex VIII;

(2) use an approved double cargo hook, or a cargo hook system approved under a relevant airworthiness standard;

(3) limit the operations to the technical phase of the flight for rescuing injured, ill or endangered persons, or to carry persons that are necessary for the mission;

(4) ensure that sling technical crew members are adequately equipped, trained, checked and briefed;

(5) develop specific HEMS HEC SOPs, following the risk assessment referred to in point SPA.HEMS.140;

(6) ensure that all flight crew members involved in HEMS HEC operations are experienced, trained and checked for HEMS HEC operations, and have recent experience with such activity.

▼B

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 ►M4 Regulation (EU) No 748/2012 ◄.

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.

▼M28

SPA.HEMS.120 HEMS operating minima

(a) HEMS flights operated under VFR shall comply with the HEMS-specific weather minima for the dispatch and en-route phase of the HEMS flight.

(b) If during the en-route phase the weather conditions fall below the cloud base or visibility minima, 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.

(c) The VFR operating minima shall be as defined by the applicable airspace requirements, except in the following cases where reduced ceiling, visibility and vertical distances from obstacles may be used:

(1) multi-pilot operations;

(2) single-pilot operations with a technical crew member seated in a forward-facing front seat, who is suitably qualified and tasked to mitigate the additional risk.

▼B

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

▼B

(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

(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.

▼M31

(g) *Flight crew members who have attained the age of 60 years and who perform single-pilot HEMS operations in accordance with point FCL.065(a) of Annex I (Part-FCL) to Regulation (EU) No 1178/2011*

(1) For flight crew members who have attained the age of 60 years and who perform single-pilot HEMS operations in accordance with point FCL.065(a) of Annex I (Part-FCL) to Regulation (EU) No 1178/2011, the operator shall take into account in its risk evaluation performed in accordance with ORO.GEN.200 the increase of the risk of incapacitation due to cardiovascular and cerebrovascular factors linked with operational circumstances.

(2) Training and checking for flight crew members referred to in point (1) shall be conducted by personnel that has received appropriate training to help them detect mild cognitive decline and request medical assessment of crew member where necessary.

▼B

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.

▼M28

SPA.HEMS.140 Information, procedures and documentation

(a) The operator shall assess, mitigate, and minimise the risks associated with the HEMS environment as part of its risk analysis and management process. The operator shall describe the mitigating measures, including operating procedures, in the operations manual.

(b) The operator shall ensure that the HEMS commander assesses specific risks associated with the particular HEMS mission.

(c) Notwithstanding point CAT.OP.MPA.175 of Annex IV, the operator does not need to complete an operational flight plan if the HEMS mission includes a flight to or from a non-pre-surveyed HEMS operating site.

(d) Relevant extracts from the operations manual shall be made available to the organisation for which the operator performs HEMS operations.

▼B

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.

▼M20

SPA.HEMS.150 Fuel/energy supply – alleviation

As an alternative to points CAT.OP.MPA.191 (b), (c), and (d), when the helicopter emergency medical services (HEMS) mission is conducted under visual flight rules (VFR) within a local and defined geographical area, the fuel/energy policy shall ensure that on completion of the mission, the final reserve fuel/energy is sufficient for:

(a) 30-minute flying time at best-range speed; or

(b) 20-minute flying time at best-range speed by day, when operating within an area providing continuous and suitable operating sites.

▼M28

SPA.HEMS.151 Aircraft tracking system

The operator shall establish and maintain a monitored aircraft tracking system for HEMS operations for the entire duration of the HEMS mission.

▼M20

SPA.HEMS.155 Refuelling with passengers on board

A refuelling procedure with either rotors stopped or rotors turning shall be provided in accordance with point CAT.OP.MPA.200 ‘Special refuelling or defuelling of the aircraft’.

▼M9

SUBPART K

HELICOPTER OFFSHORE OPERATIONS

SPA.HOFO.100 Helicopter offshore operations (HOFO)

The requirements of this Subpart apply to:

(a) a commercial air transport operator holding a valid AOC in accordance with Part-ORO;

(b) a specialised operations operator having declared its activity in accordance with Part-ORO; or

(c) a non-commercial operator having declared its activity in accordance with Part-ORO.

SPA.HOFO.105 Approval for helicopter offshore operations

(a) Prior to engaging in operations under this Subpart, a specific approval by the 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.

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

▼M9

(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.

SPA.HOFO.115 Use of offshore locations

The operator shall only use offshore locations that are suitable in relation to size and mass of the type of helicopter and to the operations concerned.

SPA.HOFO.120 Selection of aerodromes and operating sites

▼M21

(a) Onshore destination alternate aerodrome. Notwithstanding points CAT.OP.MPA.192, 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 destination aerodrome provided that sufficient operational contingency is in place to ensure a safe return from offshore.

▼M9

(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.

▼M9

(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.

▼M21

SPA.HOFO.125 Offshore standard approach procedures (OSAPs)

(a) An operator shall establish procedures to ensure that offshore standard approach procedures (OSAPs) are followed only if:

(1) the helicopter is capable of providing navigation and real-time obstacle environment information for obstacle clearance; and

(2) either:

(i) the minimum descent height (MDH) is determined from a radio altimeter or a device that provides equivalent performance; or

(ii) the minimum descent altitude (MDA) is applied and it includes an adequate margin.

(b) If the operator follows OSAPs to rigs or vessels in transit, the flight shall be conducted in multi-pilot operations.

(c) The decision range shall provide adequate obstacle clearance in the missed approach from any destination for which an OSAP 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 operations, appropriate increments shall be added to the MDA/H and decision range.

(f) When an OSAP is followed to a non-moving offshore location (i.e. fixed installation or moored vessel) and a reliable GNSS position for the location is available in the navigation system, the GNSS/area navigation system shall be used to enhance the safety of the OSAP.

(g) The operator shall include OSAPs in its initial and recurrent training and checking programmes.

▼M9

SPA.HOFO.130 Meteorological conditions

Notwithstanding CAT.OP.MPA.247, NCC.OP.180 and SPO.OP.170, when flying between offshore locations located in class G airspace where the overwater sector is less than 10 NM, VFR flights may be conducted when the limits are at, or better than, the following:

Minima for flying between offshore locations located in class G airspace

	Day		Night	
	Height (*)	Visibility	Height (*)	Visibility
Single pilot	300 feet	3 km	500 feet	5 km
Two pilots	300 feet	2 km (**)	500 feet	5 km (***)

(*) The cloud base shall allow flight at the specified height to be below and clear of cloud.

(**) Helicopters may be operated in flight visibility down to 800 m, provided the destination or an intermediate structure is continuously visible.

(***) Helicopters may be operated in flight visibility down to 1 500 m, provided the destination or an intermediate structure is continuously visible.

SPA.HOFO.135 Wind limitations for operations to offshore locations

Operation to an offshore location shall only be performed when the wind speed at the helideck is reported to be not more than 60 knots including gusts.

SPA.HOFO.140 Performance requirements at offshore locations

Helicopters taking off from and landing at offshore locations shall be operated in accordance with the performance requirements of the appropriate Annex according to their type of operation.

▼C2

SPA.HOFO.145 Flight data monitoring (FDM) programme

(a) When conducting CAT operations with a helicopter equipped with a flight data recorder, the operator shall establish and maintain a FDM programme, as part of its integrated management system, by 1 January 2019.

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

▼M9

SPA.HOFO.150 Aircraft tracking system

An operator shall establish and maintain a monitored aircraft tracking system for offshore operations in a hostile environment from the time the helicopter departs until it arrives at its final destination.

SPA.HOFO.155 Vibration health monitoring (VHM) system

(a) The following helicopters conducting CAT offshore operations in a hostile environment shall be fitted with a VHM system capable of monitoring the status of critical rotor and rotor drive systems by 1 January 2019:

(1) complex motor-powered helicopters first issued with an individual Certificate of Airworthiness (C of A) after 31 December 2016;

▼M9

(2) all helicopters with a maximum operational passenger seating configuration (MOPSC) of more than 9 and first issued with an individual C of A before 1 January 2017;

(3) all helicopters first issued with an individual C of A after 31 December 2018.

(b) The operator shall have a system to:

(1) collect the data including system generated alerts;

(2) analyse and determine component serviceability; and

(3) respond to detected incipient failures.

SPA.HOFO.160 Equipment requirements

(a) The operator shall comply with the following equipment requirements:

(1) Public Address (PA) system in helicopters used for CAT and non-commercial operations with complex motor-powered helicopters (NCC):

(i) Helicopters with a maximum operational passenger seat configuration (MOPSC) of more than 9 shall be equipped with a PA system.

(ii) Helicopters with an MOPSC of 9 or less need not be equipped with a PA system if the operator can demonstrate that the pilot's voice is understandable at all passengers' seats in flight.

(2) *Radio altimeter*

Helicopters shall be equipped with a radio altimeter that is capable of emitting an audio warning below a pre-set height and a visual warning at a height selectable by the pilot.

(b) *Emergency exits*

All emergency exits, including crew emergency exits, and any door, window or other opening that is suitable for emergency egress, and the means for opening them shall be clearly marked for the guidance of occupants using them in daylight or in the dark. Such markings shall be designed to remain visible if the helicopter is capsized or the cabin is submerged.

(c) *Helicopter terrain awareness warning system (HTAWS)*

Helicopters used in CAT operations with a maximum certificated take-off mass of more than 3 175 kg or a MOPSC of more than 9 and first issued with an individual C of A after 31 December 2018 shall be equipped with an HTAWS that meets the requirements for class A equipment as specified in an acceptable standard.

SPA.HOFO.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.

▼**M9**

(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.

▼M9

(h) *Emergency exits and escape hatches*

All emergency exits, including crew emergency exits, and any door, window or other opening suitable to be used for the purpose of underwater escape shall be equipped so as to be operable in an emergency.

(i) Notwithstanding (a), (b) and (c) above the operator may, based on a risk assessment, allow passengers, medically incapacitated at an offshore location, to partly wear or not wear life jackets, survival suits or emergency breathing systems on return flights or flights between offshore locations.

SPA.HOFO.170 Crew requirements

(a) The operator shall establish:

(1) criteria for the selection of flight crew members, taking into account the flight crew members' previous experience;

(2) a minimum experience level for a commander/pilot-in-command intending to conduct offshore operations; and

(3) a flight crew training and checking programme that each flight crew member shall complete successfully. Such programme shall be adapted to the offshore environment and include normal, abnormal and emergency procedures, crew resource management, water entry and sea survival training.

(b) *Recency requirements*

A pilot shall only operate a helicopter carrying passengers:

(1) at an offshore location, as commander or pilot-in-command, or co-pilot, when he or she has carried out in the preceding 90 days at least 3 take-offs, departures, approaches and landings at an offshore location in a helicopter of the same type or a full flight simulator (FFS) representing that type; or

(2) by night at an offshore location, as commander or pilot-in-command, or co-pilot, when he/she has carried out in the preceding 90 days at least 3 take-offs, departures, approaches and landings at night at an offshore location in a helicopter of the same type or an FFS representing that type.

The 3 take-offs and landings shall be performed in either multi-pilot or single-pilot operations, depending on the operation to be performed.

(c) Specific requirements for CAT:

(1) The 90-day period presented in points (b)(1) and (2) above may be extended to 120 days as long as the pilot undertakes line flying under the supervision of a type rating instructor or examiner.

(2) If the pilot does not comply with the requirements in (1), he/she shall complete a training flight in the helicopter or an FFS of the helicopter type to be used, which shall include at least the requirements described in (b)(1) and (2) before he or she can exercise his or her privileges.

▼M10

SUBPART L

SINGLE-ENGINED TURBINE AEROPLANE OPERATIONS AT NIGHT OR IN INSTRUMENT METEOROLOGICAL CONDITIONS (SET-IMC)

SPA.SET-IMC.100 SET-IMC operations

In commercial air transport (CAT) operations, single-engined turbine aeroplanes shall only be operated at night or in IMC if the operator has been granted a SET-IMC approval by the competent authority.

SPA.SET-IMC.105 SET-IMC operations approval

To obtain a SET-IMC approval by the competent authority, the operator shall provide evidence that all the following conditions have been complied with:

(a) an acceptable level of turbine engine reliability is achieved in service by the world fleet for the particular airframe-engine combination;

▼M16

(b) specific maintenance instructions and procedures to ensure the intended levels of continued airworthiness and reliability of the aeroplane and its propulsion system have been established and included in the operator's aircraft maintenance programme in accordance with Regulation (EU) No 1321/2014, including all of the following:

(1) an engine trend monitoring programme, except for aeroplanes first issued with an individual certificate of airworthiness after 31 December 2004 that have an automatic trend monitoring system;

(2) a propulsion and associated systems' reliability programme;

▼M10

(c) flight crew composition and a training/checking programme for the flight crew members involved in these operations have been established;

(d) operating procedures have been established specifying all the following:

(1) the equipment to be carried, including its operating limitations and appropriate entries in the MEL;

(2) the flight planning;

(3) the normal procedures;

(4) the contingency procedures, including procedures following a propulsion system failure, as well as forced landing procedures in all weather conditions;

(5) the monitoring and incident reporting.

(e) a safety risk assessment has been performed, including the determination of an acceptable risk period if an operator intends to make use of it.

SPA.SET-IMC.110 Equipment requirements for SET-IMC operations

Aeroplanes used for SET-IMC operations shall be equipped with all the following equipment:

(a) two separate electrical generating systems, each one capable of supplying adequate power to all essential flight instruments, navigation systems and aeroplane systems required for continued flight to the destination or alternate aerodrome;

▼M10

(b) two attitude indicators, powered from independent sources;

(c) for passenger operations, a shoulder harness or a safety belt with a diagonal shoulder strap for each passenger seat;

(d) airborne weather-detecting equipment;

(e) in a pressurised aeroplane, sufficient supplemental oxygen for all occupants to allow descent, following engine failure at the maximum certificated cruising altitude, at the best range gliding speed and in the best gliding configuration, assuming the maximum cabin leak rate, until sustained cabin altitudes below 13 000 ft are reached;

(f) an area navigation system capable of being programmed with the positions of landing sites and providing lateral guidance to the flight crew to reach those sites;

(g) a radio altimeter;

(h) a landing light, capable of illuminating the touchdown point on the power-off glide path from 200 ft away;

(i) an emergency electrical supply system of sufficient capacity and endurance capable of providing power, following the failure of all generated power, to additional loads necessary for all of the following:

(1) the essential flight and area navigation instruments during descent from maximum operating altitude after engine failure;

(2) the means to provide for one attempt to restart the engine;

(3) if appropriate, the extension of landing gear and flaps;

(4) the use of the radio altimeter throughout the landing approach;

(5) the landing light;

(6) one pitot heater;

(7) if installed, the electrical means to give sufficient protection against impairment of the pilot's vision for landing;

(j) an ignition system that activates automatically, or is capable of being operated manually, for take-off, landing, and during flight, in visible moisture;

(k) a means of continuously monitoring the power train lubrication system to detect the presence of debris associated with the imminent failure of a drivetrain component, including a flight crew compartment caution indication;

▼M20

(l) an emergency engine power control device that permits continuing operation of the engine at a sufficient power range to safely complete the flight in the event of any reasonably probable failure of the fuel/energy control unit.

▼M14

SUBPART M

ELECTRONIC FLIGHT BAGS (EFBs)

SPA.EFB.100 Use of electronic flight bags (EFBs) — operational approval

▼M30

(a) A commercial air transport operator of aeroplanes or helicopters or an IAM operator shall only use a type B EFB application if the operator has been granted an approval by the competent authority for such use.

▼M14

(b) In order to obtain an operational approval from the competent authority for the use of a type B EFB application, the operator shall provide evidence that:

(1) a risk assessment related to the use of the EFB device that hosts the application and to the EFB application and its associated function(s) has been conducted, identifying the associated risks and ensuring that they are appropriately managed and mitigated;

(2) the human–machine interfaces of the EFB device and the EFB application have been assessed against human factors principles;

(3) it has established an EFB administration system and that procedures and training requirements for the administration and use of the EFB device and the EFB application have been established and implemented; these shall include procedures for:

(i) operating the EFB;

(ii) the management of changes to the EFB;

(iii) the management of EFB data;

(iv) EFB maintenance; and

(v) EFB security;

(4) the EFB host platform is suitable for the intended use of the EFB application.

This demonstration shall be specific to the EFB application and the EFB host platform on which the application is installed.

▼M21

SUBPART N

HELICOPTER POINT-IN-SPACE APPROACHES AND DEPARTURES WITH REDUCED VFR MINIMA (PINS-VFR)

SPA.PINS-VFR.100 Helicopter point-in-space (PinS) approaches and departures with reduced VFR minima

▼M28

(a) The operator shall only use reduced VFR operating minima where both of the following conditions are met:

(1) the operations are not conducted under a HEMS approval;

(2) the operator has been granted an approval by the competent authority.

▼M21

(b) Reduced VFR operating minima shall apply only to a helicopter flight that includes a segment flown under IFR, and only in one of the following cases:

(1) the segment of the flight flown under VFR takes place immediately after a helicopter PinS approach with the intention of landing at a nearby heliport or operating site;

(2) the segment of the flight flown under VFR takes place immediately after a helicopter PinS approach with the intention of conducting hoist operations at a nearby HEC or HHO site;

(3) the segment of the flight flown under VFR is a departure with the intention of transitioning to IFR at a nearby initial departure fix.

(c) The operator shall define operating procedures that are applicable when flying with reduced VFR operating minima.

(d) The operator shall ensure that the flight crew members are experienced and trained to operate with reduced VFR operating minima.

▼M30

SUBPART O

EMERGENCY MEDICAL SERVICE OPERATIONS WITH MANNED VTOL-CAPABLE AIRCRAFT (VEMS)

SPA.VEMS.100 Emergency medical service operations with manned VTOL-capable aircraft (VEMS)

(a) An IAM operator shall only conduct emergency medical service operations with manned VTOL-capable aircraft (VEMS) if the operator has been granted an approval by the competent authority for such operations.

(b) To obtain such approval by the competent authority, the IAM operator shall:

(1) hold an AOC in accordance with Annex III (Part-ORO);

(2) conduct operations in accordance with the relevant requirements of Annex IX (Part-IAM); and

(3) demonstrate to the competent authority compliance with the requirements contained in this Subpart.

(c) The IAM operator shall use adequate vertiports for its VEMS operating base and hospital sites unless approved by the competent authority to use a public interest site (PIS) at a hospital site.

(d) The IAM operator may use adequate operating sites for the purpose of VEMS missions or VEMS training flights taking into account:

(1) the aircraft performance requirements applicable for take-off and landing;

(2) operating site characteristics, including dimensions, obstacles, and surface condition;

(3) the safe separation of VTOL-capable aircraft (VCA) from people on the ground; and

(4) privacy, data protection, liability, insurance, security, and environmental protection requirements.

SPA.VEMS.110 Equipment requirements for VEMS operations

(a) The installation on a VTOL-capable aircraft (VCA) of all dedicated medical equipment and any subsequent modifications to that installation and, where appropriate, its operation, shall be approved in accordance with Regulation (EU) No 748/2012.

(b) For VFR flights by day over routes or areas navigated by reference to visual landmarks, the VCA shall be equipped with tools providing own-ship position and obstacles on a moving map display. The map and obstacle database(s) shall be kept up to date.

(c) For VFR flights by day, the VCA shall be equipped with a means of measuring and displaying to the pilot the attitude and the stabilised heading or with other equivalent tools to mitigate pilot disorientation in case of reduced visual cues.

(d) Any VCA used in VEMS missions shall be equipped with tools having an ADS-B Out capability.

(e) Instruments and equipment required ►C3 under point (d) ◄ shall be certified in accordance with the applicable airworthiness requirements.

(f) The IAM operator shall ensure that all relevant information is documented in the minimum equipment list (MEL).

▼M30

SPA.VEMS.115 Communication

In addition to the requirements for instruments and equipment applicable to VCA in manned configuration, VCA used for VEMS flights shall have communication equipment capable of conducting two-way communication with the organisation for which the VEMS flight is conducted and, where possible, to communicate with ground emergency service personnel at the scene of the operation.

SPA.VEMS.120 Visibility and distance from cloud minima

The minima for the dispatch and en-route phase of the VEMS flight shall be those established in accordance with point SERA.5001. If during the en-route phase the weather conditions fall below the applicable minima:

(a) VCA certified for flights only under VFR by day shall land as soon as practicable or return to the VEMS base.

(b) Reserved.

SPA.VEMS.125 Performance requirements for VEMS operations

VCA used for VEMS operations shall be operated in accordance with the applicable performance requirements established in point UAM.POL.VCA.100.

SPA.VEMS.130 Crew requirements

(a) *Selection*. The IAM operator shall establish criteria for the selection of flight crew members for VEMS operations, taking their prior experience into account.

(b) *Operational training*. Crew members shall successfully complete operational training in accordance with the VEMS procedures contained in the operations manual.

(c) Reserved.

(d) *Crew composition*

(1) *Day flight*. The minimum crew composition at dispatch for a VEMS flight under VFR day shall be two pilots or one pilot and one VEMS technical crew member.

After landing at the VEMS operating site, subsequent flights may be conducted by one pilot:

(i) if there is a need for additional medical supplies, refuel /battery recharge or reposition while the VEMS technical crew member provides medical assistance on the ground; or

(ii) if the VEMS technical crew member provides medical assistance to the medical patient in flight or during transport in another vehicle.

(2) *Reserved*.

(3) The IAM operator shall ensure that the continuity of the crew concept is maintained throughout the VEMS mission.

(e) *Flight and technical crew training and checking*

(1) Training and checking shall be conducted by suitably qualified personnel in accordance with a syllabus included in the operations manual and approved by the competent authority.

▼M30

(2) Crew members

(i) All relevant elements of the crew training programme shall improve crew knowledge of the VEMS working environment and equipment, improve crew coordination, and include measures to minimise the risks associated with an en-route transit to low-visibility conditions, the selection of VEMS operating sites, and approach and departure profiles.

(ii) The measures referred to in point (i) shall be assessed during both of the following:

(A) VMC day proficiency checks;

(B) line checks.

(iii) The VEMS components of the proficiency checks and line checks referred to in point (ii) shall have a validity period of 6 and 12 calendar months respectively.

SPA.VEMS.135 Briefing of medical passengers and of other personnel

(a) *Medical passengers*. Prior to any VEMS flight, or series of VEMS flights, medical passengers shall be briefed to ensure they are familiar with the VEMS working environment and equipment, can operate on-board emergency equipment, and can take part in normal and emergency entry and exit procedures.

(b) *Ground emergency service personnel*. Where ground emergency service personnel are employed, the IAM operator shall take all necessary measures to ensure that such personnel are familiar with the VEMS working environment and equipment, and the risks associated with ground operations at a VEMS operating site.

(c) *Medical patients*. Notwithstanding point UAM.OP.MVCA.170 of Annex IX (Part-IAM), a briefing shall be held only if the medical condition of the medical patient renders it practicable.

SPA.VEMS.140 Information, procedures and documentation

(a) The IAM operator shall assess, mitigate and minimise the risks associated with the VEMS environment as part of its risk analysis and management process. The IAM operator shall describe its mitigating measures, including operating procedures, in the operations manual.

(b) The IAM operator shall ensure that the pilot-in-command (PIC) assesses specific risks associated with a particular VEMS flight.

(c) Relevant extracts from the operations manual shall be made available to the organisation for which the VEMS operation is being provided.

SPA.VEMS.145 Facilities at the VEMS operating base

(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 VEMS operating base.

(b) At each VEMS operating base, the flight crew shall be granted access to facilities for obtaining current and forecast weather information and shall be provided with adequate communications with the appropriate air traffic service (ATS) units. Adequate facilities shall be available for the planning of all related tasks.

▼M30

SPA.VEMS.150 Fuelling /defuelling / battery charging / battery swapping while passengers are embarking, on board, or disembarking

Refuelling /defuelling /battery charging or battery swapping procedures with either lift and thrust units powered on or off shall only be performed in accordance with point UAM.OP.MVCA.200 or point UAM.OP.MVCA.205 as applicable.

SPA.VEMS.155 Aircraft tracking system

The IAM operator shall establish and maintain a monitored aircraft tracking system for VEMS operations for the entire duration of the VEMS flight.

▼M1

ANNEX VI

NON-COMMERCIAL AIR OPERATIONS WITH COMPLEX MOTOR-POWERED AIRCRAFT

[PART-NCC]

SUBPART A

GENERAL REQUIREMENTS

▼M15

NCC.GEN.100 Competent authority

The competent authority shall be the authority designated by the Member State in which the operator has its principal place of business, is established or is residing.

▼M1

NCC.GEN.105 Crew responsibilities

(a) The crew member shall be responsible for the proper execution of his/her duties that are:

(1) related to the safety of the aircraft and its occupants; and

(2) specified in the instructions and procedures in the operations manual.

(b) During critical phases of flight or whenever deemed necessary by the pilot-in-command in the interest of safety, the crew member shall be seated at his/her assigned station and shall not perform any activities other than those required for the safe operation of the aircraft.

(c) During flight, the flight crew member shall keep his/her safety belt fastened while at his/her station.

(d) During flight, at least one qualified flight crew member shall remain at the controls of the aircraft at all times.

(e) The crew member shall not undertake duties on an aircraft:

(1) if he/she knows or suspects that he/she is suffering from fatigue as referred to in 7.f of Annex IV to Regulation (EC) No 216/2008 or feels otherwise unfit, to the extent that the flight may be endangered; or

▼M12

(2) when under the influence of psychoactive substances or for other reasons as referred to in 7.g of Annex IV to Regulation (EC) No 216/2008.

▼M1

(f) The crew member who undertakes duties for more than one operator shall:

(1) maintain his/her individual records regarding flight and duty times and rest periods as referred to in Annex III (Part-ORO), Subpart FTL to Regulation (EU) No 965/2012; and

(2) provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements.

(g) The crew member shall report to the pilot-in-command:

(1) any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

(2) any incident that was endangering, or could endanger, the safety of the operation.

▼M15

NCC.GEN.101 Additional requirements for flight training organisations

▼M16

Approved training organisations that are required to comply with this Annex shall also comply with:

(a) ORO.GEN.310, as applicable; and

(b) ORO.MLR.105.

▼M1

NCC.GEN.106 Pilot-in-command responsibilities and authority

(a) The pilot-in-command shall be responsible for:

(1) the safety of the aircraft and of all crew members, passengers and cargo on board during aircraft operations as referred to in 1.c of Annex IV to Regulation (EC) No 216/2008;

(2) the initiation, continuation, termination or diversion of a flight in the interest of safety;

(3) ensuring that all instructions, operational procedures and checklists are complied with in accordance with the operations manual and as referred to in 1.b of Annex IV to Regulation (EC) No 216/2008;

(4) only commencing a flight if he/she is satisfied that all operational limitations referred to in 2.a.3 of Annex IV to Regulation (EC) No 216/2008 are complied with, as follows:

(i) the aircraft is airworthy;

(ii) the aircraft is duly registered;

(iii) instruments and equipment required for the execution of that flight are installed in the aircraft and are operative, unless operation with inoperative equipment is permitted by the minimum equipment list (MEL) or equivalent document, as required in NCC.IDE.A.105 or NCC.IDE.H.105;

(iv) the mass of the aircraft and centre of gravity location are such that the flight can be conducted within the limits prescribed in the airworthiness documentation;

(v) all cabin baggage, hold luggage and cargo are properly loaded and secured;

(vi) the aircraft operating limitations as specified in the aircraft flight manual (AFM) will not be exceeded at any time during the flight;

(vii) each flight crew member holds a valid licence in accordance with Regulation (EU) No 1178/2011; ►M9 ——————— ◄

(viii) flight crew members are properly rated and meet competency and recency requirements; ►M9 and ◄

▼M9

(ix) any navigational database required for performance-based navigation is suitable and current;

▼M1

(5) not commencing a flight if any flight crew member is incapacitated from performing duties by any cause such as injury, sickness, fatigue or the effects of any psychoactive substance;

(6) not continuing a flight beyond the nearest weather-permissible aerodrome or operating site, when the capacity of any flight crew member to perform duties is significantly reduced from causes such as fatigue, sickness or lack of oxygen;

(7) deciding on acceptance of the aircraft with unserviceabilities in accordance with the configuration deviation list (CDL) or minimum equipment list (MEL), as applicable;

▼M1

(8) recording utilisation data and all known or suspected defects in the aircraft at the termination of the flight, or series of flights, in the aircraft technical log or journey log for the aircraft; and

▼M8

(9) ensuring that:

(i) flight recorders are not disabled or switched off during flight;

(ii) in the event of an occurrence other than an accident or a serious incident that shall be reported according to ORO.GEN.160(a), flight recorders' recordings are not intentionally erased; and

(iii) in the event of an accident or a serious incident, or if preservation of recordings of flight recorders is directed by the investigating authority:

(A) flight recorders' recordings are not intentionally erased;

(B) flight recorders are deactivated immediately after the flight is completed; and

(C) precautionary measures to preserve the recordings of flight recorders are taken before leaving the flight crew compartment.

▼M1

(b) The pilot-in-command shall have the authority to refuse carriage of or disembark any person, baggage or cargo that may represent a potential hazard to the safety of the aircraft or its occupants.

(c) The pilot-in-command shall, as soon as possible, report to the appropriate air traffic services (ATS) unit any hazardous weather or flight conditions encountered that are likely to affect the safety of other aircraft.

(d) Notwithstanding the provision of (a)(6), in a multi-crew operation the pilot-in-command may continue a flight beyond the nearest weather-permissible aerodrome when adequate mitigating procedures are in place.

(e) The pilot-in-command shall, in an emergency situation that requires immediate decision and action, take any action he/she considers necessary under the circumstances in accordance with 7.d of Annex IV to Regulation (EC) No 216/2008. In such cases he/she may deviate from rules, operational procedures and methods in the interest of safety.

(f) The pilot-in-command shall submit a report of an act of unlawful interference without delay to the competent authority and shall inform the designated local authority.

(g) The pilot-in-command shall notify the nearest appropriate authority by the quickest available means of any accident involving the aircraft that results in serious injury or death of any person or substantial damage to the aircraft or property.

NCC.GEN.110 Compliance with laws, regulations and procedures

(a) The pilot-in-command shall comply with the laws, regulations and procedures of those States where operations are conducted.

(b) The pilot-in-command shall be familiar with the laws, regulations and procedures, pertinent to the performance of his/her duties, prescribed for the areas to be traversed, the aerodromes or operating sites to be used and the related air navigation facilities as referred to in 1.a of Annex IV to Regulation (EC) No 216/2008.

▼M1

NCC.GEN.115 Common language

The operator shall ensure that all crew members can communicate with each other in a common language.

▼M5

NCC.GEN.119 Taxiing of aircraft

The operator shall establish procedures for taxiing to ensure safe operation and to enhance runway safety.

▼M1

NCC.GEN.120 Taxiing of aeroplanes

The operator shall ensure that an aeroplane is only taxied on the movement area of an aerodrome if the person at the controls:

(a) is an appropriately qualified pilot; or

(b) has been designated by the operator and:

(1) is trained to taxi the aeroplane;

(2) is trained to use the radio telephone, if radio communications are required;

(3) has received instruction in respect of aerodrome layout, routes, signs, marking, lights, air traffic control (ATC) signals and instructions, phraseology and procedures; and

(4) is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.

NCC.GEN.125 Rotor engagement — helicopters

A helicopter rotor shall only be turned under power for the purpose of flight with a qualified pilot at the controls.

NCC.GEN.130 Portable electronic devices

The operator shall not permit any person to use a portable electronic device (PED) on board an aircraft that could adversely affect the performance of the aircraft's systems and equipment.

▼M14

NCC.GEN.131 Use of electronic flight bags (EFBs)

(a) Where an EFB is used on board an aircraft, the operator shall ensure that it does not adversely affect the performance of the aircraft systems or equipment, or the ability of the flight crew member to operate the aircraft.

(b) Prior to using a type B EFB application, the operator shall:

(1) conduct a risk assessment related to the use of the EFB device that hosts the application and to the EFB application concerned and its associated function(s), identifying the associated risks and ensuring that they are appropriately managed and mitigated; the risk assessment shall address the risks associated with the human–machine interface of the EFB device and the EFB application concerned; and

(2) establish an EFB administration system, including procedures and training requirements for the administration and use of the device and the EFB application.

▼M1

NCC.GEN.135 Information on emergency and survival equipment carried

The operator shall at all times have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board.

NCC.GEN.140 Documents, manuals and information to be carried

(a) The following documents, manuals and information shall be carried on each flight as originals or copies unless otherwise specified:

(1) the AFM, or equivalent document(s);

(2) the original certificate of registration;

(3) the original certificate of airworthiness (CofA);

(4) the noise certificate;

(5) the declaration as specified in Annex III (Part-ORO), ORO.DEC.100, to Regulation (EU) No 965/2012;

(6) the list of specific approvals, if applicable;

(7) the aircraft radio licence, if applicable;

(8) the third party liability insurance certificate(s);

(9) the journey log, or equivalent, for the aircraft;

(10) details of the filed ATS flight plan, if applicable;

(11) current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

(12) procedures and visual signals information for use by intercepting and intercepted aircraft;

(13) information concerning search and rescue services for the area of the intended flight;

(14) the current parts of the operations manual that are relevant to the duties of the crew members, which shall be easily accessible to the crew members;

(15) the MEL or CDL;

(16) appropriate notices to airmen (NOTAMs) and aeronautical information service (AIS) briefing documentation;

(17) appropriate meteorological information;

(18) cargo and/or passenger manifests, if applicable; and

(19) any other documentation that may be pertinent to the flight or is required by the States concerned with the flight.

(b) In case of loss or theft of documents specified in (a)(2) to (a)(8), the operation may continue until the flight reaches its destination or a place where replacement documents can be provided.

▼M16

NCC.GEN.145 Handling of flight recorder recordings: preservation, production, protection and use

(a) Following an accident, a serious incident or an occurrence identified by the investigating authority, the operator of an aircraft shall preserve the original recorded data of the flight recorders for a period of 60 days or until otherwise directed by the investigating authority.

(b) The operator shall conduct operational checks and evaluations of recordings to ensure the continued serviceability of the flight recorders which are required to be carried.

(c) The operator shall ensure that the recordings of flight parameters and data link communication messages required to be recorded on flight recorders are preserved. However, for the purpose of testing and maintaining those flight recorders, up to 1 hour of the oldest recorded data at the time of testing may be erased.

(d) The operator shall keep and maintain up to date documentation that presents the necessary information to convert raw flight data into flight parameters expressed in engineering units.

(e) The operator shall make available any flight recorder recordings that have been preserved, if so determined by the competent authority.

(f) Without prejudice to Regulations (EU) No 996/2010 and (EU) 2016/679:

(1) Except for ensuring flight recorder serviceability, audio recordings from a flight recorder shall not be disclosed or used unless all of the following conditions are fulfilled:

(i) a procedure related to the handling of such audio recordings and of their transcript is in place;

(ii) all crew members and maintenance personnel concerned have given their prior consent;

(iii) such audio recordings are used only for maintaining or improving safety.

(1a) When flight recorder audio recordings are inspected for ensuring flight recorder serviceability, the operator shall protect the privacy of those audio recordings and make sure that they are not disclosed or used for purposes other than ensuring flight recorder serviceability.

(2) Flight parameters or data link messages recorded by a flight recorder shall not be used for purposes other than for the investigation of an accident or an incident which is subject to mandatory reporting, unless such recordings meet any of the following conditions:

(i) are used by the operator for airworthiness or maintenance purposes only;

▼M16

(ii) are de-identified;

(iii) are disclosed under secure procedures.

(3) Except for ensuring flight recorder serviceability, images of the flight crew compartment that are recorded by a flight recorder shall not be disclosed or used unless all the following conditions are fulfilled:

(i) a procedure related to the handling of such image recordings is in place;

(ii) all crew members and maintenance personnel concerned have given their prior consent;

(iii) such image recordings are used only for maintaining or improving safety.

(3a) When images of the flight crew compartment that are recorded by a flight recorder are inspected for ensuring the serviceability of the flight recorder, then:

(i) those images shall not be disclosed or used for purposes other than for ensuring flight recorder serviceability;

(ii) if body parts of crew members are likely to be visible on the images, the operator shall ensure the privacy of those images.

▼M1

NCC.GEN.150 Transport of dangerous goods

(a) The transport of dangerous goods by air shall be conducted in accordance with Annex 18 to the Chicago Convention as last amended and amplified by the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (ICAO Doc 9284-AN/905), including its supplements and any other addenda or corrigenda.

(b) Dangerous goods shall only be transported by the operator approved in accordance with Annex V (Part-SPA), Subpart G, to Regulation (EU) No 965/2012 except when:

(1) they are not subject to the Technical Instructions in accordance with Part 1 of those Instructions; or

(2) they are carried by passengers or crew members, or are in baggage, in accordance with Part 8 of the Technical Instructions.

(c) The operator shall establish procedures to ensure that all reasonable measures are taken to prevent dangerous goods from being carried on board inadvertently.

(d) The operator shall provide personnel with the necessary information enabling them to carry out their responsibilities, as required by the Technical Instructions.

▼M1

(e) The operator shall, in accordance with the Technical Instructions, report without delay to the competent authority and the appropriate authority of the State of occurrence in the event of any dangerous goods accidents or incidents.

(f) The operator shall ensure that passengers are provided with information about dangerous goods in accordance with the Technical Instructions.

(g) The operator shall ensure that notices giving information about the transport of dangerous goods are provided at acceptance points for cargo as required by the Technical Instructions.

SUBPART B

OPERATIONAL PROCEDURES

NCC.OP.100 Use of aerodromes and operating sites

The operator shall only use aerodromes and operating sites that are adequate for the type of aircraft and operation concerned.

▼M21

NCC.OP.101 Altimeter check and settings

(a) The operator shall establish procedures for altimeter checking before each departure.

(b) The operator shall establish procedures for altimeter settings for all phases of flight, which shall take into account the procedures established by the State of the aerodrome or the State of the airspace, if applicable.

▼M20

NCC.OP.105 Specification of isolated aerodromes – aeroplanes

For the selection of alternate aerodromes and the fuel/energy planning and in-flight re-planning policy, the operator shall not consider an aerodrome as an isolated aerodrome unless the flying time to the nearest weather-permissible destination alternate aerodrome is more than:

(a) for aeroplanes with reciprocating engines, 60 minutes; or

(b) for turbine-engined aeroplanes, 90 minutes.

▼M21

NCC.OP.110 Aerodrome operating minima — general

(a) The operator shall establish aerodrome operating minima for each departure, destination or alternate aerodrome that is planned to be used in order to ensure separation of the aircraft from terrain and obstacles and to mitigate the risk of loss of visual references during the visual flight segment of instrument approach operations.

(b) The method used to establish aerodrome operating minima shall take all the following elements into account:

(1) the type, performance, and handling characteristics of the aircraft;

(2) the equipment available on the aircraft for the purpose of navigation, acquisition of visual references, and/or control of the flight path during take-off, approach, landing, and missed approach;

(3) any conditions or limitations stated in the aircraft flight manual (AFM);

(4) the dimensions and characteristics of the runways/final approach and take-off areas (FATOs) that may be selected for use;

(5) the adequacy and performance of the available visual and non-visual aids and infrastructure;

▼M21

(6) the obstacle clearance altitude/height (OCA/H) for the instrument approach procedures (IAPs);

(7) the obstacles in the climb-out areas and necessary clearance margins;

(8) any non-standard characteristics of the aerodrome, the IAP or the environment;

(9) the composition of the flight crew, their competence and experience;

(10) the IAP;

(11) the aerodrome characteristics and the available air navigation services (ANS);

(12) any minima that may be promulgated by the State of the aerodrome;

(13) the conditions prescribed in any specific approvals for low-visibility operations (LVOs) or operations with operational credits; and

(14) the relevant operational experience of the operator.

(c) The operator shall specify a method of determining aerodrome operating minima in the operations manual.

———————

NCC.OP.112 Aerodrome operating minima — circling operations with aeroplanes

(a) The MDH for a circling approach operation with aeroplanes shall not be lower than the highest of:

(1) the published circling OCH for the aeroplane category;

(2) the minimum circling height derived from Table 1; or

(3) the DH/MDH of the preceding IAP.

(b) The minimum visibility for a circling approach operation with aeroplanes shall be the highest of:

(1) the circling visibility for the aeroplane category, if published; or

(2) the minimum visibility derived from Table 1.

Table 1

MDH and minimum visibility for circling per aeroplane category

	Aeroplane category			
	A	B	C	D
MDH (ft)	400	500	600	700
Minimum VIS (m)	1 500	1 600	2 400	3 600

▼M1

NCC.OP.113 Aerodrome operating minima — onshore circling operations with helicopters

The MDH for an onshore circling operation with helicopters shall not be lower than 250 ft and the meteorological visibility not less than 800 m.

NCC.OP.115 Departure and approach procedures

(a) The pilot-in-command shall use the departure and approach procedures established by the State of the aerodrome, if such procedures have been published for the runway or FATO to be used.

(b) Notwithstanding (a), the pilot-in-command shall only accept an ATC clearance to deviate from a published procedure:

(1) provided that obstacle clearance criteria are observed and full account is taken of the operating conditions; or

(2) when being radar-vectored by an ATC unit.

(c) In any case, the final approach segment shall be flown visually or in accordance with the published approach procedures.

▼M9

NCC.OP.116 Performance-based navigation — aeroplanes and helicopters

The operator shall ensure that, when PBN is required for the route or procedure to be flown:

(a) the relevant PBN specification is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; and

(b) the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document mentioned above.

▼M1

NCC.OP.120 Noise abatement procedures

The operator shall develop operating procedures taking into account the need to minimise the effect of aircraft noise while ensuring that safety has priority over noise abatement.

NCC.OP.125 Minimum obstacle clearance altitudes — IFR flights

(a) The operator shall specify a method to establish minimum flight altitudes that provide the required terrain clearance for all route segments to be flown in IFR.

(b) The pilot-in-command shall establish minimum flight altitudes for each flight based on this method. The minimum flight altitudes shall not be lower than that published by the State overflown.

▼M20

NCC.OP.130 Fuel/energy scheme – aeroplanes and helicopters

(a) The operator shall establish, implement, and maintain a fuel/energy scheme that comprises:

(1) a fuel/energy planning and in-flight re-planning policy; and

▼**M20**

(2) an in-flight fuel/energy management policy.

(b) The fuel/energy scheme shall:

(1) be appropriate for the type(s) of operation performed; and

(2) correspond to the capability of the operator to support its implementation.

NCC.OP.131 Fuel/energy scheme – fuel/energy planning and in-flight re-planning policy – aeroplanes and helicopters

(a) As part of the fuel/energy scheme, the operator shall establish a fuel/energy planning and in-flight re-planning policy to ensure that the aircraft carries a sufficient amount of usable fuel/energy to safely complete the planned flight and to allow for deviations from the planned operation.

(b) The operator shall ensure that the fuel/energy planning of flights is based upon at least the following elements:

(1) procedures contained in the operations manual as well as:

(i) current aircraft-specific data derived from a fuel/energy consumption monitoring system, or, if not available;

(ii) data provided by the aircraft manufacturer; and

(2) the operating conditions under which the flight is to be conducted including:

(i) aircraft fuel/energy consumption data;

(ii) anticipated masses;

(iii) anticipated meteorological conditions;

(iv) the effects of deferred maintenance items or configuration deviations, or both; and

(v) anticipated delays.

(c) For aeroplanes, the operator shall ensure that the pre-flight calculation of the usable fuel/energy that is required for a flight includes:

(1) taxi fuel/energy that shall not be less than the amount expected to be used prior to take-off;

(2) trip fuel/energy that shall be the amount of fuel/energy that is required to enable the aeroplane to fly from take-off, or from the point of in-flight re-planning, to landing at the destination aerodrome;

(3) contingency fuel/energy that shall be the amount of fuel/energy required to compensate for unforeseen factors;

(4) destination alternate fuel/energy:

(i) when a flight is operated with at least one destination alternate aerodrome, it shall be the amount of fuel/energy required to fly from the destination aerodrome to the destination alternate aerodrome; or

▼**M20**

(ii) when a flight is operated with no destination alternate aerodrome, it shall be the amount of fuel/energy required to hold at the destination aerodrome to compensate for the lack of a destination alternate aerodrome;

(5) final reserve fuel/energy that shall be the amount of fuel/energy that is calculated at holding speed at 1 500 ft (450 m) above the aerodrome elevation in standard conditions according to the aircraft estimated mass on arrival at the destination alternate aerodrome, or destination aerodrome when no destination alternate aerodrome is required, and shall not be less than:

(i) for aeroplanes with reciprocating engines on visual flight rules (VFR) flights by night and instrument flight rules (IFR) flights, the fuel/energy to fly for 45 minutes; or

(ii) for aeroplanes with reciprocating engines on VFR flights by day, the fuel/energy to fly for 30 minutes;

(iii) for turbine-engined aeroplanes, the fuel/energy to fly for 30 minutes;

(6) additional fuel/energy, if required by the type of operation; it shall be the amount of fuel/energy to enable the aeroplane to perform a safe landing at a fuel/energy en route alternate aerodrome (fuel/energy ERA aerodrome critical scenario) in the event of an engine failure or loss of pressurisation, whichever requires the greater amount of fuel/energy, based on the assumption that such a failure occurs at the most critical point along the route; this additional fuel/energy is required only if the minimum amount of fuel/energy that is calculated according to points (c)(2) to (c)(5) is not sufficient for such an event;

(7) extra fuel/energy to take into account anticipated delays or specific operational constraints; and

(8) discretionary fuel/energy, if required by the commander.

(d) For helicopters, the operator shall ensure that the pre-flight calculation of the usable fuel/energy that is required for a flight includes all of the following:

(1) fuel/energy to fly to the aerodrome or operating site of intended landing;

(2) if a destination alternate is required, destination alternate fuel/energy, which shall be the amount of fuel/energy that is required to execute a missed approach at the aerodrome or operating site of intended landing, and thereafter, to fly to the specified destination alternate, approach and land; and

(3) final reserve fuel/energy, which shall not be less than:

(i) for flights under VFR, fuel/energy to fly for at least 20 minutes at best-range speed; or

▼M20

(ii) for IFR flights, fuel/energy to fly for at least 30 minutes at holding speed at 450 m (1 500 ft) above the aerodrome or operating site of intended landing or destination alternate in standard temperature conditions.

(e) The operator shall ensure that if a flight has to proceed to a destination aerodrome other than the one originally planned, in-flight re-planning procedures for calculating the required usable fuel/energy are available and comply with points (c)(2) to (c)(7) for aeroplanes, and point (d) for helicopters.

(f) The pilot in command shall only commence a flight or continue in the event of in-flight re-planning, when satisfied that the aircraft carries at least the planned amount of usable fuel/energy and oil to safely complete the flight.

▼M1

NCC.OP.135 Stowage of baggage and cargo

The operator shall establish procedures to ensure that:

(a) only hand baggage that can be adequately and securely stowed is taken into the passenger compartment; and

(b) all baggage and cargo on board that might cause injury or damage, or obstruct aisles and exits if displaced, is stowed so as to prevent movement.

NCC.OP.140 Passenger briefing

The pilot-in-command shall ensure that:

(a) prior to take-off passengers have been made familiar with the location and use of the following:

(1) seat belts;

(2) emergency exits; and

(3) passenger emergency briefing cards;

and if applicable:

(4) life-jackets;

(5) oxygen dispensing equipment;

(6) life-rafts; and

(7) other emergency equipment provided for individual passenger use;

and

(b) in an emergency during flight, passengers are instructed in such emergency action as may be appropriate to the circumstances.

NCC.OP.145 Flight preparation

▼M9

(a) Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the space-based facilities, ground and/or water facilities, including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.

▼M21

(b) Before commencing a flight, the pilot-in-command shall be familiar with all available meteorological information appropriate to the intended flight. Preparation for a flight away from the vicinity of the place of departure, and for every flight under IFR, shall include:

(1) a study of the available current meteorological reports and forecasts; and

▼M21

(2) the planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of meteorological conditions.

NCC.OP.147 Destination alternate aerodromes planning minima — aeroplanes

An aerodrome shall not be specified as a destination alternate aerodrome unless the available current meteorological information indicates, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period,

(a) for an alternate aerodrome with an available instrument approach operation with DH less than 250 ft,

(1) a ceiling of at least 200 ft above the DH or MDH associated with the instrument approach operation; and

(2) a visibility of at least the higher of 1 500 m and 800 m above the instrument approach operation RVR/VIS minima; or

(b) for an alternate aerodrome with an instrument approach operation with DH or MDH 250 ft or more,

(1) a ceiling of at least 400 ft above the DH or MDH associated with the instrument approach operation; and

(2) a visibility of at least 3 000 m; or

(c) for an alternate aerodrome without an instrument approach procedure,

(1) a ceiling of at least the higher of 2 000 ft and the minimum safe IFR height; and

(2) a visibility of at least 5 000 m.

NCC.OP.148 Destination alternate aerodrome planning minima — helicopters

The operator shall only select an aerodrome as a destination alternate aerodrome if the available current meteorological information indicates, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period:,

(a) for an alternate aerodrome with an instrument approach procedure (IAP):

(1) a ceiling of at least 200 ft above the DH or MDH associated with the IAP; and

(2) a visibility of at least 1 500 m by day or 3 000 m by night; or

(b) for an alternate aerodrome without an IAP:

(1) a ceiling of at least 2 000 ft or the minimum safe IFR height — whichever is greater; and

(2) a visibility of at least 1 500 m by day or 3 000 m by night.

▼M1

NCC.OP.150 Take-off alternate aerodromes — aeroplanes

▼M21

(a) For IFR flights, the pilot-in-command shall specify at least one weather-permissible take-off alternate aerodrome in the flight plan if the meteorological conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or if it would not be possible to return to the aerodrome of departure for other reasons.

▼M1

(b) The take-off alternate aerodrome shall be located within the following distance from the aerodrome of departure:

(1) for aeroplanes having two engines, not more than a distance equivalent to a flight time of 1 hour at the single-engine cruise speed in still air standard conditions; and

(2) for aeroplanes having three or more engines, not more than a distance equivalent to a flight time of 2 hours at the one-engine-inoperative (OEI) cruise speed according to the AFM in still air standard conditions.

(c) For an aerodrome to be selected as a take-off alternate aerodrome the available information shall indicate that, at the estimated time of use, the conditions will be at or above the aerodrome operating minima for that operation.

NCC.OP.151 Destination alternate aerodromes — aeroplanes

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate aerodrome in the flight plan, unless:

(a) the available current meteorological information indicates that, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period, the approach and landing may be made under visual meteorological conditions (VMC); or

▼M20

(b) the place of intended landing is designated as an isolated aerodrome and:

(1) an instrument approach procedure is prescribed for the aerodrome of intended landing; and

(2) available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival:

(i) a cloud base of at least 300 m (1 000 ft) above the minimum associated with the instrument approach procedure; and

(ii) visibility of at least 5,5 km or of 4 km more than the minimum associated with the procedure.

▼M1

NCC.OP.152 Destination alternate aerodromes — helicopters

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate in the flight plan, unless:

(a) an instrument approach procedure is prescribed for the aerodrome of intended landing and the available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival, or from the actual time of departure to 2 hours after the estimated time of arrival, whichever is the shorter period:

(1) a cloud base of at least 120 m (400 ft) above the minimum associated with the instrument approach procedure; and

(2) visibility of at least 1 500 m more than the minimum associated with the procedure; or

▼M1

(b) the place of intended landing is isolated and:

(1) an instrument approach procedure is prescribed for the aerodrome of intended landing;

(2) available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival:

(i) the cloud base is at least 120 m (400 ft) above the minimum associated with the instrument approach procedure;

(ii) visibility is at least 1 500 m more than the minimum associated with the procedure. ►M9 ——————— ◄

▼M9

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NCC.OP.153 Destination aerodromes — instrument approach operations

The pilot-in-command shall ensure that sufficient means are available to navigate and land at the destination aerodrome or at any destination alternate aerodrome in the case of loss of capability for the intended approach and landing operation.

▼M1

NCC.OP.155 Refuelling with passengers embarking, on board or disembarking

(a) The aircraft shall not be refuelled with aviation gasoline (AVGAS) or wide-cut type fuel or a mixture of these types of fuel, when passengers are embarking, on board or disembarking.

▼M20

(b) For all other types of fuel/energy, necessary precautions shall be taken and the aircraft shall be properly manned by qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

NCC.OP.157 Refuelling with engine(s)and/or rotors turning – helicopters

(a) Refuelling with engine(s) and/or rotors turning shall only be conducted:

(1) with no passengers embarking or disembarking;

(2) if the operator of the aerodrome/operating site allows such operations;

(3) in accordance with any specific procedures and limitations in the aircraft flight manual (AFM);

(4) with JET A or JET A-1 fuel types; and

(5) in the presence of the appropriate rescue and firefighting (RFF) facilities or equipment.

(b) The operator shall assess the risks associated with refuelling with engine(s) and/or rotors turning.

(c) The operator shall establish appropriate procedures to be followed by all involved personnel, such as crew members and ground operations personnel.

▼M20

(d) The operator shall train its crew members and ensure that the involved ground operations personnel is trained appropriately.

(e) The operator shall ensure that the helicopter refuelling procedure with engine(s) and/or rotors turning are specified in the operations manual. This procedure and any change thereto shall require prior approval by the competent authority.

▼M1

NCC.OP.160 Use of headset

(a) Each flight crew member required to be on duty in the flight crew compartment shall wear a headset with boom microphone or equivalent. The headset shall be used as the primary device for voice communications with ATS:

(1) when on the ground:

(i) when receiving the ATC departure clearance via voice communication; and

(ii) when engines are running;

(2) when in flight:

(i) below transition altitude; or

(ii) 10 000 ft, whichever is higher;

and

(3) whenever deemed necessary by the pilot in command.

(b) In the conditions of (a), the boom microphone or equivalent shall be in a position that permits its use for two-way radio communications.

NCC.OP.165 Carriage of passengers

The operator shall establish procedures to ensure that:

(a) passengers are seated where, in the event that an emergency evacuation is required, they are able to assist and not hinder evacuation of the aircraft;

(b) prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety by the pilot-in-command, each passenger on board occupies a seat or berth and has his/her safety belt or restraint device properly secured; and

(c) multiple occupancy is only allowed on specified aircraft seats occupied by one adult and one infant properly secured by a supplementary loop belt or other restraint device.

▼M1

NCC.OP.170 Securing of passenger compartment and galley(s)

The pilot-in-command shall ensure that:

(a) before taxiing, take-off and landing, all exits and escape paths are unobstructed; and

(b) before take-off and landing, and whenever deemed necessary in the interest of safety, all equipment and baggage are properly secured.

NCC.OP.175 Smoking on board

The pilot-in-command shall not allow smoking on board:

(a) whenever considered necessary in the interest of safety;

(b) during refuelling of the aircraft;

(c) while the aircraft is on the surface unless the operator has determined procedures to mitigate the risks during ground operations;

(d) outside designated smoking areas, in the aisle(s) and lavatory(ies);

(e) in cargo compartments and/or other areas where cargo is carried that is not stored in flame-resistant containers or covered by flame-resistant canvas; and

(f) in those areas of the passenger compartments where oxygen is being supplied.

NCC.OP.180 Meteorological conditions

▼M21

(a) The pilot-in-command shall only commence or continue a VFR flight if the latest available meteorological information indicates that the meteorological conditions along the route and at the intended destination at the estimated time of use will be at or above the applicable VFR operating minima.

(b) The pilot-in-command shall only commence or continue an IFR flight towards the planned destination aerodrome if the latest available meteorological information indicates that, at the estimated time of arrival, the meteorological conditions at the destination or at least one destination alternate aerodrome are at or above the applicable aerodrome operating minima.

▼M1

(c) If a flight contains VFR and IFR segments, the meteorological information referred to in (a) and (b) shall be applicable as far as relevant.

NCC.OP.185 Ice and other contaminants — ground procedures

(a) The operator shall establish procedures to be followed when ground de-icing and anti-icing and related inspections of the aircraft are necessary to allow the safe operation of the aircraft.

▼M1

(b) The pilot-in-command shall only commence take-off if the aircraft is clear of any deposit that might adversely affect the performance or controllability of the aircraft, except as permitted under the procedures referred to in (a) and in accordance with the AFM.

NCC.OP.190 Ice and other contaminants — flight procedures

(a) The operator shall establish procedures for flights in expected or actual icing conditions.

(b) The pilot-in-command shall only commence a flight or intentionally fly into expected or actual icing conditions if the aircraft is certified and equipped to cope with such conditions as referred to in 2.a.5 of Annex IV to Regulation (EC) No 216/2008.

(c) If icing exceeds the intensity of icing for which the aircraft is certified or if an aircraft not certified for flight in known icing conditions encounters icing, the pilot-in-command shall exit the icing conditions without delay, by a change of level and/or route, and if necessary by declaring an emergency to ATC.

▼M21

NCC.OP.195 Take-off conditions — aeroplanes and helicopters

Before commencing take-off, the pilot-in-command shall be satisfied that:

(a) the meteorological conditions at the aerodrome or the operating site and the condition of the runway/FATO intended to be used will not prevent a safe take-off and departure; and

(b) the selected aerodrome operating minima are consistent with all of the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) flight crew qualifications.

▼M1

NCC.OP.200 Simulated situations in flight

(a) The pilot-in-command shall, when carrying passengers or cargo, not simulate:

(1) situations that require the application of abnormal or emergency procedures; or

(2) flight in instrument meteorological conditions (IMC).

▼M14

(b) Notwithstanding point (a), when training flights are conducted by a training organisation referred to in Article 10a of Commission Regulation (EU) No 1178/2011, such situations may be simulated with student pilots on board.

▼M20

NCC.OP.205 Fuel/energy scheme – in-flight fuel/energy management policy

(a) The operator shall establish procedures to ensure that in-flight fuel/energy checks and fuel/energy management are performed.

▼M20

(b) The pilot-in-command shall monitor the amount of usable fuel/energy remaining on board to ensure that it is protected and not less than the fuel/energy that is required to proceed to an aerodrome or operating site where a safe landing can be made.

(c) The pilot-in-command shall advise air traffic control (ATC) of a 'minimum fuel/energy' state by declaring 'MINIMUM FUEL' when the pilot-in-command has:

(1) committed to land at a specific aerodrome or operating site; and

(2) calculated that any change to the existing clearance to that aerodrome or operating site, or other air traffic delays, may result in landing with less than the planned final reserve fuel/energy.

(d) The pilot-in-command shall declare a situation of 'fuel/energy emergency' by broadcasting 'MAYDAY MAYDAY MAYDAY FUEL' when the usable fuel/energy estimated to be available upon landing at the nearest aerodrome or operating site where a safe landing can be made is less than the planned final reserve fuel/energy.

▼M1

NCC.OP.210 Use of supplemental oxygen

The pilot-in-command shall ensure that he/she and flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen continuously whenever the cabin altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft.

NCC.OP.215 Ground proximity detection

When undue proximity to the ground is detected by a flight crew member or by a ground proximity warning system, the pilot flying shall take corrective action immediately in order to establish safe flight conditions.

▼M9

NCC.OP.220 Airborne collision avoidance system (ACAS)

The operator shall establish operational procedures and training programs when ACAS is installed and serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.

▼M21

NCC.OP.225 Approach and landing conditions — aeroplanes and helicopters

Before commencing an approach operation, the pilot-in-command shall be satisfied that:

(a) the meteorological conditions at the aerodrome or the operating site and the condition of the runway/FATO intended to be used will not prevent a safe approach, landing or go-around, considering the performance information contained in the operations manual; and

▼M21

(b) the selected aerodrome operating minima are consistent with all of the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance; and

(4) flight crew qualifications.

▼M16

NCC.OP.226 Approach and landing conditions — helicopters

Before commencing an approach to land, the pilot-in-command shall be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the final approach and take-off area (FATO) intended to be used would not prevent a safe approach, landing or missed approach.

▼M21

NCC.OP.230 Commencement and continuation of approach

(a) For aeroplanes, if the reported visibility (VIS) or controlling RVR for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation shall not be continued:

(1) past a point at which the aeroplane is 1 000 ft above the aerodrome elevation; or

(2) into the final approach segment (FAS) if the DH or MDH is higher than 1 000 ft.

(b) For helicopters, if the reported RVR is less than 550 m and the controlling RVR for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation shall not be continued:

(1) past a point at which the helicopter is 1 000 ft above the aerodrome elevation; or

(2) into the FAS if the DH or MDH is higher than 1 000 ft.

(c) If the required visual reference is not established, a missed approach shall be executed at or before the DA/H or the MDA/H.

(d) If the required visual reference is not maintained after DA/H or MDA/H, a go-around shall be executed promptly.

(e) Notwithstanding point (a), in the case where no RVR is reported, and the reported VIS is less than the applicable minimum, but the converted meteorological visibility (CMV) is equal or greater than the applicable minimum, then the instrument approach can be continued to the DA/H or MDA/H.

(f) Notwithstanding points (a) and (b), if there is no intention to land, the instrument approach may be continued to the DA/H or the MDA/H. A missed approach shall be executed at or before the DA/H or the MDA/H.

▼M21

NCC.OP.235 EFVS 200 operations

(a) An operator that intends to conduct EFVS 200 operations with operational credits and without a specific approval shall ensure that:

(1) the aircraft is certified for the intended operations;

(2) only runways, FATOs and IAPs suitable for EFVS operations are used;

(3) the flight crew members are competent to conduct the intended operation, and a training and checking programme for the flight crew members and relevant personnel involved in the flight preparation is established;

(4) operating procedures are established;

(5) any relevant information is documented in the minimum equipment list (MEL);

(6) any relevant information is documented in the maintenance programme;

(7) safety assessments are carried out and performance indicators are established to monitor the level of safety of the operation; and

(8) the aerodrome operating minima take into account the capability of the system used.

(b) The operator shall not conduct EFVS 200 operations when conducting LVOs.

(c) Notwithstanding point (a)(1), the operator may use EVSs meeting the minimum criteria to conduct EFVS 200 operations, provided that this is approved by the competent authority.

▼M1

SUBPART C

AIRCRAFT PERFORMANCE AND OPERATING LIMITATIONS

NCC.POL.100 Operating limitations — all aircraft

(a) During any phase of operation, the loading, the mass and the centre of gravity (CG) position of the aircraft shall comply with any limitation specified in the AFM, or the operations manual, if more restrictive.

(b) Placards, listings, instrument markings, or combinations thereof, containing those operating limitations prescribed by the AFM for visual presentation, shall be displayed in the aircraft.

▼M1

NCC.POL.105 Mass and balance, loading

(a) The operator shall establish the mass and the CG of any aircraft by actual weighing prior to initial entry into service. The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented. Aircraft shall be reweighed if the effect of modifications on the mass and balance is not accurately known.

(b) The weighing shall be accomplished by the manufacturer of the aircraft or by an approved maintenance organisation.

(c) The operator shall determine the mass of all operating items and crew members included in the aircraft dry operating mass by actual weighing, including any crew baggage, or by using standard masses. The influence of their position on the aircraft's CG shall be determined. When using standard masses the following mass values for crew members shall be used to determine the dry operating mass:

(1) 85 kg, including hand baggage, for flight crew/technical crew members; and

(2) 75 kg for cabin crew members.

(d) The operator shall establish procedures to enable the pilot-in-command to determine the mass of the traffic load, including any ballast, by:

(1) actual weighing;

(2) determining the mass of the traffic load in accordance with standard passenger and baggage masses; or

(3) calculating passenger mass on the basis of a statement by, or on behalf of, each passenger and adding to it a predetermined mass to account for hand baggage and clothing, when the number of passenger seats available on the aircraft is:

(i) less than 10 for aeroplanes; or

(ii) less than six for helicopters.

(e) When using standard masses the following mass values shall be used:

(1) for passengers, those in Tables 1 and 2, where hand baggage and the mass of any infant carried by an adult on one passenger seat are included:

Table 1

Standard masses for passengers — aircraft with a total number of passenger seats of 20 or more

Passenger seats	20 and more		30 and more
	Male	Female	All adult
Adults	88 kg	70 kg	84 kg
Children	35 kg	35 kg	35 kg

▼M1

Table 2

Standard masses for passengers — aircraft with a total number of passenger seats of 19 or less

Passenger seats	1 – 5	6 – 9	10 – 19
Male	104 kg	96 kg	92 kg
Female	86 kg	78 kg	74 kg
Children	35 kg	35 kg	35 kg

(2) for baggage:

(i) for aeroplanes, when the total number of passenger seats available on the aeroplane is 20 or more, standard mass values for checked baggage in Table 3;

Table 3

Standard masses for baggage — aeroplanes with a total number of passenger seats of 20 or more

Type of flight	Baggage standard mass
Domestic	11 kg
Within the European region	13 kg
Intercontinental	15 kg
All other	13 kg

(ii) for helicopters, when the total number of passenger seats available on the helicopters is 20 or more, the standard mass value for checked baggage of 13 kg.

(f) For aircraft with 19 passenger seats or less, the actual mass of checked baggage shall be determined:

(1) by weighing; or

(2) by calculation on the basis of a statement by, or on behalf of, each passenger. Where this is impractical, a minimum standard mass of 13 kg shall be used.

(g) The operator shall establish procedures to enable the pilot-in-command to determine the mass of the fuel load by using the actual density or, if not known, the density calculated in accordance with a method specified in the operations manual.

(h) The pilot-in-command shall ensure that the loading of:

(1) the aircraft is performed under the supervision of qualified personnel; and

(2) traffic load is consistent with the data used for the calculation of the aircraft mass and balance.

(i) The operator shall establish procedures to enable the pilot-in-command to comply with additional structural limits such as the floor strength limitations, the maximum load per running metre, the maximum mass per cargo compartment and the maximum seating limit.

▼M1

(j) The operator shall specify, in the operations manual, the principles and methods involved in the loading and in the mass and balance system that meet the requirements contained in (a) to (i). This system shall cover all types of intended operations.

NCC.POL.110 Mass and balance data and documentation

(a) The operator shall establish mass and balance data and produce mass and balance documentation prior to each flight specifying the load and its distribution in such a way that the mass and balance limits of the aircraft are not exceeded. The mass and balance documentation shall contain the following information:

(1) aircraft registration and type;

(2) flight identification, number and date, as applicable;

(3) name of the pilot-in-command;

(4) name of the person who prepared the document;

(5) dry operating mass and the corresponding CG of the aircraft;

▼M20

(6) mass of the fuel/energy at take-off and mass of trip fuel/energy;

(7) mass of consumables other than fuel/energy, if applicable;

(8) load components including passengers, baggage, freight, and ballast;

(9) take-off mass, landing mass, and zero fuel/energy mass;

▼M1

(10) applicable aircraft CG positions; and

(11) the limiting mass and CG values.

(b) Where mass and balance data and documentation are generated by a computerised mass and balance system, the operator shall verify the integrity of the output data.

(c) When the loading of the aircraft is not supervised by the pilot-in-command, the person supervising the loading of the aircraft shall confirm by hand signature or equivalent that the load and its distribution are in accordance with the mass and balance documentation established by the pilot-in-command. The pilot-in-command shall indicate his/her acceptance by hand signature or equivalent.

(d) The operator shall specify procedures for last minute changes to the load to ensure that:

(1) any last minute change after the completion of the mass and balance documentation is entered in the flight planning documents containing the mass and balance documentation;

(2) the maximum last minute change allowed in passenger numbers or hold load is specified; and

(3) new mass and balance documentation is prepared if this maximum number is exceeded.

NCC.POL.111 Mass and balance data and documentation — alleviations

Notwithstanding NCC.POL.110 (a)(5), the CG position may not need to be on the mass and balance documentation, if the load distribution is in accordance with a pre-calculated balance table or if it can be shown that for the planned operations a correct balance can be ensured, whatever the real load is.

▼M1

NCC.POL.115 Performance — general

The pilot-in-command shall only operate the aircraft if the performance is adequate to comply with the applicable rules of the air and any other restrictions applicable to the flight, the airspace or the aerodromes or operating sites used, taking into account the charting accuracy of any charts and maps used.

NCC.POL.120 Take-off mass limitations — aeroplanes

The operator shall ensure that:

(a) the mass of the aeroplane at the start of take-off shall not exceed the mass limitations:

(1) at take-off as required in NCC.POL.125;

(2) en-route with one engine inoperative (OEI) as required in NCC.POL.130; and

(3) at landing as required in NCC.POL.135;

allowing for expected reductions in mass as the flight proceeds and for fuel jettisoning;

(b) the mass at the start of take-off shall never exceed the maximum take-off mass specified in the AFM for the pressure altitude appropriate to the elevation of the aerodrome or operating site, and if used as a parameter to determine the maximum take-off mass, any other local atmospheric condition; and

(c) the estimated mass for the expected time of landing at the aerodrome or operating site of intended landing and at any destination alternate aerodrome shall never exceed the maximum landing mass specified in the AFM for the pressure altitude appropriate to the elevation of those aerodromes or operating sites, and if used as a parameter to determine the maximum landing mass, any other local atmospheric condition.

NCC.POL.125 Take-off — aeroplanes

(a) When determining the maximum take-off mass, the pilot-in-command shall take the following into account:

(1) the calculated take-off distance shall not exceed the take-off distance available with a clearway distance not exceeding half of the take-off run available;

(2) the calculated take-off run shall not exceed the take-off run available;

(3) a single value of V_1 shall be used for the rejected and continued take-off, where a V_1 is specified in the AFM; and

(4) on a wet or contaminated runway, the take-off mass shall not exceed that permitted for a take-off on a dry runway under the same conditions.

▼M4

(b) Except for an aeroplane equipped with turboprop engines and a maximum take-off mass at or below 5 700 kg, in the event of an engine failure during take-off, the pilot-in-command shall ensure that the aeroplane is able:

(1) to discontinue the take-off and stop within the accelerate-stop distance available or the runway available; or

▼M4

(2) to continue the take-off and clear all obstacles along the flight path by an adequate margin until the aeroplane is in a position to comply with NCC.POL.130.

▼M1

NCC.POL.130 En-route — one engine inoperative — aeroplanes

The pilot-in-command shall ensure that in the event of an engine becoming inoperative at any point along the route, a multi-engined aeroplane shall be able to continue the flight to an adequate aerodrome or operating site without flying below the minimum obstacle clearance altitude at any point.

NCC.POL.135 Landing — aeroplanes

The pilot-in-command shall ensure that at any aerodrome or operating site, after clearing all obstacles in the approach path by a safe margin, the aeroplane shall be able to land and stop, or a seaplane to come to a satisfactorily low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.

SUBPART D

INSTRUMENTS, DATA AND EQUIPMENT

SECTION 1

Aeroplanes

NCC.IDE.A.100 Instruments and equipment — general

(a) Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements if they are:

(1) used by the flight crew to control the flight path;

(2) used to comply with NCC.IDE.A.245;

(3) used to comply with NCC.IDE.A.250; or

(4) installed in the aeroplane.

(b) The following items, when required by this Subpart, do not need an equipment approval:

(1) spare fuses;

(2) independent portable lights;

(3) an accurate time piece;

(4) chart holder;

(5) first-aid kits;

(6) survival and signalling equipment;

(7) sea anchor and equipment for mooring; and

(8) child restraint device.

▼M15

(c) Instruments and equipment or accessories not required under this Annex as well as any other equipment which is not required under this Regulation, but carried on a flight, shall comply with the following requirements:

(1) the information provided by those instruments, equipment or accessories shall not be used by the flight crew members to comply with Annex II to Regulation (EU) 2018/1139 or points NCC.IDE.A.245 and NCC.IDE.A.250 of this Annex;

(2) the instruments and equipment shall not affect the airworthiness of the aeroplane, even in the case of failures or malfunction.

▼M1

(d) Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.

(e) Those instruments that are used by a flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision which he/she normally assumes when looking forward along the flight path.

(f) All required emergency equipment shall be easily accessible for immediate use.

NCC.IDE.A.105 Minimum equipment for flight

A flight shall not be commenced when any of the aeroplane's instruments, items of equipment, or functions, required for the intended flight are inoperative or missing, unless:

(a) the aeroplane is operated in accordance with the operator's minimum equipment list (MEL);

▼M15

(b) the operator is approved by the competent authority to operate the aeroplane within the constraints of the master minimum equipment list ('MMEL') in accordance with point ORO.MLR.105(j) of Annex III; or

▼M1

(c) the aeroplane is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

NCC.IDE.A.110 Spare electrical fuses

Aeroplanes shall be equipped with spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are allowed to be replaced in flight.

NCC.IDE.A.115 Operating lights

Aeroplanes operated at night shall be equipped with:

(a) an anti-collision light system;

(b) navigation/position lights;

(c) a landing light;

(d) lighting supplied from the aeroplane's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aeroplane;

(e) lighting supplied from the aeroplane's electrical system to provide illumination in all passenger compartments;

(f) an independent portable light for each crew member station; and

(g) lights to conform with the International Regulations for Preventing Collisions at Sea if the aeroplane is operated as a seaplane.

NCC.IDE.A.120 Operations under VFR — flight and navigational instruments and associated equipment

(a) Aeroplanes operated under VFR by day shall be equipped with a means of measuring and displaying the following:

(1) magnetic-heading;

▼M1

(2) time in hours, minutes and seconds;

▼M15

(3) barometric altitude;

▼M1

(4) indicated airspeed;

(5) slip; and

(6) Mach number whenever speed limitations are expressed in terms of Mach number.

(b) Aeroplanes operated under visual meteorological conditions (VMC) over water and out of sight of the land, or under VMC at night, or in conditions where the aeroplane cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a), equipped with:

(1) a means of measuring and displaying the following:

(i) turn and slip;

(ii) attitude;

(iii) vertical speed; and

(iv) stabilised heading;

(2) a means of indicating when the supply of power to the gyroscopic instruments is not adequate; and

(3) a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

(c) Whenever two pilots are required for the operation, aeroplanes shall be equipped with an additional separate means of displaying the following:

▼M15

(1) barometric altitude;

▼M1

(2) indicated airspeed;

(3) slip, or turn and slip, as applicable;

(4) attitude, if applicable;

(5) vertical speed, if applicable;

(6) stabilised heading, if applicable; and

(7) Mach number whenever speed limitations are expressed in terms of Mach number, if applicable.

NCC.IDE.A.125 Operations under IFR — flight and navigational instruments and associated equipment

Aeroplanes operated under IFR shall be equipped with:

(a) a means of measuring and displaying the following:

(1) magnetic heading;

(2) time in hours, minutes and seconds;

▼M15

(3) barometric altitude;

▼M1

(4) indicated airspeed;

(5) vertical speed;

(6) turn and slip;

▼M1

(7) attitude;

(8) stabilised heading;

(9) outside air temperature; and

(10) Mach number whenever speed limitations are expressed in terms of Mach number;

(b) a means of indicating when the supply of power to the gyroscopic instruments is not adequate;

(c) whenever two pilots are required for the operation, an additional separate means of displaying for the second pilot:

▼M15

(1) barometric altitude;

▼M1

(2) indicated airspeed;

(3) vertical speed;

(4) turn and slip;

(5) attitude;

(6) stabilised heading; and

(7) Mach number whenever speed limitations are expressed in terms of Mach number, if applicable;

(d) a means of preventing malfunction of the airspeed indicating systems required in (a)(4) and (c)(2) due to condensation or icing;

(e) an alternate source of static pressure;

(f) a chart holder in an easily readable position that can be illuminated for night operations;

(g) a second independent means of measuring and displaying altitude; and

▼M15

(h) an emergency power supply, independent of the main electrical generating system, for the purpose of operating and illuminating an attitude indicating system for a minimum period of 30 minutes. The emergency power supply shall be automatically operative after the total failure of the main electrical generating system and clear indication shall be given on the instrument or on the instrument panel that the attitude indicator is being operated by emergency power.

▼M1

NCC.IDE.A.130 Additional equipment for single-pilot operations under IFR

Aeroplanes operated under IFR with a single pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

NCC.IDE.A.135 Terrain awareness warning system (TAWS)

Turbine-powered aeroplanes with a maximum certified take-off mass (MCTOM) of more than 5 700 kg or a maximum operational passenger seating configuration (MOPSC) of more than nine shall be equipped with a TAWS that meets the requirements for:

(a) class A equipment, as specified in an acceptable standard, in the case of aeroplanes for which the individual certificate of airworthiness (CofA) was first issued after 1 January 2011; or

(b) class B equipment, as specified in an acceptable standard, in the case of aeroplanes for which the individual CofA was first issued on or before 1 January 2011.

▼M1

NCC.IDE.A.140 Airborne collision avoidance system (ACAS)

Unless otherwise provided for by Regulation (EU) No 1332/2011, turbine-powered aeroplanes with an MCTOM of more than 5 700 kg or an MOPSC of more than 19 shall be equipped with ACAS II.

NCC.IDE.A.145 Airborne weather detecting equipment

The following aeroplanes shall be equipped with airborne weather detecting equipment when operated at night or in IMC in areas where thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route:

(a) pressurised aeroplanes;

(b) non-pressurised aeroplanes with an MCTOM of more than 5 700 kg; and

(c) non-pressurised aeroplanes with an MOPSC of more than nine.

NCC.IDE.A.150 Additional equipment for operations in icing conditions at night

(a) Aeroplanes operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

(b) The means to illuminate the formation of ice shall not cause glare or reflection that would handicap flight crew members in the performance of their duties.

NCC.IDE.A.155 Flight crew interphone system

Aeroplanes operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

NCC.IDE.A.160 Cockpit voice recorder

(a) The following aeroplanes shall be equipped with a CVR:

(1) aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2016; and

(2) aeroplanes with an MCTOM of more than 2 250 kg:

(i) certified for operation with a minimum crew of at least two pilots;

(ii) equipped with turbojet engine(s) or more than one turboprop engine; and

(iii) for which a type certificate is first issued on or after 1 January 2016.

▼M8

(b) The CVR shall be capable of retaining data recorded during at least:

▼M18

(1) the preceding 25 hours for aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2022; or

▼M8

(2) the preceding 2 hours in all other cases.

▼M1

(c) The CVR shall record with reference to a timescale:

(1) voice communications transmitted from or received in the flight crew compartment by radio;

(2) flight crew members' voice communications using the interphone system and the public address system, if installed;

(3) the aural environment of the flight crew compartment, including, without interruption, the audio signals received from each boom and mask microphone in use; and

(4) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

(d) The CVR shall start automatically to record prior to the aeroplane moving under its own power and shall continue to record until the termination of the flight when the aeroplane is no longer capable of moving under its own power.

(e) In addition to (d), depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

▼M8

(f) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

▼M1

NCC.IDE.A.165 Flight data recorder

(a) Aeroplanes with an MCTOM of more than 5 700 kg and first issued with an individual CofA on or after 1 January 2016 shall be equipped with an FDR that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available.

(b) The FDR shall record the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power, configuration and operation and be capable of retaining data recorded during at least the preceding 25 hours.

(c) Data shall be obtained from aeroplane sources that enable accurate correlation with information displayed to the flight crew.

(d) The FDR shall start automatically to record the data prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is incapable of moving under its own power.

▼M8

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

▼M1

NCC.IDE.A.170 Data link recording

(a) Aeroplanes first issued with an individual CofA on or after 1 January 2016 that have the capability to operate data link communications and are required to be equipped with a CVR shall record on a recorder, where applicable:

(1) data link communication messages related to ATS communications to and from the aeroplane, including messages applying to the following applications:

(i) data link initiation;

(ii) controller–pilot communication;

(iii) addressed surveillance;

(iv) flight information;

(v) as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

(vi) as far as is practicable, given the architecture of the system, aircraft operational control data; and

(vii) as far as is practicable, given the architecture of the system, graphics;

(2) information that enables correlation to any associated records related to data link communications and stored separately from the aeroplane; and

(3) information on the time and priority of data link communications messages, taking into account the system's architecture.

(b) The recorder shall use a digital method of recording and storing data and information and a method for readily retrieving that data. The recording method shall allow the data to match the data recorded on the ground.

(c) The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in NCC.IDE.A.160.

▼M8

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

▼M1

(e) The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in NCC.IDE.A.160(d) and (e).

NCC.IDE.A.175 Flight data and cockpit voice combination recorder

Compliance with CVR requirements and FDR requirements may be achieved by:

(a) one flight data and cockpit voice combination recorder if the aeroplane has to be equipped with a CVR or an FDR; or

(b) two flight data and cockpit voice combination recorders if the aeroplane has to be equipped with a CVR and an FDR.

▼M1

NCC.IDE.A.180 Seats, seat safety belts, restraint systems and child restraint devices

(a) Aeroplanes shall be equipped with:

(1) a seat or berth for each person on board who is aged 24 months or more;

(2) a seat belt on each passenger seat and restraining belts for each berth;

(3) a child restraint device (CRD) for each person on board younger than 24 months;

(4) a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration:

(i) on each flight crew seat and on any seat alongside a pilot's seat; and

(ii) on each observer's seat located in the flight crew compartment;

and

(5) a seat belt with upper torso restraint system on the seats for the minimum required cabin crew, in the case of aeroplanes first issued with an individual CofA after 31 December 1980.

▼M15

(b) A seat belt with upper torso restraint system shall have:

(1) a single point release;

(2) on the seats for the minimum number of required cabin crew members, two shoulder straps and a seat belt that may be used independently;

(3) on flight crew members seats and on any seat alongside a pilot's seat, either of the following:

(i) two shoulder straps and a seat belt that may be used independently;

(ii) a diagonal shoulder strap and a seat belt that may be used independently for the following aeroplanes:

(A) aeroplanes with an MCTOM of 5 700 kg or less and with an MOPSC of nine or less that are compliant with the emergency landing dynamic conditions defined in the applicable certification specification;

(B) aeroplanes with an MCTOM of 5 700 kg or less and with an MOPSC of nine or less that are not compliant with the emergency landing dynamic conditions defined in the applicable certification specification and having an individual CofA first issued before 25 August 2016.

▼M1

NCC.IDE.A.185 Fasten seat belt and no smoking signs

Aeroplanes in which not all passenger seats are visible from the flight crew seat(s) shall be equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

▼M1

NCC.IDE.A.190 First-aid kit

(a) Aeroplanes shall be equipped with first-aid kits in accordance with Table 1.

Table 1

Number of first-aid kits required

Number of passenger seats installed	Number of first-aid kits required
0 – 100	1
101 – 200	2
201 – 300	3
301 – 400	4
401 – 500	5
501 or more	6

(b) First-aid kits shall be:

(1) readily accessible for use; and

(2) kept up-to-date.

NCC.IDE.A.195 Supplemental oxygen — pressurised aeroplanes

(a) Pressurised aeroplanes operated at flight altitudes for which the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

(b) Pressurised aeroplanes operated above flight altitudes at which the pressure altitude in the passenger compartments is above 10 000 ft shall carry enough breathing oxygen to supply:

(1) all crew members and:

(i) 100 % of the passengers for any period when the cabin pressure altitude exceeds 15 000 ft, but in no case less than 10 minutes' supply;

(ii) at least 30 % of the passengers, for any period when, in the event of loss of pressurisation and taking into account the circumstances of the flight, the pressure altitude in the passenger compartment will be between 14 000 ft and 15 000 ft; and

(iii) at least 10 % of the passengers for any period in excess of 30 minutes when the pressure altitude in the passenger compartment will be between 10 000 ft and 14 000 ft;

(2) all the occupants of the passenger compartment for no less than 10 minutes, in the case of aeroplanes operated at pressure altitudes above 25 000 ft, or operated below that altitude, but under conditions that will not allow them to descend safely to a pressure altitude of 13 000 ft within 4 minutes.

(c) Pressurised aeroplanes operated at flight altitudes above 25 000 ft shall, in addition, be equipped with:

(1) a device to provide a warning indication to the flight crew of any loss of pressurisation; and

(2) quick donning masks for flight crew members.

▼M1

NCC.IDE.A.200 Supplemental oxygen — non-pressurised aeroplanes

(a) Non-pressurised aeroplanes operated at flight altitudes when the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

(b) Non-pressurised aeroplanes operated above flight altitudes at which the pressure altitude in the passenger compartments is above 10 000 ft shall carry enough breathing oxygen to supply:

(1) all crew members and at least 10 % of the passengers for any period in excess of 30 minutes when the pressure altitude in the passenger compartment will be between 10 000 ft and 13 000 ft; and

(2) all crew members and passengers for any period that the pressure altitude in the passenger compartments will be above 13 000 ft.

NCC.IDE.A.205 Hand fire extinguishers

(a) Aeroplanes shall be equipped with at least one hand fire extinguisher:

(1) in the flight crew compartment; and

(2) in each passenger compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

(b) The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

NCC.IDE.A.206 Crash axe and crowbar

(a) Aeroplanes with an MCTOM of more than 5 700 kg or with an MOPSC of more than nine shall be equipped with at least one crash axe or crowbar located in the flight crew compartment.

(b) In the case of aeroplanes with an MOPSC of more than 200, an additional crash axe or crowbar shall be installed in or near the rearmost galley area.

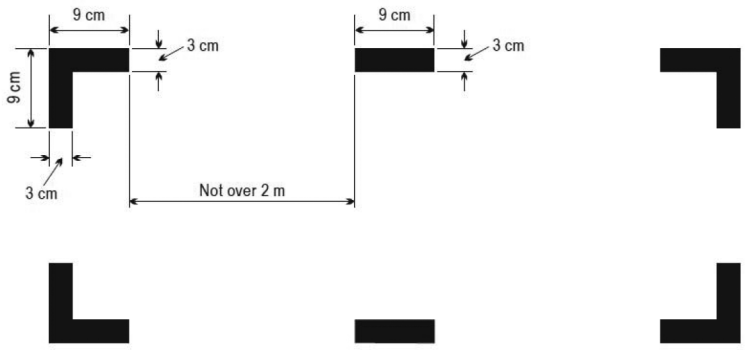
(c) Crash axes and crowbars located in the passenger compartment shall not be visible to passengers.

NCC.IDE.A.210 Marking of break-in points

If areas of the aeroplane's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.

Figure 1

Marking of break-in points



▼M1

NCC.IDE.A.215 Emergency locator transmitter (ELT)

▼M8

(a) Aeroplanes shall be equipped with:

(1) an ELT of any type or an aircraft localisation means meeting the requirement of Annex IV (Part CAT), CAT.GEN.MPA.210, to Regulation (EU) No 965/2012, when first issued with an individual CofA on or before 1 July 2008;

(2) an automatic ELT or an aircraft localisation means meeting the requirement of Annex IV (Part CAT), CAT.GEN.MPA.210, to Regulation (EU) No 965/2012, when first issued with an individual CofA after 1 July 2008.

▼M1

(b) ELTs of any type shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

NCC.IDE.A.220 Flight over water

(a) The following aeroplanes shall be equipped with a life-jacket for each person on board or equivalent individual floatation device for each person on board younger than 24 months, stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided:

(1) landplanes operated over water at a distance of more than 50 NM from land or taking off or landing at an aerodrome or operating site where, in the opinion of the pilot-in-command, the take-off or approach path is so disposed over water that there would be a likelihood of a ditching; and

(2) seaplanes operated over water.

(b) Each life-jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

(c) Seaplanes operated over water shall be equipped with:

(1) a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the aeroplane on water, appropriate to its size, weight and handling characteristics; and

(2) equipment for making the sound signals as prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

(d) The pilot-in-command of an aeroplane operated at a distance away from land where an emergency landing is possible greater than that corresponding to 30 minutes at normal cruising speed or 50 NM, whichever is the lesser, shall determine the risks to survival of the occupants of the aeroplane in the event of a ditching, based on which he/she shall determine the carriage of:

(1) equipment for making the distress signals;

(2) life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency; and

(3) life-saving equipment to provide the means of sustaining life, as appropriate to the flight to be undertaken.

▼M1

NCC.IDE.A.230 Survival equipment

(a) Aeroplanes operated over areas in which search and rescue would be especially difficult shall be equipped with:

(1) signalling equipment to make the distress signals;

(2) at least one survival ELT(S); and

(3) additional survival equipment for the route to be flown taking account of the number of persons on board.

(b) The additional survival equipment specified in (a)(3) does not need to be carried when the aeroplane:

(1) remains within a distance from an area where search and rescue is not especially difficult corresponding to:

(i) 120 minutes at one-engine-inoperative (OEI) cruising speed for aeroplanes capable of continuing the flight to an aerodrome with the critical engine(s) becoming inoperative at any point along the route or planned diversion routes; or

(ii) 30 minutes at cruising speed for all other aeroplanes;

or

(2) remains within a distance no greater than that corresponding to 90 minutes at cruising speed from an area suitable for making an emergency landing, for aeroplanes certified in accordance with the applicable airworthiness standard.

NCC.IDE.A.240 Headset

(a) Aeroplanes shall be equipped with a headset with a boom microphone or equivalent for each flight crew member at their assigned station in the flight crew compartment.

(b) Aeroplanes operated under IFR or at night shall be equipped with a transmit button on the manual pitch and roll control for each required flight crew member.

NCC.IDE.A.245 Radio communication equipment

(a) Aeroplanes operated under IFR or at night, or when required by the applicable airspace requirements, shall be equipped with radio communication equipment that, under normal radio propagating conditions, shall be capable of:

(1) conducting two-way communication for aerodrome control purposes;

(2) receiving meteorological information at any time during flight;

(3) conducting two-way communication at any time during flight with those aeronautical stations and on those frequencies prescribed by the appropriate authority; and

(4) providing for communication on the aeronautical emergency frequency 121,5 MHz.

(b) When more than one communication equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

▼M1

NCC.IDE.A.250 Navigation equipment

(a) Aeroplanes shall be equipped with navigation equipment that will enable them to proceed in accordance with:

(1) the ATS flight plan, if applicable; and

(2) the applicable airspace requirements.

(b) Aeroplanes shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with (a), or an appropriate contingency action, to be completed safely.

(c) Aeroplanes operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed. This equipment shall be capable of providing such guidance for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodromes.

▼M9

(d) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

▼M15

(e) Aeroplanes shall be equipped with surveillance equipment in accordance with the applicable airspace requirements.

▼M1

NCC.IDE.A.255 Transponder

Aeroplanes shall be equipped with a pressure altitude reporting secondary surveillance radar (SSR) transponder and any other SSR transponder capability required for the route being flown.

▼M9

NCC.IDE.A.260 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.

▼M1

SECTION 2

Helicopters

NCC.IDE.H.100 Instruments and equipment — general

(a) Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements if they are:

(1) used by the flight crew to control the flight path;

▼M1

(2) used to comply with NCC.IDE.H.245;

(3) used to comply with NCC.IDE.H.250; or

(4) installed in the helicopter.

(b) The following items, when required by this Subpart, do not need an equipment approval:

(1) independent portable light;

(2) an accurate time piece;

(3) chart holder;

(4) first-aid kit;

(5) survival and signalling equipment;

(6) sea anchor and equipment for mooring; and

(7) child restraint device.

▼M15

(c) Instruments and equipment or accessories not required under this Annex, as well as any other equipment which is not required under this Regulation, but carried on a flight, shall comply with the following requirements:

(1) the information provided by those instruments, equipment or accessories shall not be used by the flight crew members to comply with Annex II to Regulation (EU) 2018/1139 or points NCC.IDE.H.245 and NCC.IDE.H.250 of this Annex;

(2) the instruments and equipment shall not affect the airworthiness of the helicopter, even in the case of failures or malfunction.

▼M1

(d) Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.

(e) Those instruments that are used by a flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision which he/she normally assumes when looking forward along the flight path.

(f) All required emergency equipment shall be easily accessible for immediate use.

NCC.IDE.H.105 Minimum equipment for flight

A flight shall not be commenced when any of the helicopter's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

(a) the helicopter is operated in accordance with the operator's minimum equipment list (MEL);

▼M15

(b) the operator is approved by the competent authority to operate the helicopter within the constraints of the master minimum equipment list ('MMEL') in accordance with point ORO.MLR.105(j) of Annex III; or

▼M1

(c) the helicopter is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

▼M1

NCC.IDE.H.115 Operating lights

Helicopters operated at night shall be equipped with:

(a) an anti-collision light system;

(b) navigation/position lights;

(c) a landing light;

(d) lighting supplied from the helicopter's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the helicopter;

(e) lighting supplied from the helicopter's electrical system to provide illumination in all passenger compartments;

(f) an independent portable light for each crew member station; and

(g) lights to conform with the International Regulations for Preventing Collisions at Sea if the helicopter is amphibious.

NCC.IDE.H.120 Operations under VFR — flight and navigational instruments and associated equipment

(a) Helicopters operated under VFR by day shall be equipped with a means of measuring and displaying the following:

(1) magnetic heading;

(2) time in hours, minutes and seconds;

▼M15

(3) barometric altitude;

▼M1

(4) indicated airspeed; and

(5) slip.

(b) Helicopters operated under VMC over water and out of sight of the land, or under VMC at night, or when the visibility is less than 1 500 m, or in conditions where the helicopter cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be equipped, in addition to (a), with:

(1) a means of measuring and displaying the following:

(i) attitude;

(ii) vertical speed; and

(iii) stabilised heading;

(2) a means of indicating when the supply of power to the gyroscopic instruments is not adequate; and

(3) a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

(c) Whenever two pilots are required for the operation, helicopters shall be equipped with an additional separate means of displaying the following:

▼M15

(1) barometric altitude;

▼M1

(2) indicated airspeed;

(3) slip;

(4) attitude, if applicable;

(5) vertical speed, if applicable; and

(6) stabilised heading, if applicable.

NCC.IDE.H.125 Operations under IFR — flight and navigational instruments and associated equipment

Helicopters operated under IFR shall be equipped with:

(a) a means of measuring and displaying the following:

(1) magnetic heading;

(2) time in hours, minutes and seconds;

▼M15

(3) barometric altitude;

▼M1

(4) indicated airspeed;

(5) vertical speed;

(6) slip;

(7) attitude;

(8) stabilised heading; and

(9) outside air temperature;

(b) a means of indicating when the supply of power to the gyroscopic instruments is not adequate;

(c) whenever two pilots are required for the operation, an additional separate means of displaying the following:

▼M15

(1) barometric altitude;

▼M1

(2) indicated airspeed;

(3) vertical speed;

(4) slip;

(5) attitude; and

(6) stabilised heading;

(d) a means of preventing malfunction of the airspeed indicating systems required in (a)(4) and (c)(2) due to condensation or icing;

(e) an alternate source of static pressure;

(f) a chart holder in an easily readable position that can be illuminated for night operations; and

(g) an additional means of measuring and displaying attitude as a standby instrument.

▼M1

NCC.IDE.H.130 Additional equipment for single-pilot operations under IFR

Helicopters operated under IFR with a single pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

NCC.IDE.H.145 Airborne weather detecting equipment

Helicopters with an MOPSC of more than nine and operated under IFR or at night shall be equipped with airborne weather detecting equipment when current weather reports indicate that thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route to be flown.

NCC.IDE.H.150 Additional equipment for operations in icing conditions at night

(a) Helicopters operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

(b) The means to illuminate the formation of ice shall not cause glare or reflection that would handicap flight crew members in the performance of their duties.

NCC.IDE.H.155 Flight crew interphone system

Helicopters operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

NCC.IDE.H.160 Cockpit voice recorder

(a) Helicopters with an MCTOM of more than 7 000 kg and first issued with an individual CofA on or after 1 January 2016 shall be equipped with a CVR.

(b) The CVR shall be capable of retaining data recorded during at least the preceding 2 hours.

(c) The CVR shall record with reference to a timescale:

(1) voice communications transmitted from or received in the flight crew compartment by radio;

(2) flight crew members' voice communications using the interphone system and the public address system, if installed;

(3) the aural environment of the cockpit, including, without interruption, the audio signals received from each crew microphone; and

(4) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

(d) The CVR shall start automatically to record prior to the helicopter moving under its own power and shall continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power.

(e) In addition to (d), depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

▼M8

(f) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

▼M1

NCC.IDE.H.165 Flight data recorder

(a) Helicopters with an MCTOM of more than 3 175 kg and first issued with an individual CofA on or after 1 January 2016 shall be equipped with an FDR that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available.

(b) The FDR shall record the parameters required to determine accurately the helicopter flight path, speed, attitude, engine power, configuration and operation and be capable of retaining data recorded during at least the preceding 10 hours.

(c) Data shall be obtained from helicopter sources that enable accurate correlation with information displayed to the flight crew.

(d) The FDR shall start automatically to record the data prior to the helicopter being capable of moving under its own power and shall stop automatically after the helicopter is incapable of moving under its own power.

▼M8

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

▼M1

NCC.IDE.H.170 Data link recording

(a) Helicopters first issued with an individual CofA on or after 1 January 2016 that have the capability to operate data link communications and are required to be equipped with a CVR shall record on a recorder, where applicable:

(1) data link communication messages related to ATS communications to and from the helicopter, including messages applying to the following applications:

(i) data link initiation;

(ii) controller–pilot communication;

(iii) addressed surveillance;

(iv) flight information;

(v) as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

(vi) as far as is practicable, given the architecture of the system, aircraft operational control data; and

(vii) as far as is practicable, given the architecture of the system, graphics;

(2) information that enables correlation to any associated records related to data link communications and stored separately from the helicopter; and

▼M1

(3) information on the time and priority of data link communications messages, taking into account the system's architecture.

(b) The recorder shall use a digital method of recording and storing data and information and a method for readily retrieving that data. The recording method shall allow the data to match the data recorded on the ground.

(c) The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in NCC.IDE.H.160.

▼M8

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

▼M1

(e) The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in NCC.IDE.H.160(d) and (e).

NCC.IDE.H.175 Flight data and cockpit voice combination recorder

Compliance with CVR and FDR requirements may be achieved by one flight data and cockpit voice combination recorder.

NCC.IDE.H.180 Seats, seat safety belts, restraint systems and child restraint devices

(a) Helicopters shall be equipped with:

(1) a seat or berth for each person on board who is aged 24 months or more;

(2) a seat belt on each passenger seat and restraining belts for each berth;

(3) for helicopters first issued with an individual CofA after 31 December 2012, a seat belt with an upper torso restraint system for each passenger who is aged 24 months or more;

(4) a child restraint device (CRD) for each person on board younger than 24 months;

(5) a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration on each flight crew seat; and

(6) a seat belt with upper torso restraint system on the seats for the minimum required cabin crew, in the case of helicopters first issued with an individual CofA after 31 December 1980.

(b) A seat belt with upper torso restraint system shall:

(1) have a single point release; and

(2) on flight crew seats, on any seat alongside a pilot's seat and on the seats for the minimum required cabin crew, include two shoulder straps and a seat belt that may be used independently.

▼M1

NCC.IDE.H.185 Fasten seat belt and no smoking signs

Helicopters in which not all passenger seats are visible from the flight crew seat(s) shall be equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

NCC.IDE.H.190 First-aid kit

(a) Helicopters shall be equipped with at least one first-aid kit.

(b) The first-aid kit(s) shall be:

(1) readily accessible for use; and

(2) kept up-to-date.

NCC.IDE.H.200 Supplemental oxygen — non-pressurised helicopters

(a) Non-pressurised helicopters operated at flight altitudes when the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

(b) Non-pressurised helicopters operated above flight altitudes at which the pressure altitude in the passenger compartments is above 10 000 ft shall carry enough breathing oxygen to supply:

(1) all crew members and at least 10 % of the passengers for any period in excess of 30 minutes when the pressure altitude in the passenger compartment will be between 10 000 ft and 13 000 ft; and

(2) all crew members and passengers for any period that the pressure altitude in the passenger compartment will be above 13 000 ft.

NCC.IDE.H.205 Hand fire extinguishers

(a) Helicopters shall be equipped with at least one hand fire extinguisher:

(1) in the flight crew compartment; and

(2) in each passenger compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

(b) The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

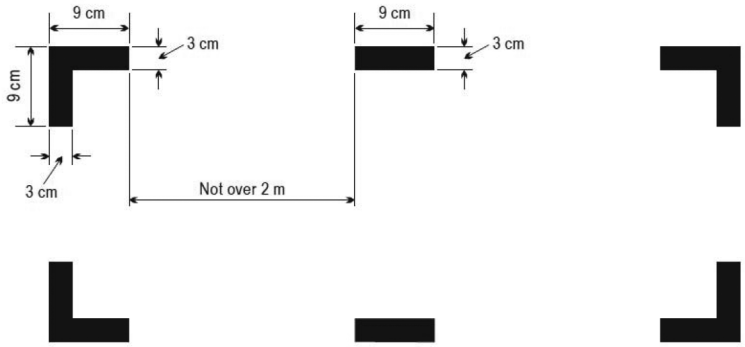
NCC.IDE.H.210 Marking of break-in points

If areas of the helicopter's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.

▼M1

Figure 1

Marking of break-in points



NCC.IDE.H.215 Emergency locator transmitter (ELT)

(a) Helicopters shall be equipped with at least one automatic ELT.

▼M9

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▼M1

(c) An ELT of any type shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

NCC.IDE.H.225 Life-jackets

(a) Helicopters shall be equipped with a life-jacket for each person on board or equivalent individual floatation device for each person on board younger than 24 months, which shall be worn or stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided, when:

(1) operated on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, where in the case of the critical engine failure, the helicopter is able to sustain level flight;

(2) operated on a flight over water beyond autorotational distance from the land, where in the case of critical engine failure, the helicopter is not able to sustain level flight; or

(3) taking off or landing at an aerodrome or operating site where the take-off or approach path is over water.

(b) Each life-jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

▼M9

NCC.IDE.H.226 Crew survival suits

Each crew member shall wear a survival suit when so determined by the pilot-in-command based on a risk assessment taking into account the following conditions:

(a) flights over water beyond autorotational distance or safe forced landing distance from land, where in the case of a critical engine failure, the helicopter is not able to sustain level flight; and

(b) 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.

▼M1

NCC.IDE.H.227 Life-rafts, survival ELTs and survival equipment on extended overwater flights

Helicopters operated:

(a) on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, where in the case of the critical engine failure, the helicopter is able to sustain level flight; or

(b) on a flight over water at a distance corresponding to more than 3 minutes flying time at normal cruising speed, where in the case of the critical engine failure, the helicopter is not able to sustain level flight, and if so determined by the pilot-in-command by means of a risk assessment;

shall be equipped with:

(1) in the case of a helicopter carrying less than 12 persons, at least one life-raft with a rated capacity of not less than the maximum number of persons on board, stowed so as to facilitate their ready use in emergency;

(2) in the case of a helicopter carrying more than 11 persons, at least two life-rafts, stowed so as to facilitate their ready use in an emergency, sufficient together to accommodate all persons capable of being carried on board and, if one is lost the remaining life-raft(s) having the overload capacity sufficient to accommodate all persons on the helicopter;

(3) at least one survival ELT (ELT(S)) for each required life-raft; and

(4) life-saving equipment, including means of sustaining life, as appropriate to the flight to be undertaken.

NCC.IDE.H.230 Survival equipment

Helicopters operated over areas in which search and rescue would be especially difficult shall be equipped with:

(a) signalling equipment to make distress signals;

(b) at least one survival ELT (ELT(S)); and

(c) additional survival equipment for the route to be flown taking account of the number of persons on board.

▼M9

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▼M1

NCC.IDE.H.232 Helicopters certified for operating on water — miscellaneous equipment

Helicopters certified for operating on water shall be equipped with:

(a) a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the helicopter on water, appropriate to its size, weight and handling characteristics; and

(b) equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

▼M15

NCC.IDE.H.235 All helicopters on flights over water — ditching

Helicopters shall be designed for landing on water or certified for ditching in accordance with the relevant certification specifications or fitted with emergency flotation equipment when operated on a flight over water in a hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed.

▼M1

NCC.IDE.H.240 Headset

Whenever a radio communication and/or radio navigation system is required, helicopters shall be equipped with a headset with boom microphone or equivalent and a transmit button on the flight controls for each required pilot and/or crew member at his/her assigned station.

NCC.IDE.H.245 Radio communication equipment

(a) Helicopters operated under IFR or at night, or when required by the applicable airspace requirements, shall be equipped with radio communication equipment that, under normal radio propagating conditions, shall be capable of:

(1) conducting two-way communication for aerodrome control purposes;

(2) receiving meteorological information;

(3) conducting two-way communication at any time during flight with those aeronautical stations and on those frequencies prescribed by the appropriate authority; and

(4) providing for communication on the aeronautical emergency frequency 121,5 MHz.

(b) When more than one communications equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

(c) When a radio communication system is required, and in addition to the flight crew interphone system required in NCC.IDE.H.155, helicopters shall be equipped with a transmit button on the flight controls for each required pilot and crew member at his/her assigned station.

NCC.IDE.H.250 Navigation equipment

(a) Helicopters shall be equipped with navigation equipment that will enable them to proceed in accordance with:

(1) the ATS flight plan, if applicable; and

(2) the applicable airspace requirements.

(b) Helicopters shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with (a), or an appropriate contingency action, to be completed safely.

(c) Helicopters operated on flights in which it is intended to land in IMC shall be equipped with navigation equipment capable of providing guidance to a point from which a visual landing can be performed. This equipment shall be capable of providing such guidance for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodromes.

▼M9

(d) When PBN is required the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

▼M15

(e) Helicopters shall be equipped with surveillance equipment in accordance with the applicable airspace requirements.

▼M1

NCC.IDE.H.255 Transponder

Helicopters shall be equipped with a pressure altitude reporting secondary surveillance radar (SSR) transponder and any other SSR transponder capability required for the route being flown.

▼M9

NCC.IDE.H.260 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.

▼M1

ANNEX VII

▼M5

NON-COMMERCIAL AIR OPERATIONS WITH OTHER-THAN COMPLEX MOTOR-POWERED AIRCRAFT

▼M1

[PART-NCO]

SUBPART A

GENERAL REQUIREMENTS

NCO.GEN.100 Competent authority

(a) The competent authority shall be the authority designated by the Member State where the aircraft is registered.

▼M15

(b) If the aircraft is registered in a third country, the competent authority shall be the authority designated by the Member State where the operator has its principal place of business, is established or is residing.

▼M1

NCO.GEN.101 Means of compliance

Alternative means of compliance to those adopted by the Agency may be used by an operator to establish compliance with Regulation (EC) No 216/2008 and its Implementing Rules.

▼M14

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▼M4

NCO.GEN.103 Introductory flights

▼M9

Introductory flights referred to in Article 6(4a)(c) of this Regulation, when conducted in accordance with this Annex, shall:

▼M14

(a) start and end at the same aerodrome or operating site;

▼M9

(b) be operated under VFR by day;

(c) be overseen by a nominated person responsible for their safety; and

(d) comply with any other conditions stipulated by the competent authority.

▼M15

NCO.GEN.104 Use of aircraft included in an AOC by an NCO operator

(a) An NCO operator may use other than complex motor-powered aircraft listed on an operator's AOC to conduct non-commercial operations in accordance with this Annex.

(b) The NCO operator using the aircraft in accordance with point (a) shall establish a procedure:

(1) clearly describing how operational control of the aircraft is transferred between the AOC holder and the NCO operator, as referred to in point ORO.GEN.310 of Annex III;

▼M15

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

That procedure shall be included in a contract between the AOC holder and the NCO operator.

The NCO operator shall ensure that the procedure is communicated to the relevant personnel.

(c) The continuing airworthiness of the aircraft used pursuant to point (a) shall be managed by organisation responsible for the continuing airworthiness for the aircraft included in the AOC, in accordance with Regulation (EU) No 1321/2014.

(d) The NCO operator using the aircraft in accordance with point (a) shall ensure the following:

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

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

(3) that any defect or technical malfunction occurring while the aircraft is under its operational control is reported to the organisation referred to in point (c) immediately after the flight;

(4) that the AOC holder receives a copy of any occurrence report related to the flights performed with the aircraft, completed in accordance with Regulation (EU) No 376/2014 and Regulation (EU) 2015/1018.

▼M1

NCO.GEN.105 Pilot-in-command responsibilities and authority

(a) The pilot-in-command shall be responsible for:

(1) the safety of the aircraft and of all crew members, passengers and cargo on board during aircraft operations as referred to in 1.c of Annex IV to Regulation (EC) No 216/2008;

(2) the initiation, continuation, termination or diversion of a flight in the interest of safety;

(3) ensuring that all operational procedures and checklists are complied with as referred to in 1.b of Annex IV to Regulation (EC) No 216/2008;

(4) only commencing a flight if he/she is satisfied that all operational limitations referred to in 2.a.3 of Annex IV to Regulation (EC) No 216/2008 are complied with, as follows:

(i) the aircraft is airworthy;

(ii) the aircraft is duly registered;

▼**M14**

(iii) instruments and equipment required for the execution of that flight are installed in the aircraft and are operative, unless operation with inoperative equipment is permitted by the minimum equipment list (MEL) or equivalent document, if applicable, as provided for in points NCO.IDE.A.105 or NCO.IDE.H.105;

▼**M11**

(iv) the mass of the aircraft and the centre of gravity location are such that the flight can be conducted within limits prescribed in the airworthiness documentation;

▼**M1**

(v) all equipment, baggage and cargo are properly loaded and secured and an emergency evacuation remains possible; ►**M9** ——————— ◄

(vi) the aircraft operating limitations as specified in the aircraft flight manual (AFM) will not be exceeded at any time during the flight; ►**M9** and ◄

▼**M9**

(vii) any navigational database required for PBN is suitable and current;

▼**M1**

(5) not commencing a flight if he/she is incapacitated from performing duties by any cause such as injury, sickness, fatigue or the effects of any psychoactive substance;

(6) not continuing a flight beyond the nearest weather-permissible aerodrome or operating site when his/her capacity to perform duties is significantly reduced from causes such as fatigue, sickness or lack of oxygen;

(7) deciding on acceptance of the aircraft with unserviceabilities in accordance with the configuration deviation list (CDL) or minimum equipment list (MEL), as applicable; and

(8) recording utilisation data and all known or suspected defects in the aircraft at the termination of the flight, or series of flights, in the aircraft technical log or journey log for the aircraft.

(b) The pilot-in-command shall ensure that during critical phases of flight or whenever deemed necessary in the interest of safety, all crew members are seated at their assigned stations and do not perform any activities other than those required for the safe operation of the aircraft.

(c) The pilot-in-command shall have the authority to refuse carriage of or disembark any person, baggage or cargo that may represent a potential hazard to the safety of the aircraft or its occupants.

(d) The pilot-in-command shall, as soon as possible, report to the appropriate air traffic services (ATS) unit any hazardous weather or flight conditions encountered that are likely to affect the safety of other aircraft.

(e) The pilot-in-command shall, in an emergency situation that requires immediate decision and action, take any action he/she considers necessary under the circumstances in accordance with 7.d of Annex IV to Regulation (EC) No 216/2008. In such cases he/she may deviate from rules, operational procedures and methods in the interest of safety.

▼M1

(f) During flight, the pilot-in-command shall:

▼M11

(1) keep his/her safety belt fastened while at his/her station; and

▼M1

(2) remain at the controls of the aircraft at all times except if another pilot is taking the controls.

(g) The pilot-in-command shall submit a report of an act of unlawful interference without delay to the competent authority and shall inform the designated local authority.

(h) The pilot-in-command shall notify the nearest appropriate authority by the quickest available means of any accident involving the aircraft that results in serious injury or death of any person or substantial damage to the aircraft or property.

▼M11

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▼M1

NCO.GEN.110 Compliance with laws, regulations and procedure

(a) The pilot-in-command shall comply with the laws, regulations and procedures of those States where operations are conducted.

(b) The pilot-in-command shall be familiar with the laws, regulations and procedures, pertinent to the performance of his/her duties, prescribed for the areas to be traversed, the aerodromes or operating sites to be used and the related air navigation facilities as referred to in 1.a of Annex IV to Regulation (EC) No 216/2008.

▼M32

NCO.GEN.115 Taxiing of aeroplanes or gyroplanes

An aeroplane or a gyroplane shall only be taxied on the movement area of an aerodrome if the person at the controls:

(a) is an appropriately qualified pilot; or

(b) has been designated by the operator and:

(1) is trained to taxi the aeroplane or the gyroplane;

(2) is trained to use the radio telephone, if radio communications are required;

(3) has received instruction in respect of aerodrome layout, routes, signs, marking, lights, air traffic control (ATC) signals and instructions, phraseology and procedures; and

(4) is able to conform to the operational standards required for safe aeroplane or gyroplane movement at the aerodrome.

▼M1

NCO.GEN.120 Rotor engagement — helicopters

A helicopter rotor shall only be turned under power for the purpose of flight with a qualified pilot at the controls.

▼M14

NCO.GEN.125 Portable electronic devices

The pilot-in-command shall not permit any person to use a portable electronic device (PED) on board an aircraft, including an electronic flight bag (EFB), that could adversely affect the performance of the aircraft systems and equipment or the ability of the flight crew member to operate the aircraft.

▼M1

NCO.GEN.130 Information on emergency and survival equipment carried

Except for aircraft taking-off and landing at the same aerodrome/operating site, the operator shall, at all times, have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board.

NCO.GEN.135 Documents, manuals and information to be carried

(a) The following documents, manuals and information shall be carried on each flight as originals or copies unless otherwise specified:

(1) the AFM, or equivalent document(s);

(2) the original certificate of registration;

(3) the original certificate of airworthiness (CofA);

(4) the noise certificate, if applicable;

(5) the list of specific approvals, if applicable;

(6) the aircraft radio licence, if applicable;

(7) the third party liability insurance certificate(s);

(8) the journey log, or equivalent, for the aircraft;

(9) details of the filed ATS flight plan, if applicable;

(10) current and suitable aeronautical charts for the route ►M4 area ◄ of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

(11) procedures and visual signals information for use by intercepting and intercepted aircraft;

(12) the MEL or CDL, if applicable; and

(13) any other documentation that may be pertinent to the flight or is required by the States concerned with the flight.

(b) Notwithstanding (a), on flights:

(1) intending to take off and land at the same aerodrome/operating site; or

(2) remaining within a distance or area determined by the competent authority,

the documents and information in (a)(2) to (a)(8) may be retained at the aerodrome or operating site.

▼M14

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▼M1

(d) The pilot-in-command shall make available within a reasonable time of being requested to do so by the competent authority, the documentation required to be carried on board.

▼M1

NCO.GEN.140 Transport of dangerous goods

(a) The transport of dangerous goods by air shall be conducted in accordance with Annex 18 to the Chicago Convention as last amended and amplified by the Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Doc 9284-AN/905), including its supplements and any other addenda or corrigenda.

(b) Dangerous goods shall only be transported by the operator approved in accordance with Annex V (Part-SPA), Subpart G, to Regulation (EU) No 965/2012 except when:

(1) they are not subject to the Technical Instructions in accordance with Part 1 of those Instructions; or

(2) they are carried by passengers or the pilot-in-command, or are in baggage, in accordance with Part 8 of the Technical Instructions;

(3) they are carried by operators of ELA2 aircraft.

(c) The pilot-in-command shall take all reasonable measures to prevent dangerous goods from being carried on board inadvertently.

(d) The pilot-in-command shall, in accordance with the Technical Instructions, report without delay to the competent authority and the appropriate authority of the State of occurrence in the event of any dangerous goods accidents or incidents.

(e) The pilot-in-command shall ensure that passengers are provided with information about dangerous goods in accordance with the Technical Instructions.

▼M9

(f) Reasonable quantities of articles and substances that would otherwise be classified as dangerous goods and that are used to facilitate flight safety, where carriage aboard the aircraft is advisable to ensure their timely availability for operational purposes, shall be considered authorised under paragraph 1;2.2.1(a) of the Technical Instructions. This is regardless of whether or not such articles and substances are required to be carried or intended to be used in connection with a particular flight.

The packing and loading on board of the above-mentioned articles and substances shall be performed, under the responsibility of the pilot in command, in such a way as to minimise the risks posed to crew members, passengers, cargo or the aircraft during aircraft operations.

▼M1

NCO.GEN.145 Immediate reaction to a safety problem

The operator shall implement:

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

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

NCO.GEN.150 Journey log

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

▼M1

NCO.GEN.155 Minimum equipment list

(a) An MEL may be established taking into account the following:

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

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

(3) the MEL shall be based on the relevant Master Minimum Equipment List (MMEL), as defined in the data established in accordance with Commission Regulation (EU) No 748/2012 ([1]), and shall not be less restrictive than the MMEL.

(b) The MEL and any amendment thereto shall be notified to the competent authority.

SUBPART B

OPERATIONAL PROCEDURES

NCO.OP.100 Use of aerodromes and operating sites

The pilot-in-command shall only use aerodromes and operating sites that are adequate for the type of aircraft and operation concerned.

▼M21

NCO.OP.101 Altimeter check and settings

(a) The pilot-in-command shall check the proper operation of the altimeter before each departure.

(b) The pilot-in-command shall use appropriate altimeter settings for all phases of flight, taking into account any procedure prescribed by the State of the aerodrome or the State of the airspace.

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NCO.OP.110 Aerodrome operating minima — aeroplanes and helicopters

(a) For instrument flight rules (IFR) flights, the pilot-in-command shall establish aerodrome operating minima for each departure, destination or alternate aerodrome that is planned to be used in order to ensure separation of the aircraft from terrain and obstacles and to mitigate the risk of loss of visual references during the visual flight segment of instrument approach operations.

(b) The aerodrome operating minima shall take the following elements into account, if relevant:

(1) the type, performance, and handling characteristics of the aircraft;

(2) the equipment available on the aircraft for the purpose of navigation, acquisition of visual references, and/or control of the flight path during take-off, approach, landing, and missed approach;

(3) any conditions or limitations stated in the aircraft flight manual (AFM);

(4) the dimensions and characteristics of the runways/final approach and take-off areas (FATOs) that may be selected for use;

([1]) OJ L 224, 21.8.2012, p. 1.

▼**M21**

(5) the adequacy and performance of the available visual and non-visual aids and infrastructure;

(6) the obstacle clearance altitude/height (OCA/H) for the instrument approach procedures (IAPs), if established;

(7) the obstacles in the climb-out areas and clearance margins;

(8) the competence and relevant operational experience of the pilot-in-command;

(9) the IAP, if established;

(10) the aerodrome characteristics and the type of air navigation services (ANS) available, if any;

(11) any minima that may be promulgated by the State of the aerodrome;

(12) the conditions prescribed in any specific approvals for low-visibility operations (LVOs) or operations with operational credits.

NCO.OP.111 Aerodrome operating minima — 2D and 3D approach operations

(a) The decision height (DH) to be used for a 3D approach operation or a 2D approach operation flown with the continuous descent final approach (CDFA) technique shall not be lower than the highest of:

(1) the obstacle clearance height (OCH) for the category of aircraft;

(2) the published approach procedure DH or minimum descent height (MDH), where applicable;

(3) the system minimum specified in Table 1;

(4) the minimum DH specified in the AFM or equivalent document, if stated.

(b) The MDH for a 2D approach operation flown without the CDFA technique shall not be lower than the highest of:

(1) the OCH for the category of aircraft;

(2) the published approach procedure MDH, where applicable;

(3) the system minimum specified in Table 1; or

(4) the minimum MDH specified in the AFM, if stated.

▼**M21**

Table 1

System minima

Facility	Lowest DH/MDH (ft)
ILS/MLS/ GLS	200
GNSS/SBAS (LPV)	200
Precision approach radar (PAR)	200
GNSS/SBAS (LP)	250
GNSS (LNAV)	250
GNSS/Baro-VNAV (LNAV/VNAV)	250
Helicopter point-in-space approach	250
LOC with or without DME	250
SRA (terminating at ½ NM)	250
SRA (terminating at 1 NM)	300
SRA (terminating at 2 NM or more)	350
VOR	300
VOR/DME	250
NDB	350
NDB/DME	300
VDF	350

NCO.OP.112 Aerodrome operating minima — circling operations with aeroplanes

(a) The MDH for a circling approach operation with aeroplanes shall not be lower than the highest of:

(1) the published circling OCH for the aeroplane category;

(2) the minimum circling height derived from Table 1; or

(3) the DH/MDH of the preceding IAP.

▼M21

(b) The minimum visibility for a circling approach operation with aeroplanes shall be the highest of:

(1) the circling visibility for the aeroplane category, if published; or

(2) the minimum visibility derived from Table 1'.

Table 1

MDH and minimum visibility for circling per aeroplane category

	Aeroplane category			
	A	B	C	D
MDH (ft)	400	500	600	700
Minimum VIS (m)	1 500	1 500	2 400	3 600

▼M1

NCO.OP.113 ►M4 Aerodrome operating minima — onshore circling operations with helicopters ◄

The MDH for an onshore circling operation with helicopters shall not be lower than 250 ft and the meteorological visibility not less than 800 m.

NCO.OP.115 Departure and approach procedures — aeroplanes and helicopters

(a) The pilot-in-command shall use the departure and approach procedures established by the State of the aerodrome, if such procedures have been published for the runway or FATO to be used.

(b) The pilot-in-command may deviate from a published departure route, arrival route or approach procedure:

(1) provided obstacle clearance criteria can be observed, full account is taken of the operating conditions and any ATC clearance is adhered to; or

(2) when being radar-vectored by an ATC unit.

▼M9

NCO.OP.116 Performance-based navigation — aeroplanes and helicopters

The pilot-in-command shall ensure that, when PBN is required for the route or procedure to be flown:

(a) the relevant PBN navigation specification is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; and

(b) the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document mentioned above.

▼M32

NCO.OP.120 Noise abatement procedures

▼M1

The pilot-in-command shall take into account published noise abatement procedures to minimise the effect of aircraft noise while ensuring that safety has priority over noise abatement.

▼M11

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▼M32

NCO.OP.125 Fuel/energy and oil supply

▼M20

(a) The pilot-in-command shall ensure that the quantity of fuel/energy and oil that is carried on board is sufficient, taking into account the meteorological conditions, any element affecting the performance of the aircraft, any delays that are expected in flight, and any contingencies that may reasonably be expected to affect the flight.

(b) The pilot-in-command shall plan a quantity of fuel/energy to be protected as final reserve fuel/energy to ensure a safe landing. The pilot-in-command shall take into account all of the following, and in the following order of priority, to determine the quantity of the final reserve fuel/energy:

(1) the severity of the hazard to persons or property that may result from an emergency landing after fuel/energy starvation; and

(2) the likelihood of unexpected circumstances that the final reserve fuel/energy may no longer be protected.

(c) The pilot-in-command shall commence a flight only if the aircraft carries sufficient fuel/energy and oil:

(1) when no destination alternate is required, to fly to the aerodrome or operating site of intended landing, plus the final reserve fuel/energy; or

(2) when a destination alternate is required, to fly to the aerodrome or operating site of intended landing, and thereafter, to an alternate aerodrome, plus the final reserve fuel/energy.

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▼M1

NCO.OP.130 Passenger briefing

The pilot-in-command shall ensure that before or, where appropriate, during the flight, passengers are given a briefing on emergency equipment and procedures.

NCO.OP.135 Flight preparation

▼M9

(a) Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the space-based facilities, ground and/or water facilities, including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.

▼M21

(b) Before commencing a flight, the pilot-in-command shall be familiar with all available meteorological information appropriate to the intended flight. Preparation for a flight away from the vicinity of the place of departure, and for every flight under IFR, shall include:

(1) a study of the available current meteorological reports and forecasts; and

(2) the planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of meteorological conditions.

NCO.OP.140 Destination alternate aerodromes — aeroplanes

For IFR flights, the pilot-in-command shall specify at least one destination alternate aerodrome in the flight plan, unless the available current meteorological information for the destination indicates, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period, a ceiling of at least 1 000 ft above the DH/MDH for an available instrument approach procedure (IAP) and a visibility of at least 5 000 m.

NCO.OP.141 Destination alternate aerodromes — helicopters

For IFR flights, the pilot-in-command shall specify at least one destination alternate aerodrome in the flight plan, unless the available current meteorological information for the destination indicates, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period, a ceiling of at least 1 000 ft above the DH/MDH for an available IAP and a visibility of at least 3 000 m.

NCO.OP.142 Destination alternate aerodromes — instrument approach operations

The pilot-in-command shall only select an aerodrome as a destination alternate aerodrome if either:

(a) an IAP that does not rely on GNSS is available either at the destination aerodrome or at a destination alternate aerodrome, or

(b) all of the following conditions are met:

(1) the onboard GNSS equipment is SBAS-capable;

(2) the destination aerodrome, any destination alternate aerodrome, and the route between them are within SBAS service area;

(3) ABAS is predicted to be available in the event of the unexpected unavailability of SBAS;

(4) an IAP is selected (either at destination or destination alternate aerodrome) that does not rely on the availability of SBAS;

(5) an appropriate contingency action allows the flight to be completed safely in the event of unavailability of GNSS.

NCO.OP.143 Destination alternate aerodromes planning minima — aeroplanes

An aerodrome shall not be specified as a destination alternate aerodrome unless the available current meteorological information indicates, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period:

(a) for an alternate aerodrome with an available instrument approach operation with DH less than 250 ft,

▼M21

(1) a ceiling of at least 200 ft above the decision height (DH) or minimum descent height (MDH) associated with the instrument approach operation; and

(2) a visibility of at least 1 500 m; or

(b) for an alternate aerodrome with an instrument approach operation with DH or MDH 250 ft or more,

(1) a ceiling of at least 400 ft above the DH or MDH associated with the instrument approach operation; and

(2) a visibility of at least 3 000 m; or

(c) for an alternate aerodrome without an IAP,

(1) a ceiling of at least the higher of 2 000 ft and the minimum safe IFR height; and

(2) a visibility of at least 5 000 m.

NCO.OP.144 Destination alternate aerodromes planning minima — helicopters

An aerodrome shall not be specified as a destination alternate aerodrome unless the available current meteorological information indicates, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period,

(a) for an alternate aerodrome with an IAP:

(1) a ceiling of at least 200 ft above the DH or MDH associated with the IAP; and

(2) a visibility of at least 1 500 m by day or 3 000 m by night; or

(b) for an alternate aerodrome without an IAP:

(1) a ceiling of at least the higher of 2 000 ft and the minimum safe IFR height; and

(2) a visibility of at least 1 500 m by day or 3 000 m by night.

▼M1

NCO.OP.145 Refuelling with passengers embarking, on board or disembarking

(a) The aircraft shall not be refuelled with aviation gasoline (AVGAS) or wide-cut type fuel or a mixture of these types of fuel, when passengers are embarking, on board or disembarking.

▼M20

(b) For all other types of fuel/energy, the aircraft shall not be refuelled when passengers are embarking, on board or disembarking, unless it is attended by the pilot-in-command or other qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

NCO.OP.147 Refuelling with engine(s)and/or rotors turning – helicopters

Refuelling with engine(s) and/or rotors turning shall only be conducted if all those conditions are met simultaneously:

(a) if it is not practical to shut down or restart the engine;

(b) in accordance with any specific procedures and limitations in the aircraft flight manual (AFM);

▼M20

(c) with JET A or JET A-1 fuel types;

(d) with no passengers or task specialists on board, embarking or disembarking;

(e) if the operator of the aerodrome or operating site allows such operations;

(f) in the presence of the appropriate rescue and firefighting (RFF) facilities or equipment; and

(g) in accordance with a checklist that shall contain:

(1) normal and contingency procedures;

(2) the required equipment;

(3) any limitations; and

(4) responsibilities and duties of the pilot-in-command and, if applicable, crew members and task specialists.

▼M11

NCO.OP.150 Carriage of passengers

The pilot-in-command shall ensure that, prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety, each passenger on board occupies a seat or berth and has his/her safety belt or restraint device properly secured.

▼M32

NCO.OP.155 Smoking on board

▼M1

The pilot-in-command shall not allow smoking on board:

(a) whenever considered necessary in the interest of safety; and

(b) during refuelling of the aircraft.

▼M14

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▼M1

NCO.OP.160 Meteorological conditions

▼M21

(a) The pilot-in-command shall only commence or continue a VFR flight if the latest available meteorological information indicates that the meteorological conditions along the route and at the intended destination at the estimated time of use will be at or above the applicable VFR operating minima.

(b) The pilot-in-command shall only commence or continue an IFR flight towards the planned destination aerodrome if the latest available meteorological information indicates that, at the estimated time of arrival, the meteorological conditions at the destination or at least one destination alternate aerodrome are at or above the applicable aerodrome operating minima.

▼M1

(c) If a flight contains VFR and IFR segments, the meteorological information referred to in (a) and (b) shall be applicable as far as relevant.

NCO.OP.165 Ice and other contaminants — ground procedures

The pilot-in-command shall only commence take-off if the aircraft is clear of any deposit that might adversely affect the performance or controllability of the aircraft, except as permitted in the AFM.

▼M1

NCO.OP.170 Ice and other contaminants — flight procedures

(a) The pilot-in-command shall only commence a flight or intentionally fly into expected or actual icing conditions if the aircraft is certified and equipped to cope with such conditions as referred to in 2.a.5 of Annex IV to Regulation (EC) No 216/2008.

(b) If icing exceeds the intensity of icing for which the aircraft is certified or if an aircraft not certified for flight in known icing conditions encounters icing, the pilot-in-command shall exit the icing conditions without delay, by a change of level and/or route, and if necessary by declaring an emergency to ATC.

▼M32

NCO.OP.175 Take-off conditions

▼M21

Before commencing take-off, the pilot-in-command shall be satisfied that:

(a) according to the information available, the meteorological conditions at the aerodrome or the operating site and the condition of the runway/FATO intended to be used will not prevent a safe take-off and departure; and

(b) the selected aerodrome operating minima are consistent with all of the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) flight crew qualifications.

▼M11

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▼M1

NCO.OP.180 Simulated situations in flight

(a) The pilot-in-command shall, when carrying passengers or cargo, not simulate:

(1) situations that require the application of abnormal or emergency procedures; or

(2) flight in instrument meteorological conditions (IMC).

▼M14

(b) Notwithstanding (a), when training flights are conducted by a training organisation referred to in Article 10a of Commission Regulation (EU) No 1178/2011, such situations may be simulated with student pilots on board.

▼M20

NCO.OP.185 In-flight fuel/energy management

(a) The pilot-in-command shall monitor the amount of usable fuel/energy remaining on board to ensure that it is protected and not less than the fuel/energy that is required to proceed to an aerodrome or operating site where a safe landing can be made.

▼M20

(b) The pilot-in-command of a controlled flight shall advise air traffic control (ATC) of a 'minimum fuel/energy' state by declaring 'MINIMUM FUEL' when the pilot-in-command has:

(1) committed to land at a specific aerodrome or operating site; and

(2) calculated that any change to the existing clearance to that aerodrome or operating site, or other air traffic delays, may result in landing with less than the planned final reserve fuel/energy.

(c) The pilot-in-command of a controlled flight shall declare a situation of 'fuel/energy emergency' by broadcasting 'MAYDAY MAYDAY MAYDAY FUEL' when the usable fuel/energy estimated to be available upon landing at the nearest aerodrome or operating site where a safe landing can be made is less than the planned final reserve fuel/energy.

▼M9

NCO.OP.190 Use of supplemental oxygen

(a) The pilot-in-command shall ensure that all flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen continuously whenever he/she determines that at the altitude of the intended flight the lack of oxygen might result in impairment of the faculties of crew members, and shall ensure that supplemental oxygen is available to passengers when lack of oxygen might harmfully affect passengers.

(b) In any other case when the pilot-in-command cannot determine how the lack of oxygen might affect all occupants on board, he/she shall ensure that:

(1) all crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen for any period in excess of 30 minutes when the pressure altitude in the the passenger compartment will be between 10 000 ft and 13 000 ft; and

(2) all occupants use supplemental oxygen for any period that the pressure altitude in the the passenger compartment will be above 13 000 ft.

▼M1

NCO.OP.195 Ground proximity detection

When undue proximity to the ground is detected by the pilot-in-command or by a ground proximity warning system, the pilot-in-command shall take corrective action immediately in order to establish safe flight conditions.

NCO.OP.200 Airborne collision avoidance system (ACAS II)

When ACAS II is used, operational procedures and training shall be in accordance with Regulation (EU) No 1332/2011.

▼M21

NCO.OP.205 Approach and landing conditions — aeroplanes

Before commencing an approach to land, the pilot-in-command shall be satisfied that:

(a) according to the information available, the meteorological conditions at the aerodrome or the operating site, and the condition of the runway intended to be used will not prevent a safe approach, landing, or missed approach; and

(b) the selected aerodrome operating minima are consistent with all of the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance, and

(4) flight crew qualifications.

NCO.OP.206 Approach and landing conditions — helicopters

Before commencing an approach to land, the pilot-in-command shall be satisfied that:

(a) according to the information available, the meteorological conditions at the aerodrome or the operating site and the condition of the final approach and take-off area (FATO) intended to be used will not prevent a safe approach, landing or missed approach; and

(b) the selected aerodrome operating minima are consistent with all of the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) flight crew qualifications.

▼M32

NCO.OP.207 Approach and landing conditions – gyroplanes

Before commencing an approach to land, the pilot-in-command shall be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the runway intended to be used do not prevent a safe approach, landing or missed approach.

▼M21

NCO.OP.210 Commencement and continuation of approach — aeroplanes and helicopters

(a) If the controlling RVR for the runway to be used for landing is less than 550 m (or any lower value established in accordance with an approval under SPA.LVO), then an instrument approach operation shall not be continued:

(1) past a point at which the aircraft is 1 000 ft above the aerodrome elevation; or

(2) into the final approach segment if the DH or MDH is higher than 1 000 ft.

(b) If the required visual reference is not established, a missed approach shall be executed at or before the DA/H or the MDA/H.

(c) If the required visual reference is not maintained after DA/H or MDA/H, a go-around shall be executed promptly.

▼M11

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▼M9

NCO.OP.220 Airborne collision avoidance system (ACAS II)

When ACAS II is used, pilot-in-command shall apply the appropriate operational procedures and be adequately trained.

▼M1

SUBPART C

AIRCRAFT PERFORMANCE AND OPERATING LIMITATIONS

NCO.POL.100 Operating limitations — all aircraft

▼M11

(a) During any phase of operation, the loading, the mass and the centre of gravity (CG) position of the aircraft shall comply with any limitation specified in the AFM or equivalent document.

▼M1

(b) Placards, listings, instrument markings, or combinations thereof, containing those operating limitations prescribed by the AFM for visual presentation, shall be displayed in the aircraft.

▼M11

NCO.POL.105 Weighing

(a) The operator shall ensure that the mass and the CG of the aircraft have been established by actual weighing prior to the initial entry into service of the aircraft. The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented. Such information shall be made available to the pilot-in-command. The aircraft shall be reweighed if the effect of modifications on the mass and balance is not accurately known.

▼M14

(b) The weighing shall be accomplished by the manufacturer of the aircraft or by an approved maintenance organisation.

▼M1

NCO.POL.110 Performance — general

The pilot-in-command shall only operate the aircraft if the performance is adequate to comply with the applicable rules of the air and any other restrictions applicable to the flight, the airspace or the aerodromes or operating sites used, taking into account the charting accuracy of any charts and maps used.

SUBPART D

INSTRUMENTS, DATA AND EQUIPMENT

SECTION 1

Aeroplanes

NCO.IDE.A.100 Instruments and equipment — general

(a) Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements if they are:

(1) used by the flight crew to control the flight path;

▼M1

(2) used to comply with NCO.IDE.A.190;

(3) used to comply with NCO.IDE.A.195; or

(4) installed in the aeroplane.

▼M15

(b) The following items, when required under this Subpart, do not need an equipment approval:

(1) spare fuses;

(2) independent portable lights;

(3) an accurate time piece;

(4) first-aid kit;

(5) survival and signalling equipment;

(6) sea anchor and equipment for mooring;

(7) child restraint device;

(8) a simple PCDS used by a task specialist as a restraint device.

(c) Instruments and equipment not required under Annex VII (Part-NCO) as well as any other equipment that is not required under this Regulation, but is carried on a flight, shall comply with the following requirements:

(1) the information provided by those instruments or equipment shall not be used by the flight crew members to comply with Annex II to Regulation (EU) 2018/1139 or points NCO.IDE.A.190 and NCO.IDE.A.195 of Annex VII;

(2) the instruments and equipment shall not affect the airworthiness of the aeroplane, even in the case of failures or malfunction.

▼M1

(d) Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.

(e) All required emergency equipment shall be easily accessible for immediate use.

NCO.IDE.A.105 Minimum equipment for flight

A flight shall not be commenced when any of the aeroplane instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

(a) the aeroplane is operated in accordance with the MEL, if established; or

(b) the aeroplane is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

NCO.IDE.A.110 Spare electrical fuses

Aeroplanes shall be equipped with spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are allowed to be replaced in flight.

NCO.IDE.A.115 Operating lights

Aeroplanes operated at night shall be equipped with:

▼M1

(a) an anti-collision light system;

(b) navigation/position lights;

(c) a landing light;

(d) lighting supplied from the aeroplane's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aeroplane;

(e) lighting supplied from the aeroplane's electrical system to provide illumination in all passenger compartments;

(f) an independent portable light for each crew member station; and

(g) lights to conform with the International Regulations for Preventing Collisions at Sea if the aeroplane is operated as a seaplane.

NCO.IDE.A.120 Operations under VFR — flight and navigational instruments and associated equipment

(a) Aeroplanes operated under VFR by day shall be equipped with a means of measuring and displaying the following:

(1) magnetic heading;

(2) time, in hours, minutes and seconds;

▼M15

(3) barometric altitude;

▼M1

(4) indicated airspeed; and

(5) Mach number, whenever speed limitations are expressed in terms of Mach number.

(b) Aeroplanes operated under visual meteorological conditions (VMC) at night, or in conditions where the aeroplane cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a), equipped with:

(1) a means of measuring and displaying the following:

(i) turn and slip;

(ii) attitude;

(iii) vertical speed; and

(iv) stabilised heading;

and

(2) a means of indicating when the supply of power to the gyroscopic instruments is not adequate.

(c) Aeroplanes operated in conditions where they cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a) and (b), equipped with a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

▼M1

NCO.IDE.A.125 Operations under IFR — flight and navigational instruments and associated equipment

Aeroplanes operated under IFR shall be equipped with:

(a) a means of measuring and displaying the following:

(1) magnetic heading;

(2) time in hours, minutes and seconds;

▼M15

(3) barometric altitude;

▼M1

(4) indicated airspeed;

(5) vertical speed;

(6) turn and slip;

(7) attitude;

(8) stabilised heading;

(9) outside air temperature; and

(10) Mach number, whenever speed limitations are expressed in terms of Mach number;

(b) a means of indicating when the supply of power to the gyroscopic instruments is not adequate; and

(c) a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

NCO.IDE.A.130 Terrain awareness warning system (TAWS)

Turbine-powered aeroplanes certified for a maximum passenger seating configuration of more than nine shall be equipped with a TAWS that meets the requirements for:

(a) class A equipment, as specified in an acceptable standard, in the case of aeroplanes for which the individual certificate of airworthiness (CofA) was first issued after 1 January 2011; or

(b) class B equipment, as specified in an acceptable standard, in the case of aeroplanes for which the individual CofA was first issued on or before 1 January 2011.

NCO.IDE.A.135 Flight crew interphone system

Aeroplanes operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

NCO.IDE.A.140 Seats, seat safety belts, restraint systems and child restraint devices

(a) Aeroplanes shall be equipped with:

(1) a seat or berth for each person on board who is aged 24 months or more;

▼M15

(2) a seat belt on each seat and restraining belts for each berth;

▼M1

(3) a child restraint device (CRD) for each person on board younger than 24 months; and

▼M9

(4) a seat belt with upper torso restraint system on each flight crew seat, having a single point release for aeroplanes having a CofA first issued on or after 25 August 2016.

▼M1

NCO.IDE.A.145 First-aid kit

(a) Aeroplanes shall be equipped with a first-aid kit.

(b) The first-aid kit shall be:

(1) readily accessible for use; and

(2) kept up-to-date.

NCO.IDE.A.150 Supplemental oxygen — pressurised aeroplanes

(a) Pressurised aeroplanes operated at flight altitudes for which the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

(b) Pressurised aeroplanes operated above flight altitudes at which the pressure altitude in the passenger compartments is above 10 000 ft shall carry enough breathing oxygen to supply:

(1) all crew members and:

(i) 100 % of the passengers for any period when the cabin pressure altitude exceeds 15 000 ft, but in no case less than 10 minutes' supply;

(ii) at least 30 % of the passengers, for any period when, in the event of loss of pressurisation and taking into account the circumstances of the flight, the pressure altitude in the passenger compartment will be between 14 000 ft and 15 000 ft; and

(iii) at least 10 % of the passengers for any period in excess of 30 minutes when the pressure altitude in the passenger compartment will be between 10 000 ft and 14 000 ft;

and

(2) all the occupants of the passenger compartment for no less than 10 minutes, in the case of aeroplanes operated at pressure altitudes above 25 000 ft, or operated below that altitude but under conditions that will not allow them to descend safely to a pressure altitude of 13 000 ft within 4 minutes.

(c) Pressurised aeroplanes operated at flight altitudes above 25 000 ft shall, in addition, be equipped with a device to provide a warning indication to the flight crew of any loss of pressurisation.

▼M9

NCO.IDE.A.155 Supplemental oxygen — non-pressurised aeroplanes

Non-pressurised aeroplanes operated when an oxygen supply is required in accordance with NCO.OP.190 shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

▼M1

NCO.IDE.A.160 Hand fire extinguishers

▼M14

(a) Aeroplanes, except ELA1 aeroplanes, shall be equipped with at least one hand fire extinguisher:

(1) in the flight crew compartment; and

(2) in each passenger compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

▼M1

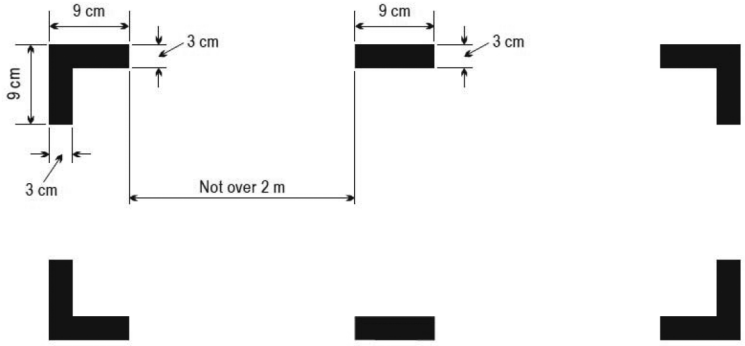
(b) The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

NCO.IDE.A.165 Marking of break-in points

If areas of the aeroplane's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.

Figure 1

Marking of break-in points



NCO.IDE.A.170 Emergency locator transmitter (ELT)

(a) Aeroplanes shall be equipped with:

(1) an ELT of any type, when first issued with an individual CofA on or before 1 July 2008;

(2) an automatic ELT, when first issued with an individual CofA after 1 July 2008; or

(3) a survival ELT (ELT(S)) or a personal locator beacon (PLB), carried by a crew member or a passenger, when certified for a maximum passenger seating configuration of six or less.

(b) ELTs of any type and PLBs shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

NCO.IDE.A.175 Flight over water

(a) The following aeroplanes shall be equipped with a life-jacket for each person on board, or equivalent individual floatation device for each person on board younger than 24 months, that shall be worn or stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided:

(1) single-engined landplanes when:

▼M1

(i) flying over water beyond gliding distance from land; or

(ii) taking off or landing at an aerodrome or operating site where, in the opinion of the pilot-in-command, the take-off or approach path is so disposed over water that there would be a likelihood of a ditching;

(2) seaplanes operated over water; and

(3) aeroplanes operated at a distance away from land where an emergency landing is possible greater than that corresponding to 30 minutes at normal cruising speed or 50 NM, whichever is less.

(b) Seaplanes operated over water shall be equipped with:

(1) one anchor;

(2) one sea anchor (drogue), when necessary to assist in manoeuvring; and

(3) equipment for making the sound signals, as prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

(c) The pilot-in-command of an aeroplane operated at a distance away from land where an emergency landing is possible greater than that corresponding to 30 minutes at normal cruising speed or 50 NM, whichever is the lesser, shall determine the risks to survival of the occupants of the aeroplane in the event of a ditching, based on which he/she shall determine the carriage of:

(1) equipment for making the distress signals;

(2) life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency; and

(3) life-saving equipment, to provide the means of sustaining life, as appropriate to the flight to be undertaken.

NCO.IDE.A.180 Survival equipment

Aeroplanes operated over areas in which search and rescue would be especially difficult shall be equipped with such signalling devices and life-saving equipment, including means of sustaining life, as may be appropriate to the area overflown.

NCO.IDE.A.190 Radio communication equipment

(a) Where required by the airspace being flown aeroplanes shall be equipped with radio communication equipment capable of conducting two-way communication with those aeronautical stations and on those frequencies to meet airspace requirements.

(b) Radio communication equipment, if required by (a), shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

(c) When more than one communication equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

NCO.IDE.A.195 Navigation equipment

(a) Aeroplanes operated over routes that cannot be navigated by reference to visual landmarks shall be equipped with any navigation equipment necessary to enable them to proceed in accordance with:

▼M1

(1) the ATS flight plan; if applicable; and

(2) the applicable airspace requirements.

(b) Aeroplanes shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with (a), or an appropriate contingency action, to be completed safely.

(c) Aeroplanes operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed. This equipment shall be capable of providing such guidance for each aerodrome at t which it is intended to land in IMC and for any designated alternate aerodromes.

▼M9

(d) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

▼M15

(e) Aeroplanes shall be equipped with surveillance equipment in accordance with the applicable airspace requirements.

▼M1

NCO.IDE.A.200 Transponder

Where required by the airspace being flown, aeroplanes shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

▼M9

NCO.IDE.A.205 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The pilot-in-command shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to the aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the pilot-in-command shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to a flight.

In such cases, the pilot-in-command shall not use the affected data.

▼M32

SECTION 2

Rotorcraft

▼M1

NCO.IDE.H.100 Instruments and equipment — general

(a) Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements if they are:

(1) used by the flight crew to control the flight path;

(2) used to comply with NCO.IDE.H.190;

(3) used to comply with NCO.IDE.H.195; or

(4) installed in the ►M32 rotorcraft ◄.

▼M15

(b) The following items, when required under this Subpart, do not need an equipment approval:

(1) independent portable lights;

(2) an accurate time piece;

(3) first-aid kit;

(4) survival and signalling equipment;

(5) sea anchor and equipment for mooring;

(6) child restraint device;

(7) a simple PCDS used by a task specialist as a restraint device.

(c) Instruments and equipment or accessories not required under Annex VII (Part-NCO), as well as any other equipment that is not required under this Regulation, but carried on a flight, shall comply with the following requirements:

(1) the information provided by those instruments, equipment or accessories shall not be used by the flight crew members to comply with Annex II to Regulation (EU) 2018/1139 or points NCO.IDE.H.190 and NCO.IDE.H.195 of Annex VII;

(2) the instruments and equipment or accessories shall not affect the airworthiness of the ►M32 rotorcraft ◄, even in the case of failures or malfunction.

▼M1

(d) Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.

(e) All required emergency equipment shall be easily accessible for immediate use.

▼M32

NCO.IDE.H.105 Minimum equipment for flight

A flight shall not be commenced when any of the rotorcraft's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

(a) the rotorcraft is operated in accordance with the MEL, if established; or

(b) the rotorcraft is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

NCO.IDE.H.115 Operating lights

Rotorcraft operated at night shall be equipped with:

(a) an anti-collision light system;

(b) navigation/position lights;

(c) a landing light;

(d) lighting supplied from the rotorcraft's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the rotorcraft;

(e) lighting supplied from the rotorcraft's electrical system to provide illumination in all passenger compartments;

(f) an independent portable light for each crew member station; and

(g) lights to conform with the International Regulations for Preventing Collisions at Sea if the rotorcraft is amphibious.

▼M1

NCO.IDE.H.120 Operations under VFR — flight and navigational instruments and associated equipment

(a) ►M32 Rotorcraft ◄ operated under VFR by day shall be equipped with a means of measuring and displaying the following:

(1) magnetic heading;

(2) time in hours, minutes and seconds;

▼M15

(3) barometric altitude;

▼M1

(4) indicated airspeed; and

(5) slip.

▼M32

(b) Rotorcraft operated under VMC at night, or when the visibility is less than 1 500 m, or in conditions where the rotorcraft cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a), equipped with:

▼M1

(1) a means of measuring and displaying the following:

(i) attitude;

(ii) vertical speed; and

(iii) stabilised heading; and

(2) a means of indicating when the supply of power to the gyroscopic instruments is not adequate.

▼M32

(c) Rotorcraft operated when the visibility is less than 1 500 m, or in conditions where the rotorcraft cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a) and (b), equipped with a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

▼M1

NCO.IDE.H.125 Operations under IFR — flight and navigational instruments and associated equipment

Helicopters operated under IFR shall be equipped with:

(a) a means of measuring and displaying the following:

(1) magnetic heading;

(2) time in hours, minutes and seconds;

▼M15

(3) barometric altitude;

▼M1

(4) indicated airspeed;

(5) vertical speed;

(6) slip;

(7) attitude;

(8) stabilised heading; and

(9) outside air temperature;

▼M1

(b) a means of indicating when the supply of power to the gyroscopic instruments is not adequate;

(c) a means of preventing malfunction of the airspeed indicating system required by (a)(4) due to condensation or icing; and

(d) an additional means of measuring and displaying attitude as a standby instrument.

NCO.IDE.H.126 Additional equipment for single pilot operations under IFR

Helicopters operated under IFR with a single pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

NCO.IDE.H.135 Flight crew interphone system

►M32 Rotorcraft ◄ operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

▼M32

NCO.IDE.H.140 Seats, seat safety belts, restraint systems and child restraint devices

(a) Rotorcraft shall be equipped with:

(1) a seat or berth for each person on board that is aged 24 months or older, or a station for each crew member or task specialist on board;

(2) a seat belt on each passenger seat and restraining belts for each berth, and restraint devices for each station;

(3) for rotorcraft first issued with an individual CofA after 31 December 2012, a seat belt with an upper-torso restraint system for each passenger that is aged 24 months or older;

(4) a child restraint device for each person on board younger than 24 months; and

(5) a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration on each flight crew seat.

(b) A seat belt with upper torso restraint system shall have a single point release.

▼M1

NCO.IDE.H.145 First-aid kit

(a) ►M32 Rotorcraft ◄ shall be equipped with a first-aid kit.

(b) The first-aid kit shall be:

(1) readily accessible for use; and

(2) kept up-to-date.

▼M32

NCO.IDE.H.155 Supplemental oxygen – non-pressurised rotorcraft

Non-pressurised rotorcraft operated when an oxygen supply is required in accordance with NCO.OP.190 shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

▼M1

NCO.IDE.H.160 Hand fire extinguishers

▼M32

(a) Rotorcraft, except ELA2 helicopters, shall be equipped with at least one hand fire extinguisher:

▼M1

(1) in the flight crew compartment; and

(2) in each passenger compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

(b) The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

NCO.IDE.H.165 Marking of break-in points

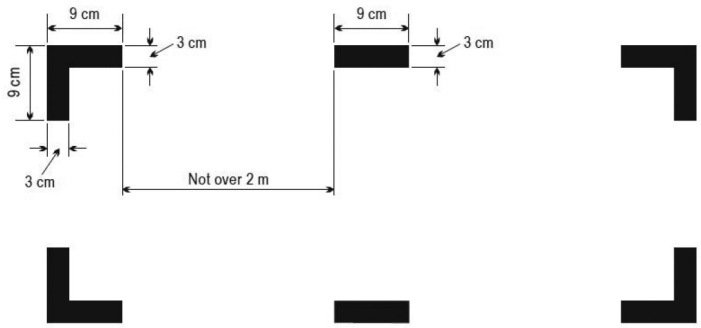
▼M32

If areas of the rotorcraft's fuselage suitable for breaking in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.

▼M1

Figure 1

Marking of break-in points



▼M32

NCO.IDE.H.170 Emergency locator transmitter (ELT)

(a) Rotorcraft certified for a maximum operational passenger seating configuration above six shall be equipped with:

(1) an automatic ELT; and

(2) one survival ELT (ELT(S)) in a life-raft or lifejacket when the rotorcraft is operated at a distance from land corresponding to more than 3 minutes flying time at normal cruising speed.

(b) Rotorcraft certified for a maximum operational passenger seating configuration of six or less shall be equipped with an ELT(S) or a personal locator beacon (PLB), carried by a crew member or a passenger, or with an automatic ELT.

(c) ELTs of any type and PLBs shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

NCO.IDE.H.175 Flight over water

(a) Rotorcraft shall be equipped with a lifejacket for each person on board or equivalent individual flotation device for each person on board younger than 24 months, which shall be worn or stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided, when:

(1) flying over water beyond autorotational distance from land where, in case of the critical engine failure, the rotorcraft is not able to sustain level flight; or

(2) flying over water beyond gliding distance from land where, in case of critical engine failure, the gyroplane is not able to sustain level flight; or

▼M32

(3) flying over water at a distance of land corresponding to more than 10 minutes flying at normal cruising speed, where, in case of the critical engine failure, the rotorcraft is able to sustain level flight; or

(4) taking off or landing at an aerodrome/operating site where the take-off or approach path is over water.

(b) Each life-jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

(c) The pilot-in-command of a rotorcraft operated on a flight over water at a distance from land corresponding to more than 30 minutes flying time at normal cruising speed or 50 NM, whichever is less, shall determine the risks to survival of the occupants of the rotorcraft in the event of a ditching, based on which he or she shall determine the carriage of:

(1) equipment for making the distress signals;

(2) life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency; and

(3) life-saving equipment, to provide the means of sustaining life, as appropriate to the flight to be undertaken.

(d) The pilot-in-command shall determine the risks to survival of the occupants of the rotorcraft in the event of a ditching, when deciding if the life-jackets required in point (a) shall be worn by all occupants.

▼M1

NCO.IDE.H.180 Survival equipment

►M32 Rotorcraft ◄, operated over areas in which search and rescue would be especially difficult, shall be equipped with such signalling devices and life-saving equipment, including means of sustaining life, as may be appropriate to the area overflown.

▼M32

NCO.IDE.H.185 All rotorcraft on flights over water – ditching

Rotorcraft flying over water in a hostile environment beyond a distance of 50 NM from land shall be either of the following:

(a) designed for landing on water in accordance with the relevant certification specifications;

(b) certified for ditching in accordance with the relevant certification specifications;

(c) fitted with emergency flotation equipment.

NCO.IDE.H.190 Radio communication equipment

(a) Where required by the airspace being flown, rotorcraft shall be equipped with radio communication equipment capable of conducting two-way communication with those aeronautical stations and on those frequencies to meet airspace requirements.

(b) Radio communication equipment, if required by (a), shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

▼M32

(c) When more than one communication equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

(d) When a radio communication system is required, and in addition to the flight crew interphone system required in NCO.IDE.H.135, rotorcraft shall be equipped with a transmit button on the flight controls for each required pilot and/or crew member at his or her working station.

▼M1

NCO.IDE.H.195 Navigation equipment

(a) Helicopters operated over routes that cannot be navigated by reference to visual landmarks shall be equipped with navigation equipment that will enable them to proceed in accordance with:

(1) the ATS flight plan, if applicable; and

(2) the applicable airspace requirements.

(b) Helicopters shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with (a), or an appropriate contingency action, to be completed safely.

(c) Helicopters operated on flights in which it is intended to land in IMC shall be equipped with navigation equipment capable of providing guidance to a point from which a visual landing can be performed. This equipment shall be capable of providing such guidance for each aerodrome at which is intended to land in IMC and for any designated alternate aerodromes.

▼M9

(d) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

▼M15

(e) Helicopters shall be equipped with surveillance equipment in accordance with the applicable airspace requirements.

▼M1

NCO.IDE.H.200 Transponder

Where required by the airspace being flown, ►M32 rotorcraft ◄ shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

▼M9

NCO.IDE.H.205 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to the aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the pilot-in-command shall not use the affected data.

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▼M11

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▼M4

SUBPART E

SPECIFIC REQUIREMENTS

SECTION 1

General

▼M5

NCO.SPEC.100 Scope

This subpart establishes specific requirements to be followed by a pilot-in-command conducting non-commercial specialised operations with other-than complex motor-powered aircraft.

▼M4

NCO.SPEC.105 Checklist

(a) Before commencing a specialised operation, the pilot-in-command shall conduct a risk assessment, assessing the complexity of the activity to determine the hazards and associated risks inherent in the operation and establish mitigating measures.

(b) A specialised operation shall be performed in accordance with a checklist. Based on the risk assessment, the pilot-in-command shall establish such checklist appropriate to the specialised activity and aircraft used, taking account of any section of this subpart.

(c) The checklist that is relevant to the duties of the pilot-in-command, crew members and task specialists shall be readily accessible on each flight.

(d) The checklist shall be regularly reviewed and updated, as appropriate.

NCO.SPEC.110 Pilot-in-command responsibilities and authority

Whenever crew members or task specialists are involved in the operation, the pilot-in-command shall

(a) ensure compliance of crew members and task specialists with NCO.SPEC.115 and NCO.SPEC.120;

(b) not commence a flight if any crew member or task specialist is incapacitated from performing duties by any cause such as injury, sickness, fatigue or the effects of any psychoactive substance;

(c) not continue a flight beyond the nearest weather-permissible aerodrome or operating site when any crew member or task specialist's capacity to perform duties is significantly reduced from causes such as fatigue, sickness or lack of oxygen;

(d) ensure that crew members and task specialists comply with the laws, regulations and procedures of those States where operations are conducted;

(e) ensure that all crew members and task specialists are able to communicate with each other in a common language; and

▼M9

(f) ensure that task specialists and crew members use supplemental oxygen continuously whenever he/she determines that at the altitude of the intended flight the lack of oxygen might result in impairment of the faculties of crew members or harmfully affect task specialists. If the pilot-in-command cannot determine how the lack of oxygen might affect the occupants on board, he/she shall ensure that task specialists and crew members use supplemental oxygen continuously whenever the cabin altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft.

▼M4

NCO.SPEC.115 Crew responsibilities

(a) The crew member shall be responsible for the proper execution of his/her duties. Crew duties shall be specified in the checklist.

▼M11

(b) During critical phases of the flight or whenever deemed necessary by the pilot-in-command in the interest of safety, the crew member shall be restrained at his/her assigned station, unless otherwise specified in the checklist.

▼M4

(c) During flight, the flight crew member shall keep his/her safety belt fastened while at his/her station.

(d) During flight, at least one qualified flight crew member shall remain at the controls of the aircraft at all times.

(e) The crew member shall not undertake duties on an aircraft:

(1) if he/she knows or suspects that he/she is suffering from fatigue as referred to in 7.f. of Annex IV to Regulation (EC) No 216/2008 or feels otherwise unfit to perform his/her duties; or

▼M12

(2) when under the influence of psychoactive substances or for other reasons as referred to in 7.g of Annex IV to Regulation (EC) No 216/2008.

▼M4

(f) The crew member who undertakes duties for more than one operator shall:

(1) maintain his/her individual records regarding flight and duty times and rest periods as referred to in Annex III (Part-ORO), Subpart FTL to Regulation (EU) No 965/2012, if applicable; and

(2) provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements.

(g) The crew member shall report to the pilot-in-command:

(1) any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

(2) any incident that was endangering, or could endanger, the safety of the operation.

▼M4

NCO.SPEC.120 Task specialists responsibilities

(a) The task specialist shall be responsible for the proper execution of his/her duties. Task specialists' duties shall be specified in the checklist.

▼M11

(b) During critical phases of the flight or whenever deemed necessary by the pilot-in-command in the interest of safety, the task specialist shall be restrained at his/her assigned station, unless otherwise specified in the checklist.

▼M4

(c) The task specialist shall ensure that he/she is restrained when carrying out specialised tasks with external doors opened or removed.

(d) The task specialist shall report to the pilot-in-command:

(1) any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

(2) any incident that was endangering, or could endanger, the safety of the operation.

NCO.SPEC.125 Safety briefing

(a) Before take-off, the pilot-in-command shall brief task specialists on:

(1) emergency equipment and procedures;

(2) operational procedures associated with the specialised task before each flight or series of flights

(b) The briefing referred to in (a)(2) may not be required if task specialists have been instructed on the operational procedures before the start of the operating season in that calendar year.

NCO.SPEC.130 Minimum obstacle clearance altitudes — IFR flights

The pilot-in-command shall establish minimum flight altitudes for each flight providing the required terrain clearance for all route segments to be flown in IFR. The minimum flight altitudes shall not be lower than those published by the State overflown.

▼M20

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▼M4

NCO.SPEC.145 Simulated situations in flight

Unless a task specialist is on-board the aircraft for training, the pilot-in-command shall, when carrying task specialists, not simulate:

▼M4

(a) situations that require the application of abnormal or emergency procedures; or

(b) flight in instrument meteorological conditions (IMC).

NCO.SPEC.150 Ground proximity detection

If installed, the ground proximity warning system may be disabled during those specialised tasks, which by their nature require the aircraft to be operated within a distance from the ground below that which would trigger the ground proximity warning system.

NCO.SPEC.155 Airborne collision avoidance system (ACAS II)

Notwithstanding NCO.OP.200, the ACAS II may be disabled during those specialised tasks, which by their nature require the aircraft to be operated within a distance from each other below that which would trigger the ACAS.

NCO.SPEC.160 Release of dangerous goods

The pilot-in-command shall not operate an aircraft over congested areas of cities, towns or settlements or over an open-air assembly of persons when releasing dangerous goods.

NCO.SPEC.165 Carriage and use of weapons

(a) The pilot-in-command shall ensure that, when weapons are carried on a flight for the purpose of a specialised task, these are secured when not in use.

(b) The task specialist using the weapon shall take all necessary measures to prevent the aircraft and persons on board or on the ground from being endangered.

NCO.SPEC.170 Performance and operating criteria — aeroplanes

When operating an aeroplane at a height of less than 150 m (500 ft) above a non-congested area, for operations of aeroplanes that are not able to sustain level flight in the event of a critical engine failure, the pilot-in-command shall have:

(a) established operational procedures to minimise the consequences of an engine failure; and

(b) briefed all crew members and task specialists on board on the procedures to be carried out in the event of a forced landing.

▼M32

NCO.SPEC.172 Performance and operating criteria – gyroplanes

When operating a gyroplane at a height of less than 150 m (500 ft) above a non-congested area, for operations of gyroplanes that are not able to sustain level flight in the event of a critical engine failure, the pilot-in-command shall have:

(a) established operational procedures to minimise the consequences of an engine failure; and

(b) briefed all crew members and task specialists on board on the procedures to be carried out in the event of a forced landing.

▼M4

NCO.SPEC.175 Performance and operating criteria — helicopters

(a) The pilot-in-command may operate an aircraft over congested areas provided that:

(1) the helicopter is certified in category A or B; and

(2) safety measures are established to prevent undue hazard to persons or property on the ground

▼M4

(b) The pilot-in-command shall have:

(1) established operational procedures to minimise the consequences of an engine failure; and

(2) briefed all crew members and task specialists on board on the procedures to be carried out in the event of a forced landing.

(c) The pilot-in-command shall ensure that the mass at take-off, landing or hover shall not exceed the maximum mass specified for:

(1) a hover out of ground effect (HOGE) with all engines operating at the appropriate power rating; or

(2) if conditions prevail that a HOGE is not likely to be established, the helicopter mass shall not exceed the maximum mass specified for a hover in ground effect (HIGE) with all engines operating at the appropriate power rating, provided prevailing conditions allow a hover in ground effect at the maximum specified mass.

SECTION 2

Helicopter external sling load operations (HESLO)

NCO.SPEC.HESLO.100 Checklist

The checklist for HESLO shall contain:

(a) normal, abnormal and emergency procedures;

(b) relevant performance data;

(c) required equipment;

(d) any limitations; and

(e) responsibilities and duties of the pilot-in-command, and, if applicable, crew members and task specialists.

NCO.SPEC.HESLO.105 Specific HESLO equipment

The helicopter shall be equipped with at least:

(a) one cargo safety mirror or alternative means to see the hook(s)/load; and

(b) one load meter, unless there is another method of determining the weight of the load.

NCO.SPEC.HESLO.110 Transportation of dangerous goods

The operator transporting dangerous goods to or from unmanned sites or remote locations shall apply to the competent authority for an exemption from the provisions of the Technical Instructions if they intend not to comply with the requirements of those Instructions.

SECTION 3

Human external cargo operations (HEC)

NCO.SPEC.HEC.100 Checklist

The checklist for HEC shall contain:

(a) normal, abnormal and emergency procedures;

▼M4

(b) relevant performance data;

(c) required equipment;

(d) any limitations; and

(e) responsibilities and duties of the pilot-in-command, and, if applicable, crew members and task specialists.

NCO.SPEC.HEC.105 Specific HEC equipment

(a) The helicopter shall be equipped with:

(1) hoist operations equipment or cargo hook;

(2) one cargo safety mirror or alternative means to see the hook; and

(3) one load meter, unless there is another method of determining the weight of the load.

▼M15

(b) The installation of all hoist and cargo hook equipment other than a simple PCDS, and any subsequent modifications shall have an airworthiness approval appropriate to the intended function.

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SECTION 4

Parachute operations (PAR)

NCO.SPEC.PAR.100 Checklist

The checklist for PAR shall contain:

(a) normal, abnormal and emergency procedures;

(b) relevant performance data;

(c) required equipment;

(d) any limitations; and

(e) responsibilities and duties of the pilot-in-command, and, if applicable, crew members and task specialists.

NCO.SPEC.PAR.105 Carriage of crew members and task specialists

The requirement laid down in NCO.SPEC.120(c) shall not be applicable for task specialists performing parachute jumping.

NCO.SPEC.PAR.110 Seats

Notwithstanding NCO.IDE.A.140(a)(1) and NCO.IDE.H.140(a)(1), the floor of the aircraft may be used as a seat, provided means are available for the task specialist to hold or strap on.

NCO.SPEC.PAR.115 Supplemental oxygen

Notwithstanding NCO.SPEC.110(f), the requirement to use supplemental oxygen shall not be applicable for crew members other than the pilot-in-command and for task specialists carrying out duties essential to the specialised task, whenever the cabin altitude:

(a) exceeds 13 000 ft, for a period of not more than 6 minutes;, or

(b) exceeds 15 000 ft, for a period of not more 3 minutes.

▼M15

NCO.SPEC.PAR.120 Transport and release of dangerous goods

Notwithstanding point NCO.SPEC.160, parachutists may carry smoke trail devices and exit the aircraft for the purpose of parachute display over congested areas of cities, towns or settlements or over an open-air assembly of persons, provided those devices are manufactured for that purpose.

▼M4

SECTION 5

Aerobatic flights (ABF)

NCO.SPEC.ABF.100 Checklist

The checklist for ABF shall contain:

(a) normal, abnormal and emergency procedures;

(b) relevant performance data;

(c) required equipment;

(d) any limitations; and

(e) responsibilities and duties of the pilot-in-command, and, if applicable, crew members and task specialists.

NCO.SPEC.ABF.105 Documents and information

The following documents and information listed in NCO.GEN.135(a) need not be carried during aerobatic flights:

(a) details of the filed ATS flight plan, if applicable;

(b) current and suitable aeronautical charts for the route/area of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted; and

(c) procedures and visual signals information for use by intercepting and intercepted aircraft.

NCO.SPEC.ABF.110 Equipment

The following equipment requirements need not be applicable to aerobatic flights:

(a) first-aids kit as laid down in NCO.IDE.A.145 and NCO.IDE.H.145;

(b) hand-fire extinguishers as laid down in NCO.IDE.A.160 and NCO.IDE.H.180; and

(c) emergency locator transmitters or personal locator beacons as laid down in NCO.IDE.A.170 and NCO.IDE.H.170.

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SECTION 6

Maintenance check flights (MCFs)

NCO.SPEC.MCF.100 Levels of maintenance check flights

Before conducting a maintenance check flight, the operator shall determine the applicable level of the maintenance check flight as follows:

(a) a ‘Level A’ maintenance check flight for a flight where the use of abnormal or emergency procedures, as defined in the aircraft flight manual, is expected, or where a flight is required to prove the functioning of a backup system or other safety devices;

▼M15

(b) a ‘Level B’ maintenance check flight for any maintenance check flight other than a ‘Level A’ maintenance check flight.

NCO.SPEC.MCF.105 Operational limitations

(a) By way of derogation from point NCO.GEN.105(a)(4) of this Annex, a maintenance check flight may be conducted with an aircraft that has been released to service with incomplete maintenance in accordance with point M.A.801(g) or point 145.A.50(e) of Annex I to Commission Regulation (EU) No 1321/2014.

▼M16

(b) By way of derogation from point NCO.GEN.105(a)(4) of this Annex, a maintenance check flight may be conducted with an aircraft that has been released to service with incomplete maintenance in accordance with points M.A.801(f) of Annex I (Part-M), 145.A.50(e) of Annex II (Part-145) or ML.A.801(f) of Annex Vb (Part-ML) to Commission Regulation (EU) No 1321/2014.

▼M15

NCO.SPEC.MCF.110 Checklist and safety briefing

(a) The checklist referred to in point NCO.SPEC.105 shall be updated as needed before each maintenance check flight and shall consider the operating procedures that are planned to be followed during the particular maintenance check flight.

(b) Notwithstanding point NCO.SPEC.125(b), a safety briefing of the task specialist shall be required before each maintenance check flight.

NCO.SPEC.MCF.120 Flight crew requirements

When selecting a flight crew member for a maintenance check flight, the operator shall consider the aircraft complexity and the level of the maintenance check flight as defined in point NCO.SPEC.MCF.100.

NCO.SPEC.MCF.125 Crew composition and persons on board

(a) The pilot-in-command shall identify the need for additional crew members or task specialists, or both, before each intended maintenance check flight, taking into consideration the expected flight crew member or task specialist workload and the risk assessment.

(b) The pilot-in-command shall not allow persons on board other than those required under point (a) during a ‘Level A’ maintenance check flight.

▼M16

NCO.SPEC.MCF.130 Simulated abnormal or emergency procedures in flight

By way of derogation from point NCO.SPEC.145, a pilot-in-command may simulate situations that require the application of abnormal or emergency procedures with a task specialist on board if the simulation is required to meet the intention of the flight and if it has been identified in the check list referred to in point NCO.SPEC.MCF.110 or in operating procedures.

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NCO.SPEC.MCF.140 Systems and equipment

When a maintenance check flight is intended to check the proper functioning of a system or equipment, that system or equipment shall be identified as potentially unreliable, and appropriate mitigation measures shall be agreed prior to the flight in order to minimise risks to flight safety.

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ANNEX VIII

SPECIALISED OPERATIONS

[PART-SPO]

SPO.GEN.005 Scope

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(a) This Annex applies to any specialised operation where the aircraft is used for specialised activities such as agriculture, construction, photography, surveying, observation and patrol, aerial advertisement or maintenance check flights.

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(b) Notwithstanding (a), non-commercial specialised operations with other-than complex motor-powered aircraft shall comply with Annex VII (Part-NCO).

(c) Notwithstanding point (a), the following operations with other-than complex motor-powered aircraft may be conducted in accordance with Annex VII (Part-NCO):

▼M4

(1) competition flights or flying displays, on the condition that the remuneration or any valuable consideration given for such flights is limited to recovery of direct costs and a proportionate contribution to annual costs, as well as prizes of no more than a value specified by the competent authority.

▼M14

(2) parachute dropping, sailplane towing with an aeroplane or aerobatic flights performed either by a training organisation having its principal place of business in a Member State and being referred to in Article 10a of Regulation (EU) No 1178/2011, or by an organisation created with the aim of promoting aerial sport or leisure aviation, on the condition that the aircraft is operated by the organisation on the basis of ownership or dry lease, that the flight does not generate profits distributed outside of the organisation, and that whenever non-members of the organisation are involved, such flights represent only a marginal activity of the organisation.

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SUBPART A

GENERAL REQUIREMENTS

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SPO.GEN.100 Competent authority

The competent authority shall be the authority designated by the Member State in which the operator has its principal place of business, is established or is residing.

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SPO.GEN.101 Means of compliance

Alternative means of compliance to those adopted by the Agency may be used by an operator to establish compliance with Regulation (EC) No 216/2008 and its Implementing Rules.

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SPO.GEN.105 Crew responsibilities

(a) The crew member shall be responsible for the proper execution of his/her duties. Crew duties shall be specified in the standard operating procedures (SOP) and, where appropriate, in the operations manual.

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(b) During critical phases of the flight or whenever deemed necessary by the pilot-in-command in the interest of safety, the crew member shall be restrained at his/her assigned station, unless otherwise specified in the SOP.

▼M4

(c) During flight, the flight crew member shall keep his/her safety belt fastened while at his/her station.

(d) During flight, at least one qualified flight crew member shall remain at the controls of the aircraft at all times.

(e) The crew member shall not undertake duties on an aircraft:

(1) if he/she knows or suspects that he/she is suffering from fatigue as referred to in 7.f. of Annex IV to Regulation (EC) No 216/2008 or feels otherwise unfit to perform his/her duties; or

▼M12

(2) when under the influence of psychoactive substances or for other reasons as referred to in 7.g of Annex IV to Regulation (EC) No 216/2008.

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(f) The crew member who undertakes duties for more than one operator shall:

(1) maintain his/her individual records regarding flight and duty times and rest periods as referred to in Annex III (Part-ORO), Subpart FTL to Regulation (EU) No 965/2012, if applicable; and

(2) provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements.

(g) The crew member shall report to the pilot-in-command:

(1) any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

(2) any incident that was endangering, or could endanger, the safety of the operation.

SPO.GEN.106 Task specialists responsibilities

(a) The task specialist shall be responsible for the proper execution of his/her duties. Task specialists' duties shall be specified in the SOP.

▼M11

(b) During critical phases of the flight or whenever deemed necessary by the pilot-in-command in the interest of safety, the task specialist shall be restrained at his/her assigned station, unless otherwise specified in the SOP.

▼M4

(c) The task specialist shall ensure that he/she is restrained when carrying out specialised tasks with external doors opened or removed.

(d) The task specialist shall report to the pilot-in-command:

(1) any fault, failure, malfunction or defect, which he/she believes may affect the airworthiness or safe operation of the aircraft, including emergency systems; and

(2) any incident that was endangering, or could endanger, the safety of the operation.

SPO.GEN.107 Pilot-in-command responsibilities and authority

(a) The pilot-in-command shall be responsible for:

(1) the safety of the aircraft and of all crew members, task specialists and cargo on board during aircraft operations;

(2) the initiation, continuation, termination or diversion of a flight in the interest of safety;

(3) ensuring that all operational procedures and checklists are complied with in accordance with the appropriate manual;

(4) only commencing a flight if he/she is satisfied that all operational limitations referred to in 2.a.3 of Annex IV to Regulation (EC) No 216/2008 are complied with, as follows:

(i) the aircraft is airworthy;

(ii) the aircraft is duly registered;

▼M14

(iii) instruments and equipment required for the execution of that flight are installed in the aircraft and are operative, unless operation with inoperative equipment is permitted by the minimum equipment list (MEL) or equivalent document, if applicable, as required in points SPO.IDE.A.105 or SPO.IDE.H.105;

▼M11

(iv) the mass of the aircraft and the centre of gravity location are such that the flight can be conducted within the limits prescribed in the airworthiness documentation;

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(v) all equipment and baggage is properly loaded and secured; ►M9 ——————— ◄

(vi) the aircraft operating limitations as specified in the aircraft flight manual (AFM) will not be exceeded at any time during the flight; ►M9 and ◄

▼M9

(vii) any navigational database required for PBN is suitable and current;

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(5) not commencing a flight if he/she, or any other crew member or task specialist is incapacitated from performing duties by any cause such as injury, sickness, fatigue or the effects of any psychoactive substance;

(6) not continuing a flight beyond the nearest weather-permissible aerodrome or operating site when his/her or any other crew member or task specialist's capacity to perform duties is significantly reduced from causes such as fatigue, sickness or lack of oxygen;

(7) deciding on acceptance of the aircraft with unserviceabilities in accordance with the configuration deviation list (CDL) or MEL, if applicable;

(8) recording utilisation data and all known or suspected defects in the aircraft at the termination of the flight, or series of flights, in the aircraft technical log or journey log for the aircraft; and

▼M8

(9) ensuring that:

(i) flight recorders are not disabled or switched off during flight;

(ii) in the event of an occurrence other than an accident or a serious incident that shall be reported according to ORO.GEN.160(a), flight recorders' recordings are not intentionally erased; and

(iii) in the event of an accident or a serious incident, or if preservation of recordings of flight recorders is directed by the investigating authority:

(A) flight recorders' recordings are not intentionally erased;

(B) flight recorders are deactivated immediately after the flight is completed; and

(C) precautionary measures to preserve the recordings of flight recorders are taken before leaving the flight crew compartment.

▼M4

(b) The pilot-in-command shall have the authority to refuse carriage of or disembark any person or cargo that may represent a potential hazard to the safety of the aircraft or its occupants.

(c) The pilot-in-command shall, as soon as possible, report to the appropriate air traffic services (ATS) unit any hazardous weather or flight conditions encountered that are likely to affect the safety of other aircraft.

(d) Notwithstanding the provision of (a)(6), in a multi-crew operation the pilot-in-command may continue a flight beyond the nearest weather-permissible aerodrome when adequate mitigating procedures are in place.

(e) The pilot-in-command shall, in an emergency situation that requires immediate decision and action, take any action he/she considers necessary under the circumstances in accordance with 7.d. of Annex IV to Regulation (EC) No 216/2008. In such cases he/she may deviate from rules, operational procedures and methods in the interest of safety.

▼M4

(f) The pilot-in-command shall submit a report of an act of unlawful interference without delay to the competent authority and shall inform the designated local authority.

(g) The pilot-in-command shall notify the nearest appropriate authority by the quickest available means of any accident involving the aircraft that results in serious injury or death of any person or substantial damage to the aircraft or property.

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▼M4

SPO.GEN.110 Compliance with laws, regulations and procedures

The pilot-in-command, crew members and task specialists shall comply with the laws, regulations and procedures of those States where operations are conducted.

SPO.GEN.115 Common language

The operator shall ensure that all crew members and task specialists are able to communicate with each other in a common language.

▼M5

SPO.GEN.119 Taxiing of aircraft

The operator shall establish procedures for taxiing of aircraft in order to ensure safe operation and in order to enhance runway safety.

▼M4

SPO.GEN.120 Taxiing of aeroplanes

The operator shall ensure that an aeroplane is only taxied on the movement area of an aerodrome if the person at the controls:

(a) is an appropriately qualified pilot; or

(b) has been designated by the operator and:

(1) is trained to taxi the aeroplane;

(2) is trained to use the radio telephone, if radio communications are required;

(3) has received instruction in respect of aerodrome layout, routes, signs, marking, lights, air traffic control (ATC) signals and instructions, phraseology and procedures; and

(4) is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.

SPO.GEN.125 Rotor engagement

A helicopter rotor shall only be turned under power for the purpose of flight with a qualified pilot at the controls.

SPO.GEN.130 Portable electronic devices

The operator shall not permit any person to use a portable electronic device (PED) on board an aircraft that could adversely affect the performance of the aircraft's systems and equipment.

▼M14

SPO.GEN.131 Use of electronic flight bags (EFBs)

(a) Where an EFB is used on board an aircraft, the operator shall ensure that it does not adversely affect the performance of the aircraft systems or equipment, or the ability of the flight crew member to operate the aircraft.

(b) Prior to using a type B EFB application, the operator shall:

(1) conduct a risk assessment related to the use of the EFB device that hosts the application, to the EFB application concerned and its associated function(s), identifying the associated risks and ensuring that they are appropriately mitigated; the risk assessment shall address the risks associated with the human–machine interface of the EFB device and the EFB application concerned; and

(2) establish an EFB administration system, including procedures and training requirements for the administration and use of the EFB device and the EFB application.

▼M4

SPO.GEN.135 Information on emergency and survival equipment carried

The operator shall, at all times, have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board.

SPO.GEN.140 Documents, manuals and information to be carried

(a) The following documents, manuals and information shall be carried on each flight as originals or copies unless otherwise specified below:

(1) the AFM, or equivalent document(s);

(2) the original certificate of registration;

(3) the original certificate of airworthiness (CofA);

(4) the noise certificate, if applicable;

(5) a copy of the declaration as specified in ORO.DEC.100 and, if applicable, a copy of the authorisation as specified in ORO.SPO.110;

(6) the list of specific approvals, if applicable;

(7) the aircraft radio licence, if applicable;

(8) the third party liability insurance certificate(s);

(9) the journey log, or equivalent, for the aircraft;

▼M16

(10) the aircraft technical log, in accordance with to Regulation (EU) No 1321/2014, if applicable;

▼M4

(11) details of the filed ATS flight plan, if applicable;

(12) current and suitable aeronautical charts for the route/area of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

▼M4

(13) procedures and visual signals information for use by intercepting and intercepted aircraft;

(14) information concerning search and rescue services for the area of the intended flight;

(15) the current parts of the operations manual and/or SOP or AFM that are relevant to the duties of crew members and task specialists, which shall be easily accessible to them;

(16) the MEL or CDL, if applicable;

(17) appropriate notices to airmen (NOTAMs) and aeronautical information service (AIS) briefing documentation;

(18) appropriate meteorological information, if applicable;

(19) cargo manifests, if applicable; and

(20) any other documentation that may be pertinent to the flight or is required by the States concerned with the flight.

(b) Notwithstanding (a), the documents and information in (a)(2) to (a)(11) and (a)(14), (a)(17), (a)(18) and (a)(19) may be retained at the aerodrome or operating site on flights:

(1) intending to take off and land at the same aerodrome or operating site; or

(2) remaining within a distance or area determined by the competent authority in accordance with ARO.OPS.210.

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▼M4

(d) In case of loss or theft of documents specified in (a)(2) to (a)(8), the operation may continue until the flight reaches its destination or a place where replacement documents can be provided.

(e) The operator shall make available, within a reasonable time of being requested to do so by the competent authority, the documentation required to be carried on board.

▼M16

SPO.GEN.145 Handling of flight recorder recordings: preservation, production, protection and use

(a) Following an accident, a serious incident or an occurrence identified by the investigating authority, the operator of an aircraft shall preserve the original recorded data of the flight recorders for a period of 60 days or until otherwise directed by the investigating authority.

(b) The operator shall conduct operational checks and evaluations of recordings to ensure the continued serviceability of the flight recorders which are required to be carried.

▼**M16**

(c) The operator shall ensure that the recordings of flight parameters and data link communication messages required to be recorded on flight recorders are preserved. However, for the purpose of testing and maintaining those flight recorders, up to 1 hour of the oldest recorded data at the time of testing may be erased.

(d) The operator shall keep and maintain up to date documentation that presents the necessary information to convert raw flight data into flight parameters expressed in engineering units.

(e) The operator shall make available any flight recorder recordings that have been preserved, if so determined by the competent authority.

(f) Without prejudice to Regulations (EU) No 996/2010 and (EU) 2016/679, and except for ensuring flight recorder serviceability:

(1) audio recordings from a flight recorder shall not be disclosed or used unless all the following conditions are fulfilled:

(i) a procedure related to the handling of such audio recordings and of their transcript is in place;

(ii) all crew members and maintenance personnel concerned have given their prior consent;

(iii) such audio recordings are used only for maintaining or improving safety.

(1a) When flight recorder audio recordings are inspected for ensuring flight recorder serviceability, the operator shall protect the privacy of those audio recordings and make sure that they are not disclosed or used for purposes other than ensuring flight recorder serviceability.

(2) Flight parameters or data link messages recorded by a flight recorder shall not be used for purposes other than for the investigation of an accident or an incident that is subject to mandatory reporting. That limitation shall not apply, unless such recordings meet any of the following conditions:

(i) are used by the operator for airworthiness or maintenance purposes only;

(ii) are de-identified;

(iii) are disclosed under secure procedures.

(3) Except for ensuring flight recorder serviceability, images of the flight crew compartment that are recorded by a flight recorder shall not be disclosed or used unless all of the following conditions are fulfilled:

▼M16

(i) a procedure related to the handling of such image recordings is in place;

(ii) all crew members and maintenance personnel concerned have given their prior consent;

(iii) such image recordings are used only for maintaining or improving safety.

(3a) When images of the flight crew compartment that are recorded by a flight recorder are inspected for ensuring the serviceability of the flight recorder, then:

(i) those images shall not be disclosed or used for purposes other than ensuring flight recorder serviceability;

(ii) if body parts of crew members are likely to be visible on the images, the operator shall ensure the privacy of those images.

▼M4

SPO.GEN.150 Transport of dangerous goods

(a) The transport of dangerous goods by air shall be conducted in accordance with Annex 18 to the Chicago Convention as last amended and amplified by the Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Doc 9284-AN/905), including its attachments, supplements and any other addenda or corrigenda.

(b) Dangerous goods shall only be transported by an operator approved in accordance with Annex V (Part-SPA), subpart G, to Regulation (EU) No 965/2012 except when:

(1) they are not subject to the Technical Instructions in accordance with Part 1 of those Instructions;

(2) they are carried by task specialists or crew members or are in baggage which has been separated from its owner, in accordance with Part 8 of the Technical Instructions;

(3) required on board the aircraft for specialised purposes in accordance with the Technical Instructions;

(4) they are used to facilitate flight safety where carriage aboard the aircraft is reasonable to ensure their timely availability for operational purposes, whether or not such articles and substances are required to be carried or intended to be used in connection with a particular flight.

▼M4

(c) The operator shall establish procedures to ensure that all reasonable measures are taken to prevent dangerous goods from being carried on board inadvertently.

(d) The operator shall provide personnel with the necessary information enabling them to carry out their responsibilities, as required by the Technical Instructions.

(e) The operator shall, in accordance with the Technical Instructions, report without delay to the competent authority and the appropriate authority of the State of occurrence in the event of:

(1) any dangerous good accident or incidents;

(2) the finding of dangerous goods carried by task specialists or crew, or in their baggage, when not in accordance with Part 8 of the Technical Instructions.

(f) The operator shall ensure that task specialists are provided with information about dangerous goods.

(g) The operator shall ensure that notices giving information about the transport of dangerous goods are provided at acceptance points for cargo as required by the Technical Instructions.

SPO.GEN.155 Release of dangerous goods

The operator shall not operate an aircraft over congested areas of cities, towns or settlements or over an open-air assembly of persons when releasing dangerous goods.

SPO.GEN.160 Carriage and use of weapons

(a) The operator shall ensure that, when weapons are carried on a flight for the purpose of a specialised task, these are secured when not in use.

(b) The task specialist using the weapon shall take all necessary measures to prevent the aircraft and persons on board or on the ground from being endangered.

SPO.GEN.165 Admission to the flight crew compartment

The pilot-in-command shall make the final decision regarding the admission to the flight crew compartment and shall ensure that:

(a) admission to the flight crew compartment does not cause distraction or interference with the operation of the flight; and

(b) all persons carried in the flight crew compartment are made familiar with the relevant safety procedures.

SUBPART B

OPERATIONAL PROCEDURES

SPO.OP.100 Use of aerodromes and operating sites

The operator shall only use aerodromes and operating sites that are adequate for the type of aircraft and operation concerned.

▼M21

SPO.OP.101 Altimeter check and settings

(a) The operator shall establish procedures for altimeter checking before each departure.

(b) The operator shall establish procedures for altimeter settings for all phases of flight, which shall take into account the procedures established by the State of the aerodrome or the State of the airspace, if applicable.

▼M20

SPO.OP.105 Specification of isolated aerodromes – aeroplanes

For the selection of alternate aerodromes and the fuel/energy planning and in-flight re-planning policy, the operator shall not consider an aerodrome as an isolated aerodrome unless the flying time to the nearest weather-permissible destination alternate aerodrome is more than:

(a) for aeroplanes with reciprocating engines, 60 minutes; or

(b) for turbine-engined aeroplanes, 90 minutes.

▼M21

SPO.OP.110 Aerodrome operating minima — aeroplanes and helicopters

(a) The operator shall establish aerodrome operating minima for each departure, destination or alternate aerodrome that is planned to be used in order to ensure separation of the aircraft from terrain and obstacles and to mitigate the risk of loss of visual references during the visual flight segment of instrument approach operations.

(b) The method used to establish aerodrome operating minima shall take all the following elements into account:

(1) the type, performance, and handling characteristics of the aircraft;

(2) the equipment available on the aircraft for the purpose of navigation, acquisition of visual references, and/or control of the flight path during take-off, approach, landing, and missed approach;

(3) any conditions or limitations stated in the aircraft flight manual (AFM);

(4) the dimensions and characteristics of the runways/final approach and take-off areas (FATOs) that may be selected for use;

(5) the adequacy and performance of the available visual and non-visual aids and infrastructure;

(6) the obstacle clearance altitude/height (OCA/H) for the instrument approach procedures (IAPs);

(7) the obstacles in the climb-out areas and the necessary clearance margins;

(8) any non-standard characteristics of the aerodrome, the IAP or the local environment;

(9) the composition of the flight crew, their competence and experience;

(10) the IAP;

(11) the aerodrome characteristics and the available air navigation services (ANS);

(12) any minima that may be promulgated by the State of the aerodrome;

(13) the conditions prescribed in any specific approvals for low-visibility operations (LVOs) or operations with operational credits; and

(14) the relevant operational experience of the operator.

(c) The operator shall specify a method of determining aerodrome operating minima in the operations manual.

▼M21

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SPO.OP.112 Aerodrome operating minima — circling operations with aeroplanes

(a) The minimum descent height (MDH) for a circling approach operation with aeroplanes shall not be lower than the highest of:

(1) the published circling OCH for the aeroplane category;

(2) the minimum circling height derived from Table 1; or

(3) the decision height (DH)/MDH of the preceding IAP.

(b) The minimum visibility for a circling approach operation with aeroplanes shall be the highest of:

(1) the circling visibility for the aeroplane category, if published; or

(2) the minimum visibility derived from Table 1.

Table 1

MDH and minimum visibility for circling per aeroplane category

	Aeroplane category			
	A	B	C	D
MDH (ft)	400	500	600	700
Minimum VIS (m)	1 500	1 600	2 400	3 600

▼M4

SPO.OP.113 Aerodrome operating minima — onshore circling operations with helicopters

The MDH for an onshore circling operation with helicopters shall not be lower than 250 ft and the meteorological visibility not less than 800 m.

SPO.OP.115 Departure and approach procedures — aeroplanes and helicopters

(a) The pilot-in-command shall use the departure and approach procedures established by the State of the aerodrome, if such procedures have been published for the runway or FATO to be used.

(b) The pilot-in-command may deviate from a published departure route, arrival route or approach procedure:

(1) provided obstacle clearance criteria can be observed, full account is taken of the operating conditions and any ATC clearance is adhered to; or

(2) when being radar-vectored by an ATC unit.

(c) In the case of operations with complex motor-powered aircraft, the final approach segment shall be flown visually or in accordance with the published approach procedures.

▼M9

SPO.OP.116 Performance-based navigation — aeroplanes and helicopters

The operator shall ensure that, when PBN is required for the route or procedure to be flown:

(a) the relevant PBN specification is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; and

(b) the aircraft is operated in conformance with the relevant navigation specification and limitations in the AFM or other document mentioned above.

▼M4

SPO.OP.120 Noise abatement procedures

The pilot-in-command shall take into account published noise abatement procedures to minimise the effect of aircraft noise while ensuring that safety has priority over noise abatement.

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SPO.OP.125 Minimum obstacle clearance altitudes — IFR flights

(a) The operator shall specify a method to establish minimum flight altitudes that provide the required terrain clearance for all route segments to be flown in IFR.

(b) The pilot-in-command shall establish minimum flight altitudes for each flight based on this method. The minimum flight altitudes shall not be lower than those published by the State overflown.

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SPO.OP.130 Fuel/energy scheme – aeroplanes and helicopters

(a) The operator shall establish, implement, and maintain a fuel/energy scheme that comprises:

(1) a fuel/energy planning and in-flight re-planning policy; and

(2) an in-flight fuel/energy management policy.

(b) The fuel/energy scheme shall:

(1) be appropriate for the type(s) of operation performed; and

(2) correspond to the capability of the operator to support its implementation.

SPO.OP.131 Fuel/energy scheme – fuel/energy planning and in-flight re-planning policy – aeroplanes and helicopters

(a) As part of the fuel/energy scheme, the operator shall establish a fuel/energy planning and in-flight re-planning policy to ensure that the aircraft carries a sufficient amount of usable fuel/energy to safely complete the planned flight and to allow for deviations from the planned operation.

(b) The operator shall ensure that the fuel/energy planning of flights is based upon at least the following elements:

▼**M20**

(1) procedures contained in the operations manual as well as:

(i) current aircraft-specific data derived from a fuel/energy consumption monitoring system or, if not available;

(ii) data provided by the aircraft manufacturer; and

(2) the operating conditions under which the flight is to be conducted including:

(i) aircraft fuel/energy consumption data;

(ii) anticipated masses;

(iii) anticipated meteorological conditions;

(iv) the effects of deferred maintenance items and/or configuration deviations; and

(v) anticipated delays.

(c) For aeroplanes, the operator shall ensure that the pre-flight calculation of the usable fuel/energy that is required for a flight includes:

(1) taxi fuel/energy that shall not be less than the amount expected to be used prior to take-off;

(2) trip fuel/energy that shall be the amount of fuel/energy that is required to enable the aeroplane to fly from take-off, or from the point of in-flight re-planning, to landing at the destination aerodrome;

(3) contingency fuel/energy that shall be the amount of fuel/energy required to compensate for unforeseen factors;

(4) destination alternate fuel/energy

(i) when a flight is operated with at least one destination alternate aerodrome, it shall be the amount of fuel/energy required to fly from the destination aerodrome to the destination alternate aerodrome; or

(ii) when a flight is operated with no destination alternate aerodrome, it shall be the amount of fuel/energy required to hold at the destination aerodrome to compensate for the lack of a destination alternate aerodrome;

(5) final reserve fuel/energy that shall be protected to ensure a safe landing; the operator shall take into account all of the following, and in the following order of priority, to determine the quantity of the final reserve fuel/energy:

(i) the severity of the hazard to persons or property that may result from an emergency landing after fuel/energy starvation;

(ii) the likelihood of unexpected circumstances that the final reserve fuel/energy may no longer be protected;

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(6) additional fuel/energy, if required by the type of operation; it shall be the amount of fuel/energy to enable the aeroplane to perform a safe landing at a fuel/energy en route alternate aerodrome (fuel/energy ERA aerodrome critical scenario) in the event of an engine failure or loss of pressurisation, whichever requires the greater amount of fuel/energy, based on the assumption that such a failure occurs at the most critical point along the route; this additional fuel/energy is required only if the minimum amount of fuel/energy that is calculated according to points (c)(2) to (c)(5) is not sufficient for such an event;

(7) extra fuel/energy to take into account anticipated delays or specific operational constraints; and

(8) discretionary fuel/energy, if required by the pilot-in-command.

(d) For helicopters, the operator shall ensure that the pre-flight calculation of the usable fuel/energy that is required for a flight includes all of the following:

(1) fuel/energy to fly to the aerodrome or operating site of intended landing;

(2) if a destination alternate is required, destination alternate fuel/energy, which shall be the amount of fuel/energy that is required to execute a missed approach at the aerodrome or operating site of intended landing, and thereafter, to fly to the specified destination alternate, approach and land; and

(3) final reserve fuel/energy, which shall be protected to ensure a safe landing; the operator shall take into account all of the following, and in the following order of priority, to determine the quantity of the final reserve fuel/energy:

(i) the severity of the hazard to persons or property that may result from an emergency landing after fuel/energy starvation; and

(ii) the likelihood of such unexpected circumstances that the final reserve fuel/energy may no longer be protected;

(4) extra fuel/energy to take into account anticipated delays or specific operational constraints; and

(5) discretionary fuel/energy, if required by the pilot-in-command.

(e) The operator shall ensure that, if a flight has to proceed to a destination aerodrome other than the one originally planned, in-flight re-planning procedures for calculating the required usable fuel/energy are available and comply with points (c)(2) to (c)(7) for aeroplanes, and point (d) for helicopters.

(f) The pilot in command shall only commence a flight or continue in the event of in-flight re-planning, when satisfied that the aircraft carries at least the planned amount of usable fuel/energy and oil to safely completethe flight.

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SPO.OP.135 Safety briefing

(a) The operator shall ensure that, prior to take-off task specialists are given a briefing on:

(1) emergency equipment and procedures;

(2) operational procedures associated with the specialised task before each flight or series of flights

(b) The briefing referred to in (a)(2) may be replaced by an initial and recurrent training programme. In such case the operator shall also define recency requirements.

SPO.OP.140 Flight preparation

▼M9

(a) Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the space-based facilities, ground and/or water facilities, including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.

▼M21

(b) Before commencing a flight, the pilot-in-command shall be familiar with all available meteorological information appropriate to the intended flight. Preparation for a flight away from the vicinity of the place of departure, and for every flight under IFR, shall include:

(1) a study of the available current meteorological reports and forecasts; and

(2) the planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of meteorological conditions.

SPO.OP.143 Destination alternate aerodromes planning minima — aeroplanes

An aerodrome shall not be specified as a destination alternate aerodrome unless the available current meteorological information indicates, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period,

(a) for an alternate aerodrome with an available instrument approach operation with DH less than 250 ft,

(1) a ceiling of at least 200 ft above the DH or MDH associated with the instrument approach operation; and

(2) a visibility of at least the higher of 1 500 m and 800 m above the instrument approach operation RVR/VIS minima; or

(b) for an alternate aerodrome with an instrument approach operation with DH or MDH 250 ft or more,

(1) a ceiling of at least 400 ft above the DH or MDH associated with the instrument approach operation; and

(2) a visibility of at least 3 000 m; or

▼M21

(c) for an alternate aerodrome without an instrument approach procedure,

(1) a ceiling of at least the higher of 2 000 ft and the minimum safe IFR height; and

(2) a visibility of at least 5 000 m.

SPO.OP.144 Destination alternate aerodrome planning minima — helicopters

The operator shall only select an aerodrome as a destination alternate aerodrome if the available current meteorological information indicates, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period,

(a) for an alternate aerodrome with an IAP:

(1) a ceiling of at least 200 ft above the DH or MDH associated with the IAP; and

(2) a visibility of at least 1 500 m by day or 3 000 m by night; or

(b) for an alternate aerodrome without an IAP:

(1) a ceiling of at least 2 000 ft or the minimum safe IFR height, whichever is greater; and

(2) a visibility of at least 1 500 m by day or 3 000 m by night.

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SPO.OP.145 Take-off alternate aerodromes — complex motor-powered aeroplanes

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(a) For IFR flights, the pilot-in-command shall specify at least one weather-permissible take-off alternate aerodrome in the flight plan if the meteorological conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or if it would not be possible to return to the aerodrome of departure for other reasons.

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(b) The take-off alternate aerodrome shall be located within the following distance from the aerodrome of departure:

(1) for aeroplanes having two engines, not more than a distance equivalent to a flight time of 1 hour at the single-engine cruise speed in still air standard conditions; and

(2) for aeroplanes having three or more engines, not more than a distance equivalent to a flight time of 2 hours at the one-engine-inoperative (OEI) cruise speed according to the AFM in still air standard conditions.

(c) For an aerodrome to be selected as a take-off alternate aerodrome the available information shall indicate that, at the estimated time of use, the conditions will be at or above the aerodrome operating minima for that operation.

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SPO.OP.150 Destination alternate aerodromes — aeroplanes

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate aerodrome in the flight plan, unless:

(a) the available current meteorological information indicates that, for the period from 1 hour before until 1 hour after the estimated time of arrival, or from the actual time of departure to 1 hour after the estimated time of arrival, whichever is the shorter period, the approach and landing may be made under visual meteorological conditions (VMC); or

▼M20

(b) the place of intended landing is designated as an isolated aerodrome and:

(1) an instrument approach procedure is prescribed for the aerodrome of intended landing; and

(2) available current meteorological information indicates that both following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival, or from the actual time of departure to 2 hours after the estimated time of arrival whichever is the shorter period:

(i) a cloud base of at least 300 m (1 000 ft) above the minimum associated with the instrument approach procedure;

(ii) visibility of at least 5,5 km or of 4 km more than the minimum associated with the procedure.

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SPO.OP.151 Destination alternate aerodromes — helicopters

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate aerodrome in the flight plan, unless:

(a) an instrument approach procedure is prescribed for the aerodrome of intended landing and the available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival, or from the actual time of departure to 2 hours after the estimated time of arrival, whichever is the shorter period:

(1) a cloud base of at least 120 m (400 ft) above the minimum associated with the instrument approach procedure; and

(2) visibility of at least 1 500 m more than the minimum associated with the procedure; or

(b) the place of intended landing is isolated and:

(1) an instrument approach procedure is prescribed for the aerodrome of intended landing;

(2) available current meteorological information indicates that the following meteorological conditions will exist from 2 hours before to 2 hours after the estimated time of arrival:

(i) the cloud base is at least 120 m (400 ft) above the minimum associated with the instrument approach procedure;

(ii) visibility is at least 1 500 m more than the minimum associated with the procedure.

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SPO.OP.152 Destination aerodromes — instrument approach operations

The pilot-in-command shall ensure that sufficient means are available to navigate and land at the destination aerodrome or at any destination alternate aerodrome in the case of loss of capability for the intended approach and landing operation.

▼M4

SPO.OP.155 Refuelling with persons embarking, on board or disembarking

(a) The aircraft shall not be refuelled with aviation gasoline (AVGAS) or wide-cut type fuel or a mixture of these types of fuel, when persons are embarking, on board or disembarking.

▼M20

(b) For all other types of fuel/energy, necessary precautions shall be taken and the aircraft shall be properly manned by qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

SPO.OP.157 Refuelling with engine(s)and/or rotors turning – helicopters

(a) Refuelling with engine(s) and/or rotors turning shall only be conducted:

(1) with no task specialists embarking or disembarking;

(2) if the operator of the aerodrome or operating site allows such operations;

(3) in accordance with any specific procedures and limitations in the aircraft flight manual (AFM);

(4) with JET A or JET A-1 fuel types; and

(5) in the presence of the appropriate rescue and firefighting (RFF) facilities or equipment.

(b) The operator shall assess the risks associated with refuelling with engine(s) and/or rotors turning.

(c) The operator shall establish appropriate procedures to be followed by all involved personnel, such as crew members, task specialists, and ground operations personnel.

(d) The operator shall ensure that its crew members, ground operations personnel, as well as any task specialist involved in the procedures, are appropriately trained.

(e) The operator shall ensure that the helicopter refuelling procedures with engine(s) and/or rotors turning are specified in the operations manual.

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SPO.OP.160 Use of headset

Each flight crew member required to be on duty in the flight crew compartment shall wear a headset with boom microphone or equivalent and use it as the primary device to communicate with ATS, other crew members and task specialists.

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SPO.OP.165 Smoking

The pilot-in-command shall not allow smoking on board or during refuelling or defuelling of the aircraft.

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SPO.OP.170 Meteorological conditions

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(a) The pilot-in-command shall only commence or continue a VFR flight if the latest available meteorological information indicates that the meteorological conditions along the route and at the intended destination at the estimated time of use will be at or above the applicable VFR operating minima.

(b) The pilot-in-command shall only commence or continue an IFR flight towards the planned destination aerodrome if the latest available meteorological information indicates that, at the estimated time of arrival, the meteorological conditions at the destination or at least one destination alternate aerodrome are at or above the applicable aerodrome operating minima.

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(c) If a flight contains VFR and IFR segments, the meteorological information referred to in (a) and (b) shall be applicable as far as relevant.

SPO.OP.175 Ice and other contaminants — ground procedures

(a) The pilot-in-command shall only commence take-off if the aircraft is clear of any deposit that might adversely affect the performance or controllability of the aircraft, except as permitted in the AFM.

(b) In the case of operations with complex motor-powered aircraft, the operator shall establish procedures to be followed when ground de-icing and anti-icing and related inspections of the aircraft are necessary to allow the safe operation of the aircraft.

SPO.OP.176 Ice and other contaminants — flight procedures

(a) The pilot-in-command shall only commence a flight or intentionally fly into expected or actual icing conditions if the aircraft is certified and equipped to cope with such conditions as referred to in 2.a.5 of Annex IV to Regulation (EC) No 216/2008.

(b) If icing exceeds the intensity of icing for which the aircraft is certified or if an aircraft not certified for flight in known icing conditions encounters icing, the pilot-in-command shall exit the icing conditions without delay, by a change of level and/or route, and if necessary by declaring an emergency to ATC.

(c) In the case of operations with complex motor-powered aircraft, the operator shall establish procedures for flights in expected or actual icing conditions.

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SPO.OP.180 Take-off conditions — aeroplanes and helicopters

Before commencing take-off, the pilot-in-command shall be satisfied that:

(a) the meteorological conditions at the aerodrome or the operating site and the condition of the runway/FATO intended to be used will not prevent a safe take-off and departure; and

(b) the selected aerodrome operating minima are consistent with all of the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) flight crew qualifications.

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SPO.OP.185 Simulated situations in flight

Unless a task specialist is on-board the aircraft for training, the pilot-in-command shall, when carrying task specialists, not simulate:

(a) situations that require the application of abnormal or emergency procedures; or

(b) flight in instrument meteorological conditions (IMC).

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SPO.OP.190 Fuel/energy scheme – in-flight fuel/energy management policy

(a) The operator of complex motor-powered aircraft shall establish procedures to ensure that in-flight fuel/energy checks and fuel/energy management are performed.

(b) The pilot-in-command shall monitor the amount of usable fuel/energy remaining on board to ensure that it is protected and not less than the fuel/energy that is required to proceed to an aerodrome or operating site where a safe landing can be made.

(c) The pilot-in-command shall advise air traffic control (ATC) of a 'minimum fuel/energy' state by declaring 'MINIMUM FUEL' when the pilot-in-command has:

(1) committed to land at a specific aerodrome or operating site; and

(2) calculated that any change to the existing clearance to that aerodrome or operating site, or other air traffic delays, may result in landing with less than the planned final reserve fuel/energy.

(d) The pilot-in-command shall declare a situation of 'fuel/energy emergency' by broadcasting 'MAYDAY MAYDAY MAYDAY FUEL' when the usable fuel/energy estimated to be available upon landing at the nearest aerodrome or operating site where a safe landing can be made is less than the planned final reserve fuel/energy.

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SPO.OP.195 Use of supplemental oxygen

(a) The operator shall ensure that task specialists and crew members use supplemental oxygen continuously whenever the cabin altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft, unless otherwise approved by the competent authority and in accordance with SOPs.

(b) Notwithstanding (a) and except for parachute operations, short excursions of a specified duration above 13 000 ft without using supplemental oxygen on other-than-complex aeroplanes and helicopters may be undertaken with a prior approval of the competent authority based on the consideration of the following:

(1) the duration of the excursion above 13 000 ft is not more than 10 minutes or, if needed for a longer period, the time strictly necessary to the accomplishment of the specialised task;

(2) the flight is not conducted above 16 000 ft;

(3) the safety briefing in accordance with SPO.OP.135 includes adequate information to crew members and tasks specialists on the effects of hypoxia;

(4) SOPs for the concerned operation reflecting (1), (2) and (3);

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(5) the previous experience of the operator in conducting operations above 13 000 ft without using supplemental oxygen;

(6) the individual experience of crew members and task specialists and their physiological adaptation to high altitudes; and

(7) the altitude of the base where the operator is established or the operations are conducted from.

SPO.OP.200 Ground proximity detection

(a) When undue proximity to the ground is detected by a flight crew member or by a ground proximity warning system, the pilot flying shall take corrective action immediately in order to establish safe flight conditions.

(b) The ground proximity warning system may be disabled during those specialised tasks, which by their nature require the aircraft to be operated within a distance from the ground below that which would trigger the ground proximity warning system.

SPO.OP.205 Airborne collision avoidance system (ACAS)

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(a) The operator shall establish operational procedures and training programmes when ACAS is installed and serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.

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(b) The ACAS II may be disabled during those specialised tasks, which by their nature require the aircraft to be operated within a distance from each other below that which would trigger the ACAS.

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SPO.OP.210 Approach and landing conditions — aeroplanes and helicopters

Before commencing an approach operation, the pilot-in-command shall be satisfied that:

(a) the meteorological conditions at the aerodrome or the operating site and the condition of the runway/FATO intended to be used will not prevent a safe approach, landing or go-around, considering the performance information contained in the operations manual; and

(b) the selected aerodrome operating minima are consistent with all of the following:

(1) the operative ground equipment;

(2) the operative aircraft systems;

(3) the aircraft performance;

(4) flight crew qualifications.

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SPO.OP.211 Approach and landing conditions — helicopters

Before commencing an approach to land, the pilot-in-command shall be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the final approach and take-off area (FATO) intended to be used would not prevent a safe approach, landing or missed approach.

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SPO.OP.215 Commencement and continuation of approach

(a) For aeroplanes, if the reported visibility (VIS) or controlling RVR for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation shall not be continued:

(1) past a point at which the aeroplane is 1 000 ft above the aerodrome elevation; or

(2) into the final approach segment (FAS) if the DH or MDH is higher than 1 000 ft.

(b) For helicopters, if the reported RVR is less than 550 m and the controlling RVR for the runway to be used for landing is less than the applicable minimum, then an instrument approach operation shall not be continued:

(1) past a point at which the helicopter is 1 000 ft above the aerodrome elevation; or

(2) into the FAS if the DH or MDH is higher than 1 000 ft.

(c) If the required visual reference is not established, a missed approach shall be executed at or before the DA/H or the MDA/H.

(d) If the required visual reference is not maintained after DA/H or MDA/H, a go-around shall be executed promptly.

(e) Notwithstanding point (a), in the case where no RVR is reported, and the reported VIS is lower, but the converted meteorological visibility (CMV) is greater than the applicable minimum, then the instrument approach can be continued to the DA/H or MDA/H.

(f) Notwithstanding points (a) and (b), if there is no intention to land, the instrument approach may be continued to the DA/H or the MDA/H. A missed approach shall be executed at or before the DA/H or the MDA/H.

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SPO.OP.230 Standard operating procedures

(a) Before commencing a specialised operation, the operator shall conduct a risk assessment, assessing the complexity of the activity to determine the hazards and associated risks inherent in the operation and establish mitigating measures.

(b) Based on the risk assessment, the operator shall establish standard operating procedures (SOP) appropriate to the specialised activity and aircraft used taking account of the requirements of subpart E. The SOP shall be part of the operations manual or a separate document. SOP shall be regularly reviewed and updated, as appropriate.

(c) The operator shall ensure that specialised operations are performed in accordance with SOP.

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SPO.OP.235 EFVS 200 operations

(a) An operator that intends to conduct EFVS 200 operations with operational credits and without a specific approval shall ensure that:

(1) the aircraft is certified for the intended operations;

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(2) only runways, FATOs and IAPs suitable for EFVS operations are used;

(3) the flight crew are competent to conduct the intended operation and a training and checking programme for the flight crew members and relevant personnel involved in the flight preparation is established;

(4) operating procedures are established;

(5) any relevant information is documented in the minimum equipment list (MEL);

(6) any relevant information is documented in the maintenance programme;

(7) safety assessments are carried out and performance indicators are established to monitor the level of safety of the operation; and

(8) the aerodrome operating minima take into account the capability of the system used.

(b) The operator shall not conduct EFVS 200 operations when conducting LVOs.

(c) Notwithstanding point (a)(1), the operator may use EVSs meeting the minimum criteria to conduct EFVS 200 operations, provided that this is approved by the competent authority.

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SUBPART C

AIRCRAFT PERFORMANCE AND OPERATING LIMITATIONS

SPO.POL.100 Operating limitations — all aircraft

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(a) During any phase of operation, the loading, the mass and the centre of gravity (CG) position of the aircraft shall comply with any limitation specified in the appropriate manual.

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(b) Placards, listings, instrument markings, or combinations thereof, containing those operating limitations prescribed by the AFM for visual presentation, shall be displayed in the aircraft.

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SPO.POL.105 Mass and balance

(a) The operator shall ensure that the mass and the CG of the aircraft have been established by actual weighing prior to the initial entry into service of the aircraft. The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented. Such information shall be made available to the pilot-in-command. The aircraft shall be reweighed if the effect of modifications on the mass and balance is not accurately known.

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(b) The weighing shall be accomplished by the manufacturer of the aircraft or by an approved maintenance organisation.

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SPO.POL.110 Mass and balance system – commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft

(a) The operator shall establish a mass and balance system to determine for each flight or series of flights the following:

(1) aircraft dry operating mass;

(2) mass of the traffic load;

(3) mass of the fuel/energy load;

(4) aircraft load and load distribution;

(5) take-off mass, landing mass, and zero fuel/energy mass; and

(6) applicable aircraft centre of gravity (CG) positions.

(b) The flight crew shall be provided with a means of replicating and verifying any mass and balance computation based on electronic calculations.

(c) The operator shall establish procedures to enable the pilot-in-command to determine the mass of the fuel/energy load by using the actual density or, if not known, the density calculated in accordance with a method specified in the operations manual.

▼M27

(d) The pilot-in-command shall ensure the following:

(1) the loading of the aircraft is performed under the supervision of qualified personnel;

(2) traffic load is consistent with the data used for the calculation of the aircraft mass and balance.

(e) The operator shall specify, in the operations manual, the principles and methods involved in the loading and in the mass and balance system, which are in conformity with the requirements set out in points (a) to (d). That system shall cover all types of intended operations.

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SPO.POL.115 Mass and balance data and documentation — commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft

(a) The operator shall establish mass and balance data and produce mass and balance documentation prior to each flight, or series of flights, specifying the load and its distribution in such a way that the mass and balance limits of the aircraft are not exceeded. The mass and balance documentation shall contain the following information:

(1) aircraft registration and type;

(2) flight identification, number and date, as applicable;

(3) name of the pilot-in-command;

(4) name of the person who prepared the document;

(5) dry operating mass and the corresponding CG of the aircraft;

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(6) mass of the fuel/energy at take-off and mass of trip fuel/energy;

(7) mass of consumables other than fuel/energy, if applicable;

(8) load components;

(9) take-off mass, landing mass, and zero fuel/energy mass;

▼M4

(10) applicable aircraft CG positions; and

(11) the limiting mass and CG values.

▼M4

(b) Where mass and balance data and documentation is generated by a computerised mass and balance system, the operator shall verify the integrity of the output data.

SPO.POL.116 Mass and balance data and documentation — alleviations

Notwithstanding SPO.POL.115(a)(5), the CG position may not need not be on the mass and balance documentation, if the load distribution is in accordance with a pre-calculated balance table or if it can be shown that for the planned operations a correct balance can be ensured, whatever the real load is.

SPO.POL.120 Performance — general

The pilot-in-command shall only operate the aircraft if the performance is adequate to comply with the applicable rules of the air and any other restrictions applicable to the flight, the airspace or the aerodromes or operating sites used, taking into account the charting accuracy of any charts and maps used.

SPO.POL.125 Take-off mass limitations — complex motor-powered aeroplanes

The operator shall ensure that:

(a) the mass of the aeroplane at the start of take-off shall not exceed the mass limitations:

(1) at take-off, as required in SPO.POL.130;

(2) en-route with one engine inoperative (OEI), as required in SPO.POL.135; and

(3) at landing, as required in SPO.POL.140,

allowing for expected reductions in mass as the flight proceeds, and for fuel jettisoning;

(b) the mass at the start of take-off shall never exceed the maximum take-off mass specified in the AFM for the pressure altitude appropriate to the elevation of the aerodrome or operating site, and if used as a parameter to determine the maximum take-off mass, any other local atmospheric condition; and

(c) the estimated mass for the expected time of landing at the aerodrome or operating site of intended landing and at any destination alternate aerodrome shall never exceed the maximum landing mass specified in the AFM for the pressure altitude appropriate to the elevation of those aerodromes or operating sites and if used as a parameter to determine the maximum landing mass, any other local atmospheric condition.

SPO.POL.130 Take-off — complex motor-powered aeroplanes

(a) When determining the maximum take-off mass, the pilot-in-command shall take the following into account:

(1) the calculated take-off distance shall not exceed the take-off distance available with a clearway distance not exceeding half of the take-off run available;

(2) the calculated take-off run shall not exceed the take-off run available;

(3) a single value of V1 shall be used for the rejected and continued take-off, where a V1 is specified in the AFM; and

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(4) on a wet or contaminated runway, the take-off mass shall not exceed that permitted for a take-off on a dry runway under the same conditions.

(b) Except for an aeroplane equipped with turboprop engines and a maximum take-off mass at or below 5 700 kg, in the event of an engine failure during take-off, the pilot-in-command shall ensure that the aeroplane is able:

(1) to discontinue the take-off and stop within the accelerate-stop distance available or the runway available; or

(2) to continue the take-off and clear all obstacles along the flight path by an adequate margin until the aeroplane is in a position to comply with SPO.POL.135.

SPO.POL.135 En-route — one engine inoperative — complex motor-powered aeroplanes

The pilot-in-command shall ensure that in the event of an engine becoming inoperative at any point along the route, a multi-engined aeroplane shall be able to continue the flight to an adequate aerodrome or operating site without flying below the minimum obstacle clearance altitude at any point.

SPO.POL.140 Landing — complex motor-powered aeroplanes

The pilot-in-command shall ensure that at any aerodrome or operating site, after clearing all obstacles in the approach path by a safe margin, the aeroplane shall be able to land and stop, or a seaplane to come to a satisfactory low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.

SPO.POL.145 Performance and operating criteria — aeroplanes

When operating an aeroplane at a height of less than 150 m (500 ft) above a non-congested area, for operations of aeroplanes that are not able to sustain level flight in the event of a critical engine failure, the operator shall:

(a) establish operational procedures to minimise the consequences of an engine failure;

(b) establish a training programme for crew members; and

(c) ensure that all crew members and task specialists on board are briefed on the procedures to be carried out in the event of a forced landing.

SPO.POL.146 Performance and operating criteria — helicopters

(a) The pilot-in-command may operate an aircraft over congested areas provided that:

(1) the helicopter is certified in category A or B; and

(2) safety measures are established to prevent undue hazard to persons or property on the ground and the operation and its SOP is authorised.

(b) The operator shall:

(1) establish operational procedures to minimise the consequences of an engine failure;

(2) establish a training programme for crew members; and

(3) ensure that all crew members and task specialists on board are briefed on the procedures to be carried out in the event of a forced landing.

▼M4

(c) The operator shall ensure that the mass at take-off, landing or hover shall not exceed the maximum mass specified for:

(1) a hover out of ground effect (HOGE) with all engines operating at the appropriate power rating; or

(2) if conditions prevail that a HOGE is not likely to be established, the helicopter mass shall not exceed the maximum mass specified for a hover in ground effect (HIGE) with all engines operating at the appropriate power rating, provided prevailing conditions allow a hover in ground effect at the maximum specified mass.

SUBPART D

INSTRUMENTS, DATA AND EQUIPMENT

SECTION 1

Aeroplanes

SPO.IDE.A.100 Instruments and equipment — general

(a) Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements if they are:

(1) used by the flight crew to control the flight path;

(2) used to comply with SPO.IDE.A.215;

(3) used to comply with SPO.IDE.A.220; or

(4) installed in the aeroplane.

▼M15

(b) The following items, when required under this Subpart, do not need an equipment approval:

(1) spare fuses;

(2) independent portable lights;

(3) an accurate time piece;

(4) chart holder;

(5) first aid kits;

(6) survival and signalling equipment;

(7) sea anchor and equipment for mooring;

(8) a simple PCDS used by a task specialist as a restraint device.

(c) Instruments, equipment or accessories not required under this Annex (Part-SPO) as well as any other equipment which is not required under this Regulation, but carried on a flight, shall comply with the following requirements:

(1) the information provided by those instruments, equipment or accessories shall not be used by the flight crew members to comply with Annex II to Regulation (EU) 2018/1139 or points SPO.IDE.A.215 and SPO.IDE.A.220 of this Annex;

(2) the instruments, equipment or accessories shall not affect the airworthiness of the aeroplane, even in the case of failures or malfunction.

▼M4

(d) Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.

▼M4

(e) Those instruments that are used by a flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision which he/she normally assumes when looking forward along the flight path.

(f) All required emergency equipment shall be easily accessible for immediate use.

▼M15

SPO.IDE.A.105 Minimum equipment for flight

A flight shall not be commenced when any of the aeroplane's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless either of the following conditions is fulfilled:

(a) the aeroplane is operated in accordance with the minimum equipment list (MEL);

(b) for complex motor-powered aeroplanes and for any aeroplane used in commercial operations, the operator is approved by the competent authority to operate the aeroplane within the constraints of the master minimum equipment list (MMEL) in accordance with point ORO.MLR.105(j) of Annex III;

(c) the aeroplane is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

▼M4

SPO.IDE.A.110 Spare electrical fuses

Aeroplanes shall be equipped with spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are allowed to be replaced in flight.

SPO.IDE.A.115 Operating lights

Aeroplanes operated at night shall be equipped with:

(a) an anti-collision light system;

(b) navigation/position lights;

(c) a landing light;

(d) lighting supplied from the aeroplane’s electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the aeroplane;

(e) lighting supplied from the aeroplane’s electrical system to provide illumination in all cabin compartments;

(f) an independent portable light for each crew member station; and

(g) lights to conform with the International Regulations for Preventing Collisions at Sea if the aeroplane is operated as a seaplane.

SPO.IDE.A.120 Operations under VFR — flight and navigational instruments and associated equipment

(a) Aeroplanes operated under VFR by day shall be equipped with a means of measuring and displaying the following:

(1) magnetic heading,

(2) time in hours, minutes and seconds,

▼M15

(3) barometric altitude,

▼M4

(4) indicated airspeed,

(5) Mach number whenever speed limitations are expressed in terms of Mach number, and

(6) slip for complex motor-powered aeroplanes.

▼M4

(b) Aeroplanes operating under VMC at night shall be, in addition to (a), equipped with:

(1) a means of measuring and displaying the following:

(i) turn and slip,

(ii) attitude,

(iii) vertical speed, and

(iv) stabilised heading;

(2) a means of indicating when the supply of power to the gyroscopic instruments is not adequate.

(c) Complex motor-powered aeroplanes operating under VMC over water and out of sight of the land shall be, in addition to (a) and (b), equipped with a means of preventing malfunction of the airspeed indicating system due to condensation or icing.

(d) Aeroplanes operated in conditions where they cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a) and (b), equipped with a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

(e) Whenever two pilots are required for the operation, aeroplanes shall be equipped with an additional separate means of displaying the following:

▼M15

(1) barometric altitude,

▼M4

(2) indicated airspeed,

(3) slip, or turn and slip, as applicable,

(4) attitude, if applicable,

(5) vertical speed, if applicable

(6) stabilised heading, if applicable, and

(7) Mach number whenever speed limitations are expressed in terms of Mach number, if applicable.

SPO.IDE.A.125 Operations under IFR — flight and navigational instruments and associated equipment

Aeroplanes operated under IFR shall be equipped with:

(a) a means of measuring and displaying the following:

(1) magnetic heading,

(2) time in hours, minutes and seconds,

▼M15

(3) barometric altitude,

▼M4

(4) indicated airspeed,

(5) vertical speed,

(6) turn and slip,

(7) attitude,

▼M4

(8) stabilised heading,

(9) outside air temperature, and

(10) Mach number, whenever speed limitations are expressed in terms of Mach number;

(b) a means of indicating when the supply of power to the gyroscopic instruments is not adequate.

(c) whenever two pilots are required for the operation, an additional separate means of displaying for the second pilot:

▼M15

(1) barometric altitude,

▼M4

(2) indicated airspeed,

(3) vertical speed,

(4) turn and slip,

(5) attitude,

(6) stabilised heading, and

(7) Mach number whenever speed limitations are expressed in terms of Mach number, if applicable;

(d) a means of preventing malfunction of the airspeed indicating system required in (a)(4) and (c)(2) due to condensation or icing; and

(e) complex motor-powered aeroplanes when operated under IFR shall, in addition to (a), (b), (c) and (d), be equipped with:

(1) an alternate source of static pressure;

(2) a chart holder in an easily readable position that can be illuminated for night operations;

(3) a second independent means of measuring and displaying altitude unless already installed to comply with (e)(1); and

▼M15

(4) an emergency power supply, independent of the main electrical generating system, for the purpose of operating and illuminating an attitude indicating system for a minimum period of 30 minutes. The emergency power supply shall be automatically operative after the total failure of the main electrical generating system and clear indication shall be given on the instrument or on the instrument panel that the attitude indicator is being operated by emergency power.

▼M4

SPO.IDE.A.126 Additional equipment for single-pilot operation under IFR

Complex motor-powered aeroplanes operated under IFR with a single pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

▼M12

SPO.IDE.A.130 Terrain awareness warning system (TAWS)

(a) Turbine-powered aeroplanes with a maximum certified take-off mass (MCTOM) of more than 5 700 kg or an MOPSC of more than nine shall be equipped with a TAWS that meets the requirements for:

▼M12

(1) class A equipment, as specified in an acceptable standard, in the case of aeroplanes for which the individual certificate of airworthiness (CofA) was first issued after 1 January 2011; or

(2) class B equipment, as specified in an acceptable standard, in the case of aeroplanes for which the individual CofA was first issued on or before 1 January 2011.

(b) When used in commercial operations, turbine-powered aeroplanes for which the individual CofA was first issued after 1 January 2019 and having an MCTOM of 5 700 kg or less and an MOPSC of six to nine shall be equipped with a TAWS that meets the requirements for class B equipment, as specified in an acceptable standard.

▼M4

SPO.IDE.A.131 Airborne collision avoidance system (ACAS II)

Unless otherwise provided for by Regulation (EU) No 1332/2011, turbine-powered aeroplanes with an MCTOM of more than 5 700 kg shall be equipped with ACAS II.

SPO.IDE.A.132 Airborne weather detecting equipment — complex motor-powered aeroplanes

The following aeroplanes shall be equipped with airborne weather detecting equipment when operated at night or in IMC in areas where thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route:

(a) pressurised aeroplanes;

(b) non-pressurised aeroplanes with an MCTOM of more than 5 700 kg.

SPO.IDE.A.133 Additional equipment for operations in icing conditions at night — complex motor-powered aeroplanes

(a) Aeroplanes operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

(b) The means to illuminate the formation of ice shall not cause glare or reflection that would handicap flight crew members in the performance of their duties.

SPO.IDE.A.135 Flight crew interphone system

Aeroplanes operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

SPO.IDE.A.140 Cockpit voice recorder

(a) The following aeroplanes shall be equipped with a CVR:

(1) aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2016; and

(2) aeroplanes with an MCTOM of more than 2 250 kg:

(i) certified for operation with a minimum crew of at least two pilots;

(ii) equipped with turbojet engine(s) or more than one turboprop engine; and

▼M4

(iii) for which a type certificate is first issued on or after 1 January 2016.

▼M8

(b) The CVR shall be capable of retaining data recorded during at least:

▼M18

(1) the preceding 25 hours for aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2022; or

▼M8

(2) the preceding 2 hours in all other cases.

▼M4

(c) The CVR shall record with reference to a timescale:

(1) voice communications transmitted from or received in the flight crew compartment by radio;

(2) flight crew members' voice communications using the interphone system and the public address system, if installed;

(3) the aural environment of the flight crew compartment, including, without interruption, the audio signals received from each boom and mask microphone in use; and

(4) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

(d) The CVR shall start automatically to record prior to the aeroplane moving under its own power and shall continue to record until the termination of the flight when the aeroplane is no longer capable of moving under its own power.

(e) In addition to (d), depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

▼M8

(f) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

▼M4

SPO.IDE.A.145 Flight data recorder

(a) Aeroplanes with an MCTOM of more than 5 700 kg and first issued with an individual CofA on or after 1 January 2016 shall be equipped with an FDR that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available.

(b) The FDR shall record the parameters required to determine accurately the aeroplane flight path, speed, attitude, engine power, configuration and operation and be capable of retaining data recorded during at least the preceding 25 hours.

(c) Data shall be obtained from aeroplane sources that enable accurate correlation with information displayed to the flight crew.

▼M4

(d) The FDR shall start automatically to record the data prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is incapable of moving under its own power.

▼M8

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

▼M16

SPO.IDE.A.146 Lightweight flight recorder

(a) Turbine-engined aeroplanes with an MCTOM of 2 250 kg or more and aeroplanes with an MOPSC of more than 9 shall be equipped with a flight recorder if all the following conditions are met:

(1) they are not within the scope of point SPO.IDE.A.145(a);

(2) they are used for commercial operations;

(3) they are first issued with an individual CofA on or after 5 September 2022.

(b) The flight recorder shall record, by means of flight data or images, information that is sufficient to determine the flight path and aircraft speed.

(c) The flight recorder shall be capable of retaining the flight data and the images recorded during at least the preceding 5 hours.

(d) The flight recorder shall automatically start to record prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is no longer capable of moving under its own power.

(e) If the flight recorder records images or audio of the flight crew compartment, then a function shall be provided which can be operated by the pilot-in-command and which modifies image and audio recordings made before the operation of that function, so that those recordings cannot be retrieved using normal replay or copying techniques.

▼M4

SPO.IDE.A.150 Data link recording

(a) Aeroplanes first issued with an individual CofA on or after 1 January 2016 that have the capability to operate data link communications and are required to be equipped with a CVR shall record on a recorder, where applicable:

(1) data link communication messages related to ATS communications to and from the aeroplane, including messages applying to the following applications:

(i) data link initiation;

(ii) controller-pilot communication;

(iii) addressed surveillance;

(iv) flight information;

(v) as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

(vi) as far as is practicable, given the architecture of the system, aircraft operational control data; and

(vii) as far as is practicable, given the architecture of the system, graphics;

▼M4

(2) information that enables correlation to any associated records related to data link communications and stored separately from the aeroplane; and

(3) information on the time and priority of data link communications messages, taking into account the system's architecture.

(b) The recorder shall use a digital method of recording and storing data and information and a method for readily retrieving that data. The recording method shall allow the data to match the data recorded on the ground.

(c) The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in SPO.IDE.A.140.

▼M8

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

▼M4

(e) The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in SPO.IDE.A.140 (d) and (e).

SPO.IDE.A.155 Flight data and cockpit voice combination recorder

Compliance with CVR requirements and FDR requirements may be achieved by:

(a) one flight data and cockpit voice combination recorder if the aeroplane has to be equipped with a CVR or an FDR; or

(b) two flight data and cockpit voice combination recorders if the aeroplane has to be equipped with a CVR and an FDR.

SPO.IDE.A.160 Seats, seat safety belts and restraint systems

Aeroplanes shall be equipped with:

(a) a seat or station for each crew member or task specialist on board;

(b) a seat belt on each seat, and restraint devices for each station;

▼M9

(c) for other-than-complex motor-powered aeroplanes, a seat belt with upper torso restraint system on each flight crew seat, having a single point release for aeroplanes having a CofA first issued on or after 25 August 2016;

(d) for complex motor-powered aeroplanes, a seat belt with upper torso restraint system, incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration:

(1) on each flight crew seat and on any seat alongside a pilot's seat; and

(2) on each observer's seat located in the flight crew compartment;

▼M15

(e) The seat belt with upper torso restraint system required under point (d) shall have:

(1) a single point release;

(2) on flight crew members seats and on any seat alongside a pilot's seat, either of the following:

▼M15

(i) two shoulder straps and a seat belt that may be used independently;

(ii) a diagonal shoulder strap and a seat belt that may be used independently for the following aeroplanes:

(A) aeroplanes with an MCTOM of 5 700 kg or less and with an MOPSC of nine or less that are compliant with the emergency landing dynamic conditions defined in the applicable certification specification;

(B) aeroplanes with an MCTOM of 5 700 kg or less and with an MOPSC of nine or less that are not compliant with the emergency landing dynamic conditions defined in the applicable certification specification and having an individual CofA first issued before 25 August 2016.

▼M4

SPO.IDE.A.165 First-aid kit

(a) Aeroplanes shall be equipped with a first-aid kit.

(b) The first-aid kit shall be:

(1) readily accessible for use; and

(2) kept up-to-date.

SPO.IDE.A.170 Supplemental oxygen — pressurised aeroplanes

(a) Pressurised aeroplanes operated at flight altitudes for which the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

(b) Pressurised aeroplanes operated above flight altitudes at which the pressure altitude in the cabin compartments is above 10 000 ft shall carry enough breathing oxygen to supply all crew members and task specialists at least:

(1) for any period when the cabin pressure altitude exceeds 15 000 ft, but in no case less than 10 minutes' supply;

(2) for any period when, in the event of loss of pressurisation and taking into account the circumstances of the flight, the pressure altitude in the flight crew and cabin compartment will be between 14 000 ft and 15 000 ft;

(3) for any period in excess of 30 minutes when the pressure altitude in the flight crew and cabin compartment will be between 10 000 ft and 14 000 ft; and

(4) for no less than 10 minutes, in the case of aeroplanes operated at pressure altitudes above 25 000 ft, or operated below that altitude, but under conditions that will not allow them to descend safely to a pressure altitude of 13 000 ft within 4 minutes.

(c) Pressurised aeroplanes operated at flight altitudes above 25 000 ft shall, in addition, be equipped with:

(1) a device to provide a warning indication to the flight crew of any loss of pressurisation; and

(2) in the case of complex motor-powered aeroplanes, quick donning masks for flight crew members.

SPO.IDE.A.175 Supplemental oxygen — non-pressurised aeroplanes

(a) Non-pressurised aeroplanes operated at flight altitudes when the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

▼M4

(b) Non-pressurised aeroplanes operated above flight altitudes at which the pressure altitude in the cabin compartments is above 10 000 ft shall carry enough breathing oxygen to supply:

(1) all crew members for any period in excess of 30 minutes when the pressure altitude in the cabin compartment will be between 10 000 ft and 13 000 ft; and

(2) all persons on board for any period that the pressure altitude in the cabin compartment will be above 13 000 ft.

(c) Notwithstanding (b), excursions of a specified duration between 13 000 ft and 16 000 ft may be undertaken without oxygen supplies, in accordance with SPO.OP.195(b).

SPO.IDE.A.180 Hand fire extinguishers

▼M14

(a) Aeroplanes, except ELA1 aeroplanes, shall be equipped with at least one hand fire extinguisher:

(1) in the flight crew compartment; and

(2) in each cabin compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

▼M4

(b) The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

SPO.IDE.A.181 Crash axe and crowbar

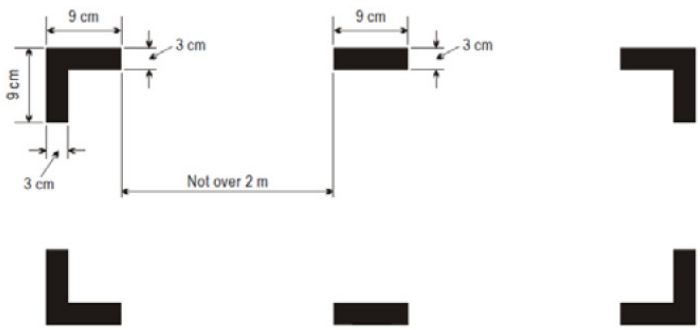
Aeroplanes with an MCTOM of more than 5 700 kg shall be equipped with at least one crash axe or crowbar located in the flight crew compartment.

SPO.IDE.A.185 Marking of break-in points

If areas of the aeroplane's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.

Figure 1

Marking of break-in points



SPO.IDE.A.190 Emergency locator transmitter (ELT)

▼M8

(a) Aeroplanes shall be equipped with:

(1) an ELT of any type or an aircraft localisation means meeting the requirement of Annex IV (Part CAT), CAT.GEN.MPA.210, to Regulation (EU) No 965/2012, when first issued with an individual CofA on or before 1 July 2008;

▼M8

(2) an automatic ELT or an aircraft localisation means meeting the requirement of Annex IV (Part CAT), CAT.GEN.MPA.210, to Regulation (EU) No 965/2012, when first issued with an individual CofA after 1 July 2008; or

(3) a survival ELT (ELT(S)) or a personal locator beacon (PLB), carried by a crew member or a task specialist, when certified for a maximum seating configuration of six or less.

▼M4

(b) ELTs of any type and PLBs shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

SPO.IDE.A.195 Flight over water

(a) The following aeroplanes shall be equipped with a life-jacket for each person on board, that shall be worn or stowed in a position that is readily accessible from the seat or station of the person for whose use it is provided:

(1) single-engine landplanes when:

(i) flying over water beyond gliding distance from land; or

(ii) taking off or landing at an aerodrome or operating site where, in the opinion of the pilot-in-command, the take-off or approach path is so disposed over water that there would be a likelihood of a ditching;

(2) seaplanes operated over water; and

(3) aeroplanes operated at a distance away from land where an emergency landing is possible greater than that corresponding to 30 minutes at normal cruising speed or 50 NM, whichever is less.

(b) Each life-jacket shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

(c) Seaplanes operated over water shall be equipped with:

(1) a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the aeroplane on water, appropriate to its size, weight and handling characteristics; and

(2) equipment for making the sound signals as prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

(d) The pilot-in-command of an aeroplane operated at a distance away from land where an emergency landing is possible greater than that corresponding to 30 minutes at normal cruising speed or 50 NM, whichever is the lesser, shall determine the risks to survival of the occupants of the aeroplane in the event of a ditching, based on which he/she shall determine the carriage of:

(1) equipment for making the distress signals;

(2) life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency; and

(3) life-saving equipment, to provide the means of sustaining life, as appropriate to the flight to be undertaken.

SPO.IDE.A.200 Survival equipment

(a) Aeroplanes operated over areas in which search and rescue would be especially difficult shall be equipped with:

(1) signalling equipment to make the distress signals;

(2) at least one survival ELT (ELT(S)); and

▼M4

(3) additional survival equipment for the route to be flown taking account of the number of persons on board.

(b) The additional survival equipment specified in (a)(3) does not need to be carried when the aeroplane:

(1) remains within a distance from an area where search and rescue is not especially difficult corresponding to:

(i) 120 minutes at one-engine-inoperative (OEI) cruising speed for aeroplanes capable of continuing the flight to an aerodrome with the critical engine(s) becoming inoperative at any point along the route or planned diversion routes; or

(ii) 30 minutes at cruising speed for all other aeroplanes; or

(2) remains within a distance no greater than that corresponding to 90 minutes at cruising speed from an area suitable for making an emergency landing, for aeroplanes certified in accordance with the applicable airworthiness standard.

SPO.IDE.A.205 Individual protective equipment

Each person on board shall wear individual protective equipment that is adequate for the type of operation being undertaken.

SPO.IDE.A.210 Headset

(a) Aeroplanes shall be equipped with a headset with a boom microphone or equivalent for each flight crew member at their assigned station in the flight crew compartment.

(b) Aeroplanes operated under IFR or at night shall be equipped with a transmit button on the manual pitch and roll control for each required flight crew member.

SPO.IDE.A.215 Radio communication equipment

(a) Aeroplanes operated under IFR or at night, or when required by the applicable airspace requirements, shall be equipped with radio communication equipment that, under normal radio propagating conditions, shall be capable of:

(1) conducting two-way communication for aerodrome control purposes;

(2) receiving meteorological information at any time during flight;

(3) conducting two-way communication at any time during flight with those aeronautical stations and on those frequencies prescribed by the appropriate authority; and

(4) providing for communication on the aeronautical emergency frequency 121,5 MHz.

(b) When more than one communication equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

SPO.IDE.A.220 Navigation equipment

(a) Aeroplanes shall be equipped with navigation equipment that will enable them to proceed in accordance with:

(1) the ATS flight plan, if applicable; and

(2) the applicable airspace requirements.

▼M4

(b) Aeroplanes shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with (a), or an appropriate contingency action to be completed safely.

(c) Aeroplanes operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed. This equipment shall be capable of providing such guidance for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodromes.

▼M9

(d) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

▼M15

(e) Aeroplanes shall be equipped with surveillance equipment in accordance with the applicable airspace requirements.

▼M4

SPO.IDE.A.225 Transponder

Where required by the airspace being flown, aeroplanes shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

▼M9

SPO.IDE.A.230 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.

▼M4

SECTION 2

Helicopters

SPO.IDE.H.100 Instruments and equipment — general

(a) Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements if they are:

(1) used by the flight crew to control the flight path;

(2) used to comply with SPO.IDE.H.215;

(3) used to comply with SPO.IDE.H.220; or

(4) installed in the helicopter.

▼M15

(b) The following items, when required by this Subpart, do not need an equipment approval:

(1) independent portable lights;

▼M15

(2) an accurate time piece;

(3) first-aid kit;

(4) survival and signalling equipment;

(5) sea anchor and equipment for mooring;

(6) child restraint device;

(7) a simple PCDS used by a task specialist as a restraint device.

(c) Instruments, equipment or accessories not required under this Annex (Part-SPO), as well as any other equipment that is not required under this Regulation, but carried on a flight, shall comply with the following requirements:

(1) the information provided by those instruments, equipment or accessories shall not be used by the flight crew members to comply with Annex II to Regulation (EU) 2018/1139 or points SPO.IDE.H.215 and SPO.IDE.H.220 of this Annex;

(2) the instruments, equipment or accessories shall not affect the airworthiness of the helicopter, even in the case of failures or malfunction.

▼M4

(d) Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.

(e) Those instruments that are used by a flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision which he/she normally assumes when looking forward along the flight path.

(f) All required emergency equipment shall be easily accessible for immediate use.

▼M15

SPO.IDE.H.105 Minimum equipment for flight

A flight shall not be commenced when any of the helicopter's instruments, items of equipment or functions required for the intended flight is inoperative or missing, unless either of the following conditions is fulfilled:

(a) the helicopter is operated in accordance with the minimum equipment list (MEL);

(b) for complex motor-powered helicopters, and for any helicopter used in commercial operations, the operator is approved by the competent authority to operate the helicopter within the constraints of the master minimum equipment list (MMEL) in accordance with point ORO.MLR.105(j) of Annex III;

(c) the helicopter is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

▼M4

SPO.IDE.H.115 Operating lights

Helicopters operated at night shall be equipped with:

(a) an anti-collision light system;

(b) navigation/position lights;

(c) a landing light;

(d) lighting supplied from the helicopter’s electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the helicopter;

▼M4

(e) lighting supplied from the helicopter's electrical system to provide illumination in all cabin compartments;

(f) an independent portable light for each crew member station; and

(g) lights to conform with the International Regulations for Preventing Collisions at Sea if the helicopter is amphibious.

SPO.IDE.H.120 Operations under VFR — flight and navigational instruments and associated equipment

(a) Helicopters operated under VFR by day shall be equipped with a means of measuring and displaying the following:

(1) magnetic heading,

(2) time in hours, minutes and seconds,

▼M15

(3) barometric altitude,

▼M4

(4) indicated airspeed, and

(5) slip.

(b) Helicopters operated under VMC overwater and out of sight of the land or under VMC at night, shall be, in addition to (a), equipped with:

(1) a means of measuring and displaying:

(i) attitude,

(ii) vertical speed, and

(iii) stabilised heading;

(2) a means of indicating when the supply of power to the gyroscopic instruments is not adequate; and

(3) for complex motor-powered helicopters, a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

(c) Helicopters operated when the visibility is less than 1 500 m, or in conditions where they cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a) and (b), equipped with a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

(d) Whenever two pilots are required for the operation, helicopters shall be equipped with an additional separate means of displaying:

▼M15

(1) barometric altitude,

▼M4

(2) indicated airspeed,

(3) slip,

(4) attitude, if applicable,

(5) vertical speed, if applicable, and

(6) stabilised heading, if applicable.

▼M4

SPO.IDE.H.125 Operations under IFR — flight and navigational instruments and associated equipment

Helicopters operated under IFR shall be equipped with:

(a) a means of measuring and displaying:

(1) magnetic heading,

(2) time in hours, minutes and seconds,

▼M15

(3) barometric altitude,

▼M4

(4) indicated airspeed,

(5) vertical speed,

(6) slip,

(7) attitude,

(8) stabilised heading, and

(9) outside air temperature;

(b) a means of indicating when the supply of power to the gyroscopic instruments is not adequate;

(c) whenever two pilots are required for the operation, an additional separate means of displaying:

▼M15

(1) barometric altitude,

▼M4

(2) indicated airspeed,

(3) vertical speed,

(4) slip,

(5) attitude, and

(6) stabilised heading;

(d) a means of preventing malfunction of the airspeed indicating system required by (a)(4) and (c)(2) due to condensation or icing;

(e) an additional means of measuring and displaying attitude as a standby instrument; and

(f) the following for complex motor-powered helicopters:

(1) an alternate source of static pressure; and

(2) a chart holder in an easily readable position that can be illuminated for night operations.

SPO.IDE.H.126 Additional equipment for single-pilot operation under IFR

Helicopters operated under IFR with a single pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

▼M4

SPO.IDE.H.132 Airborne weather detecting equipment — complex motor-powered helicopters

Helicopters operated under IFR or at night shall be equipped with airborne weather detecting equipment when current weather reports indicate that thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route to be flown.

SPO.IDE.H.133 Additional equipment for operations in icing conditions at night — complex motor-powered helicopters

(a) Helicopters operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

(b) The means to illuminate the formation of ice shall not cause glare or reflection that would handicap flight crew members in the performance of their duties.

SPO.IDE.H.135 Flight crew interphone system

Helicopters operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

SPO.IDE.H.140 Cockpit voice recorder

(a) Helicopters with an MCTOM of more than 7 000 kg and first issued with an individual CofA on or after 1 January 2016 shall be equipped with a CVR.

(b) The CVR shall be capable of retaining data recorded during at least the preceding 2 hours.

(c) The CVR shall record with reference to a timescale:

(1) voice communications transmitted from or received in the flight crew compartment by radio;

(2) flight crew members' voice communications using the interphone system and the public address system, if installed;

(3) the aural environment of the cockpit, including, without interruption, the audio signals received from each crew microphone; and

(4) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.

(d) The CVR shall start automatically to record prior to the helicopter moving under its own power and shall continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power.

(e) In addition to (d), depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

▼M8

(f) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter.

▼M4

SPO.IDE.H.145 Flight data recorder

(a) Helicopters with an MCTOM of more than 3 175 kg and first issued with an individual CofA on or after 1 January 2016 shall be equipped with an FDR that uses a digital method of recording and storing data and for which a method of readily retrieving that data from the storage medium is available.

(b) The FDR shall record the parameters required to determine accurately the helicopter flight path, speed, attitude, engine power, configuration and operation and be capable of retaining data recorded during at least the preceding 10 hours.

(c) Data shall be obtained from helicopter sources that enable accurate correlation with information displayed to the flight crew.

(d) The FDR shall start automatically to record the data prior to the helicopter being capable of moving under its own power and shall stop automatically after the helicopter is incapable of moving under its own power.

▼M8

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

▼M16

SPO.IDE.H.146 Lightweight flight recorder

(a) Turbine-engined helicopters with an MCTOM of 2 250 kg or more shall be equipped with a flight recorder if all the following conditions are met:

▼M20

(1) they are not within the scope of point SPO.IDE.H.145 (a);

▼M16

(2) they are used for commercial operations;

(3) they are first issued with an individual CofA on or after 5 September 2022.

(b) The flight recorder shall record, by means of flight data or images, information that is sufficient to determine the flight path and aircraft speed.

(c) The flight recorder shall be capable of retaining the flight data and the images recorded during at least the preceding 5 hours.

(d) The flight recorder shall automatically start to record prior to the helicopter being capable of moving under its own power and shall stop automatically after the helicopter is no longer capable of moving under its own power.

(e) If the flight recorder records images or audio of the flight crew compartment, then a function shall be provided which can be operated by the pilot-in-command and which modifies image and audio recordings made before the operation of that function, so that those recordings cannot be retrieved using normal replay or copying techniques.

▼M4

SPO.IDE.H.150 Data link recording

(a) Helicopters first issued with an individual CofA on or after 1 January 2016 that have the capability to operate data link communications and are required to be equipped with a CVR shall record on a recorder, where applicable:

(1) data link communication messages related to ATS communications to and from the helicopter, including messages applying to the following applications:

(i) data link initiation;

(ii) controller-pilot communication;

▼M4

(iii) addressed surveillance;

(iv) flight information;

(v) as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

(vi) as far as is practicable, given the architecture of the system, aircraft operational control data; and

(vii) as far as is practicable, given the architecture of the system, graphics;

(2) information that enables correlation to any associated records related to data link communications and stored separately from the helicopter; and

(3) information on the time and priority of data link communications messages, taking into account the system's architecture.

(b) The recorder shall use a digital method of recording and storing data and information and a method for readily retrieving that data. The recording method shall allow the data to match the data recorded on the ground.

(c) The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in SPO.IDE.H.140.

▼M8

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

▼M4

(e) The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in SPO.IDE.H.140 (d) and (e).

SPO.IDE.H.155 Flight data and cockpit voice combination recorder

Compliance with CVR and FDR requirements may be achieved by one flight data and cockpit voice combination recorder.

SPO.IDE.H.160 Seats, seat safety belts and restraint systems

(a) Helicopters shall be equipped with:

(1) a seat or station for each crew member or task specialist on board;

(2) a seat belt on each seat, and restraint devices for each station;

(3) for helicopters first issued with an individual CofA after 31 December 2012, a seat belt with an upper torso restraint system for each seat; and

(4) a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration on each flight crew seat.

(b) A seat belt with upper torso restraint system shall have a single point release.

▼M4

SPO.IDE.H.165 First-aid kit

(a) Helicopters shall be equipped with a first-aid kit.

(b) The first-aid kit shall be:

(1) readily accessible for use; and

(2) kept up-to-date.

SPO.IDE.H.175 Supplemental oxygen — non-pressurised helicopters

(a) Non-pressurised helicopters operated at flight altitudes when the oxygen supply is required in accordance with (b) shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the required oxygen supplies.

(b) Non-pressurised helicopters operated above flight altitudes at which the pressure altitude in the cabin compartments is above 10 000 ft shall carry enough breathing oxygen to supply:

(1) all crew members for any period in excess of 30 minutes when the pressure altitude in the cabin compartment will be between 10 000 ft and 13 000 ft; and

(2) all crew members and task specialists for any period that the pressure altitude in the cabin compartment will be above 13 000 ft.

(c) Notwithstanding (b), excursions of a specified duration between 13 000 ft and 16 000 ft may be undertaken without oxygen supplies, -in accordance with SPO.OP.195(b).

SPO.IDE.H.180 Hand fire extinguishers

(a) Helicopters, except ELA2 helicopters, shall be equipped with at least one hand fire extinguisher:

(1) in the flight crew compartment; and

(2) in each cabin compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

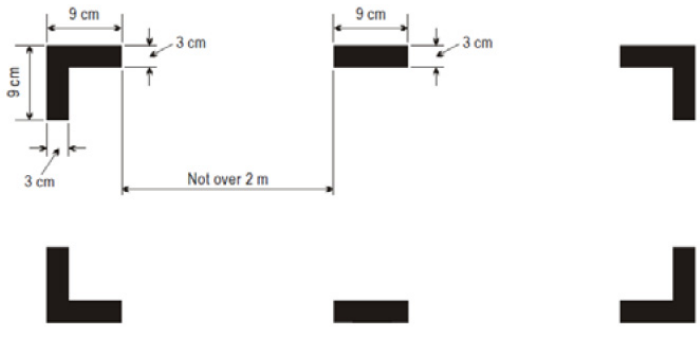
(b) The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

SPO.IDE.H.185 Marking of break-in points

If areas of the helicopter's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.

Figure 1

Marking of break-in points



▼M4

SPO.IDE.H.190 Emergency locator transmitter (ELT)

(a) Helicopters certified for a maximum seating configuration above six shall be equipped with:

(1) an automatic ELT; and

(2) one survival ELT (ELT(S)) in a life-raft or life-jacket when the helicopter is operated at a distance from land corresponding to more than 3 minutes flying time at normal cruising speed.

▼M28

(b) Helicopters certified for a maximum seating configuration of six or less shall be equipped with an ELT(S) or a personal locator beacon (PLB), carried by a crew member or a task specialist, or with an automatic ELT.

▼M4

(c) ELTs of any type and PLBs shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

SPO.IDE.H.195 ►M5 Flight over water — other-than complex motor-powered helicopters ◄

(a) Helicopters shall be equipped with a life-jacket for each person on board, that shall be worn or stowed in a position that is readily accessible from the seat or station of the person for whose use it is provided, when:

(1) flying over water beyond autorotational distance from the land where in case of the critical engine failure, the helicopter is not able to sustain level flight; or

(2) flying over water at a distance of land corresponding to more than 10 minutes flying at normal cruising speed, where in case of the critical engine failure, the helicopter is able to sustain level flight; or

(3) taking off or landing at an aerodrome/operating site where the take-off or approach path is over water.

(b) Each life-jacket shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

(c) The pilot-in-command of a helicopter operated on a flight over water at a distance from land corresponding to more than 30 minutes flying time at normal cruising speed or 50 NM, whichever is less, shall determine the risks to survival of the occupants of the helicopter in the event of a ditching, based on which he/she shall determine the carriage of:

(1) equipment for making the distress signals;

(2) life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency; and

(3) life-saving equipment to provide the means of sustaining life, as appropriate to the flight to be undertaken.

(d) The pilot-in-command shall determine the risks to survival of the occupants of the helicopter in the event of a ditching, when deciding if the life-jackets required in (a) shall be worn by all occupants.

SPO.IDE.H.197 Life-jackets — complex motor-powered helicopters

(a) Helicopters shall be equipped with a life-jacket for each person on board, that shall be worn or stowed in a position that is readily accessible from the seat or station of the person for whose use it is provided, when:

▼M4

(1) operated on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, where in the case of the critical engine failure, the helicopter is able to sustain level flight;

(2) operated on a flight over water beyond auto-rotational distance from the land, where in the case of the critical engine failure, the helicopter is not able to sustain level flight; or

(3) taking off or landing at an aerodrome or operating site where the take-off or approach path is so disposed over water that in the event of a mishap there would be the likelihood of a ditching.

(b) Each life-jacket shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

▼M9

SPO.IDE.H.198 Survival suits — complex motor-powered helicopters

Each person on board shall wear a survival suit when so determined by the pilot-in-command based on a risk assessment taking into account the following conditions:

(a) flights over water beyond autorotational distance or safe forced-landing distance from land, where, in the case of a critical engine failure, the helicopter is not able to sustain level flight; and

(b) the weather report or forecasts available to the pilot-in-command indicate that the sea temperature will be less than plus 10 °C during the flight.

▼M4

SPO.IDE.H.199 Life-rafts, survival ELTs and survival equipment on extended overwater flights — complex motor-powered helicopters

Helicopters operated:

(a) on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed where in the case of the critical engine failure, the helicopter is able to sustain level flight; or

(b) on a flight over water at a distance corresponding to more than 3 minutes flying time at normal cruising speed, where in the case of the critical engine failure, the helicopter is not able to sustain level flight, and if so determined by the pilot-in-command by means of a risk assessment, shall be equipped with:

(1) at least one life-raft with a rated capacity of not less than the maximum number of persons on board, stowed so as to facilitate their ready use in emergency;

(2) at least one survival ELT (ELT(S)) for each required life-raft; and

(3) life-saving equipment, including means of sustaining life, as appropriate to the flight to be undertaken.

SPO.IDE.H.200 Survival equipment

Helicopters operated over areas in which search and rescue would be especially difficult shall be equipped with:

(a) signalling equipment to make distress signals;

(b) at least one survival ELT (ELT(S)); and

(c) additional survival equipment for the route to be flown taking account of the number of persons on board.

▼M9

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▼M4

SPO.IDE.H.202 Helicopters certified for operating on water — miscellaneous equipment

Helicopters certified for operating on water shall be equipped with:

(a) a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the helicopter on water, appropriate to its size, weight and handling characteristics; and

(b) equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

SPO.IDE.H.203 All helicopters on flights over water — ditching

▼M5

Complex motor-powered helicopters operated on a flight over water in a hostile environment at a distance from land corresponding to more than 10 minutes' flying time at normal cruising speed and other-than complex motor-powered helicopters flying over water in a hostile environment beyond a distance of 50 NM from land shall be:

▼M4

(a) designed for landing on water in accordance with the relevant airworthiness code;

(b) certified for ditching in accordance with the relevant airworthiness code; or

(c) fitted with emergency flotation equipment.

SPO.IDE.H.205 Individual protective equipment

Each person on board shall wear individual protective equipment that is adequate for the type of operation being undertaken.

SPO.IDE.H.210 Headset

Whenever a radio communication and/or radio navigation system is required, helicopters shall be equipped with a headset with boom microphone or equivalent and a transmit button on the flight controls for each required pilot, crew member and/or task specialist at his/her assigned station.

SPO.IDE.H.215 Radio communication equipment

(a) Helicopters operated under IFR or at night, or when required by the applicable airspace requirements, shall be equipped with radio communication equipment that, under normal radio propagating conditions, shall be capable of:

(1) conducting two-way communication for aerodrome control purposes;

(2) receiving meteorological information;

(3) conducting two-way communication at any time during flight with those aeronautical stations and on those frequencies prescribed by the appropriate authority; and

(4) providing for communication on the aeronautical emergency frequency 121,5 MHz.

(b) When more than one communications equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

▼M4

(c) When a radio communication system is required, and in addition to the flight crew interphone system required in SPO.IDE.H.135, helicopters shall be equipped with a transmit button on the flight controls for each required pilot and crew member at his/her assigned station.

SPO.IDE.H.220 Navigation equipment

(a) Helicopters shall be equipped with navigation equipment that will enable them to proceed in accordance with:

(1) the ATS flight plan, if applicable; and

(2) the applicable airspace requirements.

(b) Helicopters shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with (a), or an appropriate contingency action to be completed safely.

(c) Helicopters operated on flights in which it is intended to land in IMC shall be equipped with navigation equipment capable of providing guidance to a point from which a visual landing can be performed. This equipment shall be capable of providing such guidance for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodromes.

▼M9

(d) For PBN operations the aircraft shall meet the airworthiness certification requirements for the appropriate navigation specification.

▼M15

(e) Helicopters shall be equipped with surveillance equipment in accordance with the applicable airspace requirements.

▼M4

SPO.IDE.H.225 Transponder

Where required by the airspace being flown, helicopters shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

▼M9

SPO.IDE.H.230 Management of aeronautical databases

(a) Aeronautical databases used on certified aircraft system applications shall meet data quality requirements that are adequate for the intended use of the data.

(b) The operator shall ensure the timely distribution and insertion of current and unaltered aeronautical databases to all aircraft that require them.

(c) Notwithstanding any other occurrence reporting requirements as defined in Regulation (EU) No 376/2014, the operator shall report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight.

In such cases, the operator shall inform flight crew and other personnel concerned, and shall ensure that the affected data is not used.

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SUBPART E

SPECIFIC REQUIREMENTS

SECTION 1

Helicopter external sling load operations (HESLO)

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SPO.SPEC.HESLO.100 Standard operating procedures

The standard operating procedures for HESLO shall specify:

(a) the equipment to be carried, including its operating limitations and appropriate entries in the MEL, as applicable;

(b) crew composition and experience requirements of crew members and task specialists;

(c) the relevant theoretical and practical training for crew members to perform their tasks, the relevant training for task specialists to perform their tasks, and the qualification and nomination of persons providing such training to crew members and task specialists;

(d) responsibilities and duties of crew members and task specialists;

(e) helicopter performance criteria necessary to be met to conduct HESLO operations;

(f) normal, abnormal and emergency procedures.

▼M4

SPO.SPEC.HESLO.105 Specific HESLO equipment

The helicopter shall be equipped with at least:

(a) one cargo safety mirror or alternative means to see the hook(s)/load; and

(b) one load meter, unless there is another method of determining the weight of the load.

SPO.SPEC.HESLO.110 Transportation of dangerous goods

The operator transporting dangerous goods to or from unmanned sites or remote locations shall apply to the competent authority for an exemption from the provisions of the Technical Instructions if they intend not to comply with the requirements of those Instructions.

SECTION 2

Human external cargo operations (HEC)

▼M15

SPO.SPEC.HEC.100 Standard operating procedures

The standard operating procedures for HEC shall specify:

(a) the equipment to be carried, including its operating limitations and appropriate entries in the MEL, as applicable;

(b) crew composition and experience requirements of crew members and task specialists;

▼M15

(c) the relevant theoretical and practical training for crew members to perform their tasks, the relevant training for task specialists to perform their tasks, and the qualification and nomination of persons providing such training to crew members and task specialists;

(d) responsibilities and duties of crew members and task specialists;

(e) helicopter performance criteria necessary to be met to conduct HEC operations;

(f) normal, abnormal and emergency procedures.

▼M4

SPO.SPEC.HEC.105 Specific HEC equipment

(a) The helicopter shall be equipped with:

(1) hoist operations equipment or cargo hook;

(2) one cargo safety mirror or alternative means to see the hook; and

(3) one load meter, unless there is another method of determining the weight of the load.

▼M15

(b) The installation of all hoist and cargo hook equipment other than a simple PCDS, and any subsequent modifications shall have an airworthiness approval appropriate to the intended function.

▼M4

SECTION 3

Parachute operations (PAR)

SPO.SPEC.PAR.100 Standard operating procedures

The standard operating procedures for PAR shall specify:

(a) the equipment to be carried, including its operating limitations and appropriate entries in the MEL, as applicable;

(b) crew composition and experience requirements of crew members and task specialists;

(c) the relevant training for crew members and task specialists to perform their task and the qualification and nomination of persons providing such training to the crew members and task specialists;

(d) responsibilities and duties of crew members and task specialists;

(e) performance criteria necessary to be met to conduct parachute operations;

(f) normal, abnormal and emergency procedures.

SPO.SPEC.PAR.105 Carriage of crew members and task specialists

The requirement for task specialist's responsibilities as laid down in SPO.GEN.106(c) shall not be applicable for task specialists performing parachute jumping.

▼M4

SPO.SPEC.PAR.110 Seats

Notwithstanding SPO.IDE.A.160(a) and SPO.IDE.H.160(a)(1), the floor of the aircraft may be used as a seat, provided means are available for the task specialist to hold or strap on.

SPO.SPEC.PAR.115 Supplemental oxygen

Notwithstanding SPO.OP.195(a), the requirement to use supplemental oxygen shall not be applicable for crew members other than the pilot-in-command and for task specialists carrying out duties essential to the specialised task, whenever the cabin altitude:

(a) exceeds 13 000 ft, for a period of not more than 6 minutes.

(b) exceeds 15 000 ft, for a period of not more 3 minutes.

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SPO.SPEC.PAR.125 Releasing of dangerous goods

Notwithstanding point SPO.GEN.155, parachutists may exit the aircraft for the purpose of parachute display over congested areas of cities, towns or settlements or over an open-air assembly of persons whilst carrying smoke trail devices, provided those are manufactured for that purpose.

▼M4

SECTION 4

Aerobatic flights (ABF)

SPO.SPEC.ABF.100 Standard operating procedures

The standard operating procedures for ABF shall specify:

(a) the equipment to be carried, including its operating limitations and appropriate entries in the MEL, as applicable;

(b) crew composition and experience requirements of crew members and task specialists;

(c) the relevant training for crew members and task specialists to perform their task and the qualification and nomination of persons providing such training to the crew members and task specialists;

(d) responsibilities and duties of crew members and task specialists;

(e) performance criteria necessary to be met to conduct aerobatic flights;

(f) normal, abnormal and emergency procedures.

SPO.SPEC.ABF.105 Documents, manuals and information to be carried

The following documents listed in SPO.GEN.140(a) need not be carried during aerobatic flights:

(a) details of the filed ATS flight plan, if applicable;

▼M4

(b) current and suitable aeronautical charts for the route/area of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

(c) procedures and visual signals information for use by intercepting and intercepted aircraft; and

(d) information concerning search and rescue services for the area of the intended flight.

SPO.SPEC.ABF.115 Equipment

The following equipment requirements need not be applicable to aerobatic flights:

(a) first-aids kit as laid down in SPO.IDE.A.165 and SPO.IDE.H.165;

(b) hand-fire extinguishers as laid down in SPO.IDE.A.180 and SPO.IDE.H.180; and

(c) emergency locator transmitters or personal locator beacons as laid down in SPO.IDE.A.190 and SPO.IDE.H.190.

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SECTION 5

Maintenance check flights (MCFs)

SPO.SPEC.MCF.100 Levels of maintenance check flight

Before conducting a maintenance check flight, the operator shall determine the applicable level of the maintenance check flight as follows:

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(a) 'Level A' maintenance check flight for a flight where the use of abnormal or emergency procedures, as defined in the aircraft flight manual, is expected, or where a flight is required to prove the functioning of a backup system or other safety devices;

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(b) a 'Level B' maintenance check flight for any maintenance check flights other than a 'Level A' maintenance check flight.

SPO.SPEC.MCF.105 Flight programme for a 'Level A' maintenance check flight

Before conducting a Level A maintenance check flight with a complex motor-powered aircraft, the operator shall develop and document a flight programme.

SPO.SPEC.MCF.110 Maintenance check flight manual for a 'Level A' maintenance check flight

The operator conducting a 'Level A' maintenance check flight shall:

(a) describe those operations and associated procedures in the operations manual referred to in point ORO.MLR.100 of Annex III or in a dedicated maintenance check flight manual;

(b) update the manual when necessary;

(c) inform all affected personnel of the manual and of its changes that are relevant to their duties;

(d) provide the competent authority with the manual and its updates.

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SPO.SPEC.MCF.115 Flight crew requirements for a ‘Level A’ maintenance check flight

(a) The operator shall select adequate flight crew members considering the aircraft complexity and the level of the maintenance check flight. When selecting flight crew members for a ‘Level A’ maintenance check flight with a complex motor-powered aircraft, the operator shall ensure all of the following:

(1) that the pilot-in-command has followed a training course in accordance with point SPO.SPEC.MCF.120; if the training has been conducted in a simulator, the pilot shall conduct at least one ‘Level A’ maintenance check flight as a pilot monitoring or as an observer before flying as a pilot-in-command on a ‘Level A’ maintenance check flight;

(2) that the pilot-in-command has completed on aircraft of the same aircraft category as the aircraft to be flown a minimum of 1 000 flight hours, of which at least 400 hours as a pilot-in-command in a complex motor-powered aircraft and at least 50 hours on the particular aircraft type.

Notwithstanding point (2) of the first paragraph, if the operator introduces a new aircraft type to its operation and has assessed the pilot's qualifications in accordance with an established assessment procedure, the operator may select a pilot having less than 50 hours experience on the particular aircraft type.

(b) Pilots holding a flight test rating in accordance with Regulation (EU) No 1178/2011 shall be given full credit for the training course stipulated in point (a)(1) of this point, provided that the pilots holding a flight test rating have obtained the required initial and recurrent crew resource management training in accordance with points ORO.FC.115 and ORO.FC.215 of Annex III.

(c) A pilot-in-command shall not perform a ‘Level A’ maintenance check flight on a complex motor-powered aircraft unless the pilot-in-command has carried out a ‘Level A’ maintenance check flight within the preceding 36 months.

(d) Recency as pilot-in-command on a ‘Level A’ maintenance check flight is regained after performing a ‘Level A’ maintenance check flight as an observer or a pilot monitoring, or after acting as the pilot-in-command in a ‘Level A’ maintenance check flight in a simulator.

SPO.SPEC.MCF.120 Flight crew training course for Level A maintenance check flights

(a) The training course required for a ‘Level A’ maintenance check flight shall be conducted in accordance with a detailed syllabus.

(b) The flight instruction for the training course shall be conducted in either of the following ways:

(1) in a simulator which, for training purposes, adequately reflects the reaction of the aircraft and its systems to the checks being conducted;

(2) during a flight in an aircraft demonstrating maintenance check flight techniques.

(c) A training course followed on one aircraft category is considered valid for all aircraft types of that category.

(d) When considering the aircraft used for the training and the aircraft to be flown during the maintenance check flight, the operator shall specify whether differences or familiarisation training is required and describe the contents of such a training.

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SPO.SPEC.MCF.125 Crew composition and persons on board

(a) The operator shall establish procedures to identify the need for additional task specialists.

(b) For a ‘Level A’ maintenance check flight, the operator shall define in its manual the policy for other persons on board.

(c) For a ‘Level A’ maintenance check flight, a task specialist or additional pilot is required in the flight crew compartment to assist the flight crew members, unless the aircraft configuration does not permit it or the operator can justify, considering the flight crew members workload based on the flight programme, that the flight crew members does not require additional assistance.

SPO.SPEC.MCF.130 Simulated abnormal or emergency procedures in flight

By way of derogation from point SPO.OP.185 a task specialist may be on board a ‘Level A’ maintenance check flight if the task specialist is required to meet the intention of the flight and has been identified in the flight programme.

SPO.SPEC.MCF.135 Flight time limitations and rest requirements

When assigning crew members to maintenance check flights, operators subject to Subpart FTL of Annex III (Part-ORO) shall apply the provisions of that Subpart.

SPO.SPEC.MCF.140 Systems and equipment

When a maintenance check flight is intended to check the proper functioning of a system or equipment, that system or equipment shall be identified as potentially unreliable and appropriate mitigation measures shall be agreed prior to the flight in order to minimise risks to flight safety.

SPO.SPEC.MCF.145 Cockpit voice recorder, flight data recorder and data link recording requirements for AOC holders

For a maintenance check flight of an aircraft otherwise used for CAT operations, the provisions for cockpit voice recorders (CVR), flight data recorders (FDR) and data link recorders (DLR) of Annex IV (Part-CAT) shall continue to apply.

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ANNEX IX

INNOVATIVE AIR MOBILITY OPERATIONS

(PART-IAM)

SUBPART A

GENERAL REQUIREMENTS

IAM.GEN.050 Scope

This Annex shall apply to IAM operations with manned VTOL-capable aircraft (VCA) in accordance with VFR by day.

IAM.GEN.055 Competent authority

The competent authority of the IAM operator shall be the authority designated by the Member State where that operator has its principal place of business or its place of residence, or the Agency in accordance with Article 65 of Regulation (EU) 2018/1139.

SECTION 1

VTOL-capable aircraft (VCA)

IAM.GEN.VCA.050 Scope

This Section contains general requirements for the operation of VCA.

IAM.GEN.VCA.100 Crew responsibilities

(a) Pilots and other crew members shall be responsible for the proper execution of their duties that are:

(1) related to the safety of the VCA and its occupants; and

(2) specified in the operations manual (OM) of the VCA operator.

(b) Pilots and other crew members shall comply with all of the following:

(1) report, if not already reported, to the pilot-in-command (PIC) any fault, failure, malfunction or defect which they believe may affect the airworthiness or safe operation of the VCA, including emergency systems;

(2) report, if not already reported, to the PIC any incident that has endangered, or could have endangered, the safety of the operation of the VCA;

(3) comply with the relevant requirements of the operator's occurrence-reporting scheme;

(4) comply with the flight time, duty time and rest requirements applicable to their activities;

(5) not disable or switch off the recorders during flight, or intentionally erase their recordings.

(c) Pilots and other crew members shall not perform duties related to the operation of VCA if they are in any of the following situations:

(1) when they are under the influence of psychoactive substances or when they are unfit due to injury, fatigue, medication, sickness or other similar causes;

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(2) when they do not fulfil applicable medical requirements;

(3) when they are in any doubt as to being able to accomplish their assigned duties;

(4) when they know or suspect they suffer from fatigue as referred to in point 7.5 of Annex V to Regulation (EU) 2018/1139 or otherwise feel unfit to the extent that the safety of the flight may be endangered.

IAM.GEN.VCA.105 Responsibilities of the pilot-in-command (PIC)

(a) In addition to complying with point IAM.GEN.VCA.100, the PIC shall, as soon as they assume the command functions at the assigned station and until they hand over the command functions or leave the assigned station at the end of the flight, comply with all of the following:

(1) be responsible for the safety of all crew members, passengers and cargo on board the VCA;

(2) be responsible for the operation and safety of the VCA when the lift and thrust units are powered on;

(3) be responsible for the initiation, continuation, termination or diversion of a flight in the interest of safety;

(4) have the authority to give all commands and take any appropriate actions for the purpose of ensuring the safety of the VCA and of the persons and/or property carried in it;

(5) ensure that all passengers are briefed on the location of emergency exits, and on the location and use of relevant safety and emergency equipment, as applicable;

(6) ensure that all passengers are briefed on when and how to communicate with the flight crew member(s) during the flight;

(7) ensure that all operational procedures and checklists are complied with in accordance with the operations manual (OM) of the VCA operator;

(8) not permit any crew member to perform any activity during critical phases of flight, except for duties required for the safe operation of the VCA;

(9) ensure that the recorders are not disabled or switched off during the flight, and that their recordings are not intentionally erased;

(10) decide on the acceptance of a VCA with unserviceability in accordance with the VCA configuration deviation list (CDL) or the minimum equipment list (MEL), and the VCA technical logbook;

(11) ensure that the pre-flight inspection has been carried out in accordance with the applicable continuing airworthiness requirements;

(12) be satisfied that the relevant emergency equipment remains easily accessible for immediate use;

(13) record, at the termination of the flight, in accordance with the continuing airworthiness record system requirements, utilisation data and all known or suspected defects of the VCA to ensure continued flight safety.

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(b) The PIC shall, in an emergency situation that requires immediate decision and action, take any action they consider necessary under the circumstances. In such cases, the PIC may deviate from rules, operational procedures and methods in the interest of safety.

(c) The PIC shall, as soon as practicable, report to the appropriate air traffic services (ATS) unit any hazardous weather or flight conditions encountered during the flight that are likely to affect the safety of other VCA operations.

IAM.GEN.VCA.110 Authority of the pilot-in-command

The IAM operator shall take all reasonable measures to ensure that all persons carried on board VCA obey all lawful commands given by the PIC for the purpose of ensuring the safety of the VCA and of the persons or property carried in it.

IAM.GEN.VCA.120 Common language

The IAM operator shall ensure that all crew members can communicate with each other in a common language.

IAM.GEN.VCA.130 Powering-on of lift and thrust units

The VCA's lift and thrust units shall only be powered on for the purpose of flight by a qualified pilot at the VCA controls.

IAM.GEN.VCA.140 Portable electronic devices (PEDs)

The IAM operator shall not permit any person to use a PED on board an aircraft that could adversely affect the performance of the VCA's systems and equipment, and shall take all reasonable measures to prevent such use.

IAM.GEN.VCA.141 Use of electronic flight bags (EFBs)

(a) When an EFB is used on board an aircraft, the IAM operator shall ensure that it does not adversely affect the performance of the VCA's systems or equipment, or the ability of the flight crew member to operate the VCA.

(b) The IAM operator shall not use a type B EFB application unless it is approved in accordance with Subpart M of Annex V (Part-SPA).

IAM.GEN.VCA.145 Information on emergency and survival equipment carried on board VCA

The IAM operator shall at all times have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board any of its VCA.

IAM.GEN.VCA.155 Carriage of weapons of war and munitions of war

The IAM operator shall not accept weapons of war or munitions of war for carriage by air in the VCA.

IAM.GEN.VCA.160 Carriage of sporting weapons and ammunition

(a) The IAM operator shall not accept sporting weapons for carriage by air in the VCA unless:

(1) they can be stowed in the VCA in a place that is inaccessible to passengers during the flight; and

(2) all ammunition is unloaded and carried separately from the sporting weapons.

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IAM.GEN.VCA.165 Method of carriage of persons

The IAM operator shall take all reasonable measures to ensure that no person is located in any part of the VCA in flight which is not designed or designated for the accommodation of persons, except when a person takes an action that is necessary for the safety of the VCA or of any person, animal or goods carried in the VCA.

IAM.GEN.VCA.170 Psychoactive substances

(a) The IAM operator shall take all reasonable measures to ensure that no person enters or is aboard the VCA when under the influence of psychoactive substances to the extent that the safety of the VCA or its occupants is likely to be endangered.

(b) The IAM operator shall develop and implement an objective, transparent and non-discriminatory policy and procedure on the prevention and detection of misuse of psychoactive substances by the pilots and other safety-sensitive personnel under the IAM operator's direct control, in order to ensure that the safety of the VCA and its occupants is not endangered.

(c) If pilots or other safety-sensitive personnel are tested positive to psychoactive substances, the IAM operator shall inform its competent authority and the authority that is responsible for the pilots and the personnel concerned.

IAM.GEN.VCA.175 Endangering safety

(a) The IAM operator shall take all reasonable measures to ensure that no person recklessly, intentionally or negligently acts, or omits to act, so as to:

(1) endanger the safety of the VCA or the safety of the persons in it; or

(2) cause or permit the VCA to endanger any person or property.

(b) The IAM operator shall ensure that pilots undergo a psychological assessment before commencing flight operations in order to:

(1) identify the pilots' psychological attributes and suitability in respect of their work environment; and

(2) reduce the likelihood of pilots negatively interfering with the safe operation of the VCA.

IAM.GEN.VCA.176 Pilot support programme

(a) The IAM operator shall enable, facilitate and ensure access to a proactive and non-punitive support programme that will assist and support pilots in recognising, coping with, and overcoming any problem which might negatively affect their ability to safely exercise the privileges of their licence.

(b) Without prejudice to applicable Union law on the protection of individuals with regard to the processing of personal data and on the free movement of such data, the protection of the confidentiality of personal data shall be a precondition for an effective pilot support programme.

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IAM.GEN.VCA.185 Information to be preserved on the ground

(a) The IAM operator shall ensure that for the duration of each flight, or series of flights, information that is relevant to the flight, or series of flights, and appropriate for the type of operation:

(1) is preserved on the ground; and

(2) is retained until it has been duplicated at the place at which it will be stored; or, if this is impracticable,

(3) is carried in a fireproof container in the VCA.

(b) The information referred to in point (a) shall include all the following:

(1) a copy of the operational flight plan;

(2) copies of the relevant part(s) of the aircraft continuing airworthiness records;

(3) route-specific NOTAM documentation, if specifically edited by the IAM operator;

(4) mass and balance documentation;

(5) special loads notification.

IAM.GEN.VCA.190 Provision of documentation and records

The PIC shall, within a reasonable time of being requested to do so by a person authorised by an authority, provide that person with the documentation required to be carried on board, in paper or digital media.

IAM.GEN.VCA.195 Preservation, production, protection and use of recorder recordings

(a) Following an accident, a serious incident or an occurrence identified by the investigating authority, the IAM operator shall preserve the original recorded data of the recorder, carried in the VCA in accordance with Subpart D of this Annex, for a period of 60 days or until otherwise directed by the investigating authority.

(b) The IAM operator shall conduct operational checks and evaluations of the recordings to ensure the continued serviceability of the recorder.

(c) The IAM operator shall ensure that the recordings of flight parameters required to be recorded on a recorder are preserved. For the purpose of testing and maintaining the recorder, up to 1 hour of the oldest recorded material at the time of testing may be erased.

(d) The IAM operator shall keep and maintain up to date the documentation that contains the necessary information to convert raw flight data into flight parameters expressed in engineering units.

(e) The IAM operator shall make available any recording of the recorder that has been preserved, if so determined by the competent authority.

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(f) Without prejudice to Regulation (EU) No 996/2010 ([1]) and Regulation (EU) 2016/679 ([2]):

(1) except for ensuring the serviceability of a recorder, audio recordings shall not be disclosed or used unless all the following conditions are fulfilled:

(i) a procedure related to the handling of such audio recordings and of their transcript is in place;

(ii) all pilots and maintenance personnel concerned have given their prior consent;

(iii) such audio recordings are used only for maintaining or improving safety;

(2) when inspecting the audio recordings of a recorder to ensure the serviceability of that recorder, the IAM operator shall protect the privacy of those audio recordings and make sure that they are not disclosed or used for purposes other than for ensuring the serviceability of the recorder;

(3) flight parameters recorded by a recorder shall not be used for purposes other than for the investigation of an accident or an incident which is subject to mandatory reporting, unless such recordings meet any of the following conditions:

(i) are used by the IAM operator for airworthiness or maintenance purposes only;

(ii) are de-identified;

(iii) are disclosed under secure procedures;

(4) except for ensuring the serviceability of a recorder, recorded images of the flight crew compartment shall not be disclosed or used unless all the following conditions are fulfilled:

(i) a procedure related to the handling of such image recordings is in place;

(ii) all pilots and maintenance personnel concerned have given their prior consent;

(iii) such image recordings are used only for maintaining or improving safety;

(5) when images of the flight crew compartment, recorded by a recorder, are inspected for ensuring the serviceability of that recorder, then:

(i) those images shall not be disclosed or used for purposes other than for ensuring the serviceability of the recorder;

(ii) if body parts of pilots or passengers are likely to be visible on the images, the operator shall ensure the privacy of those images.

([1]) Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC (OJ L 295, 12.11.2010, p. 35).

([2]) Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (OJ L 119, 4.5.2016, p. 1).

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IAM.GEN.VCA.200 Transport of dangerous goods under a specific approval

(a) The transport of dangerous goods by air shall be conducted at least in accordance with Annex 18 to the Chicago Convention and applicable technical instructions (TI).

(b) The IAM operator shall be approved for the carriage of dangerous goods by air as cargo in accordance with Subpart G of Annex V (Part-SPA).

(c) The IAM operator shall establish procedures to ensure that all reasonable measures are taken to prevent undeclared or misdeclared dangerous goods from being carried on board inadvertently.

(d) The IAM operator shall ensure that all personnel, including third-party personnel, involved in the acceptance, handling, loading and unloading of cargo are informed of the operator's operational approval and limitations with regard to the transport of dangerous goods by air, and are provided with the necessary information enabling them to carry out their responsibilities, as required by the TI.

(e) The IAM operator shall, in accordance with TI, ensure that passengers are provided with information about the carriage of dangerous goods on board.

(f) The IAM operator shall, in accordance with TI, report without delay to the competent authority and the appropriate authority of the State of occurrence in the event of:

(1) any accidents or incidents involving dangerous goods;

(2) the discovery of undeclared or misdeclared dangerous goods in cargo or mail; or

(3) the finding of dangerous goods carried by passengers or crew members, or in their baggage, when not in accordance with Part 8 of TI.

(g) The IAM operator shall ensure that notices giving information about the transport of dangerous goods are provided at acceptance points for cargo as required by the TI.

IAM.GEN.VCA.205 Transport of dangerous goods without a specific approval

(a) The transport of dangerous goods by air shall be conducted at least in accordance with Annex 18 to the Chicago Convention and applicable TI.

(b) Dangerous goods shall be carried by operators on board VCA without the specific approval required under Subpart G of Annex V (Part-SPA) if:

(1) they are not subject to the TI in accordance with Part 1 thereof; or

(2) they are carried by passengers or crew, or are in baggage, in accordance with Part 8 of TI.

(c) IAM operators not approved in accordance with Subpart G of Annex V (Part-SPA), shall establish a dangerous goods training programme that meets the requirements of Annex 18 of Chicago Convention and the applicable TI.

(d) The IAM operator shall ensure that passengers are provided with information about the carriage of dangerous goods in accordance with the Technical Instructions.

(e) The IAM operator shall establish procedures to ensure that all reasonable measures are taken to prevent undeclared dangerous goods from being carried on board inadvertently.

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(f) The IAM operator shall, in accordance with the TI, report without delay to the competent authority and the appropriate authority of the State of occurrence in the event of:

(1) any accidents or incidents involving dangerous goods;

(2) the discovery of undeclared dangerous goods in cargo or mail; or

(3) the finding of dangerous goods carried by passengers or crew members, or in their baggage, when not in accordance with Part 8 of the TI.

SECTION 2

Manned VTOL-capable aircraft (MVCA)

IAM.GEN.MVCA.050 Scope

This Section establishes additional requirements for IAM operations with manned VTOL-capable aircraft (MVCA).

IAM.GEN.MVCA.135 Admission to the flight crew compartment

(a) The IAM operator shall ensure that no person, other than the pilot assigned to a flight, is admitted to, or carried in, the flight crew compartment unless that person is:

(1) an operating crew member;

(2) a representative of the competent authority or inspecting authority, if this is required for the performance of their official duties; or

(3) permitted by and carried in accordance with the operator's OM.

(b) The pilot-in-command shall ensure that:

(1) admission to the flight crew compartment does not cause distraction or interference with the conduct of the flight; and

(2) all persons carried in the flight crew compartment are made familiar with the relevant safety procedures.

(c) The pilot-in-command shall make the final decision regarding admission to the flight crew compartment in the VCA.

IAM.GEN.MVCA.180 Documents, manuals and information to be carried on board each flight

(a) The following documents, manuals and information, in paper or digital media, shall be carried on each flight with a VCA and shall be easily accessible for inspection purposes:

(1) the aircraft flight manual (AFM), or equivalent document(s);

(2) the original certificate of registration of the aircraft;

(3) the original certificate of airworthiness (CofA);

(4) the noise certificate, including an English translation where one has been provided by the authority that is responsible for issuing the noise certificate;

(5) a certified true copy of the air operator certificate (AOC), including an English translation when the AOC has been issued in another language;

(6) the operations specifications relevant to the aircraft type, issued with the AOC, including an English translation when the operations specifications have been issued in another language;

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(7) the original aircraft radio licence, if applicable;

(8) the third-party liability insurance certificate(s);

(9) the journey log, or equivalent, for the aircraft;

(10) the continuing airworthiness records, as applicable;

(11) details of the filed ATS flight plan, if applicable;

(12) current and suitable aeronautical charts for the route of the proposed flight and all routes along which it is reasonable to expect that the flight may be diverted;

(13) procedures and information on visual signals for use by intercepting and intercepted aircraft;

(14) information concerning search and rescue services for the area of the intended flight, which shall be easily accessible in the aircraft;

(15) the current parts of the OM that are relevant to the duties of the pilots, which shall be easily accessible to those pilots;

(16) the MEL;

(17) appropriate notices to airmen (NOTAMs) and aeronautical information service (AIS) briefing documentation;

(18) appropriate meteorological information;

(19) cargo and/or passenger manifests;

(20) mass and balance documentation;

(21) the operational flight plan, where required;

(22) notification about special categories of passenger (SCPs), if applicable; and

(23) any other documentation that may be pertinent to the flight or is required by the States concerned with the flight.

(b) The documents, manuals, and information carried on each flight shall be accessible to authorised persons, usable, and reliable.

(c) Notwithstanding point (a), in case of loss or theft of the documents specified in points (a)(2) to (8), the operation may continue until the flight reaches its destination or a place where replacement documents can be provided.

IAM.GEN.MVCA.181 Documents and information that may not be carried on board

(a) Notwithstanding point IAM.GEN.MVCA.180, for IAM operations in accordance with VFR by day, taking off and landing at the same vertiport within 24 hours, or remaining within a local area specified in the OM, the following documents and information may be retained at the vertiport instead of being carried on board each flight:

(1) noise certificate;

(2) aircraft radio licence;

(3) journey log, or equivalent;

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(4) continuing airworthiness records;

(5) notices to airmen (NOTAMs) and aeronautical information service (AIS) briefing documentation;

(6) meteorological information;

(7) notification about special categories of passengers (SCPs), if applicable; and

(8) mass and balance documentation.

SUBPART B

OPERATING PROCEDURES

SECTION 1

VTOL-capable aircraft (VCA)

UAM.OP.VCA.050 Scope

This Section establishes the requirements for IAM operations with VTOL-capable aircraft (VCA).

UAM.OP.VCA.101 Altimeter check and altimeter settings

(a) The IAM operator shall establish procedures for altimeter checking before each departure.

(b) The IAM operator shall establish procedures for altimeter settings for all phases of flight, which shall take into account the procedures established by the State of the vertiport or, if applicable, by the State of the airspace flown.

UAM.OP.VCA.125 Taxiing and ground movement

(a) The IAM operator shall establish standard and contingency procedures for the taxiing of VCA (in the air and on the ground) and for the movement of VCA on the ground in order to ensure the safe operation of the VCA at the vertiport, diversion location or VEMS operating site. In particular, the IAM operator shall consider the risk of collision between a taxiing VCA or a VCA being moved and another aircraft or other objects, as well as the risk of injuries to ground personnel. The IAM operator's procedures shall be coordinated with the operator of the vertiport, the diversion location or the operating site, as applicable.

(b) The VCA shall be taxied on the movement area of a vertiport, diversion location or VEMS operating site:

(1) by an appropriately qualified pilot at the controls of the VCA; or

(2) in the case of ground taxiing without passengers for a purpose other than taking off, by a person at the controls of the VCA, designated by the IAM operator, after having received appropriate training and instructions.

(c) The IAM operator shall ensure that the ground movement of a VCA on the movement area of a vertiport, diversion location or VEMS operating site is carried out or supervised by personnel that have received appropriate training and instructions.

UAM.OP.VCA.130 Noise-abatement procedures

(a) When developing operating procedures, the IAM operator shall take into account the need to minimise the effect of noise and any published noise-abatement procedures.

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(b) The IAM operator's procedures shall:

(1) ensure that safety has priority over noise abatement; and

(2) be simple and safe to implement by not significantly increasing flight crew workload during critical phases of flight.

UAM.OP.VCA.135 Routes and areas of operation

(a) The IAM operator shall ensure that operations are only conducted along routes or within areas for which:

(1) space-based facilities, ground facilities and services, and meteorological services, adequate for the planned operation, are provided;

(2) adequate vertiports, diversion locations or VEMS operating sites are available that permit a landing to be executed in the case of critical failure for performance (CFP) of the VCA;

(3) the performance of the VCA is adequate to comply with minimum flight altitude requirements;

(4) the equipment of the VCA meets the minimum requirements for the planned operation; and

(5) appropriate maps and charts are available.

(b) The IAM operator shall ensure that operations are conducted in accordance with any restriction on the routes or the areas of operation specified by the competent authority.

UAM.OP.VCA.145 Establishment of minimum flight altitudes

(a) For all route segments to be flown, the IAM operator shall establish:

(1) minimum flight altitudes that provide the required vertical clearance from terrain and obstacles, taking into account the relevant requirements of Subpart C of this Annex and the minima established by the State where the operation takes place; and

(2) a method for the pilot to determine the altitudes referred to in point (1).

(b) The method for establishing minimum flight altitudes shall be approved by the competent authority.

(c) Where the minimum flight altitudes established by the IAM operator and the State where the operation takes place differ, the higher values shall apply.

UAM.OP.VCA.190 Fuel/energy scheme – general

(a) The IAM operator shall establish, implement and maintain a fuel/energy scheme that comprises policies and procedures for:

(1) fuel/energy planning and fuel/energy in-flight replanning;

(2) selection of vertiports, diversion locations or VEMS operating sites; and

(3) in-flight fuel/energy management.

(b) The fuel/energy scheme shall:

(1) be appropriate for the intended operation; and

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(2) correspond to the capacity of the IAM operator to support its implementation.

(c) The fuel/energy scheme shall be included in the operations manual.

(d) The fuel/energy scheme and any changes to it shall require the prior approval of the competent authority.

UAM.OP.VCA.191 Fuel/energy scheme – fuel/energy planning and fuel/energy in-flight replanning

The IAM operator shall ensure that:

(a) the VCA carries a sufficient amount of usable fuel/energy and reserves to safely complete the planned flight and to allow for deviations from the planned operation;

(b) the planned amount of usable fuel/energy for the intended flight is based on all the following:

(1) fuel/energy consumption data provided in the AFM or current aircraft-specific data derived from a fuel/energy consumption monitoring system;

(2) the conditions under which the flight is to be operated, including but not limited to:

(i) performance required for the intended flight to the destination, including vertiports, diversion locations or operating sites, selected along the route;

(ii) anticipated masses;

(iii) NOTAMs;

(iv) anticipated meteorological conditions;

(v) the effects of deferred maintenance items in accordance with the IAM operator's MEL and/or of configuration deviations in accordance with the IAM operator's CDL;

(vi) the expected departure and arrival routing, and anticipated delays;

(3) the efficiency and capacity of energy storage devices for the planned operating conditions, considering degradation of those energy storage devices as appropriate;

(c) the pre-flight calculation of the usable fuel/energy and reserves for a flight includes:

(1) taxi fuel/energy that shall not be less than the amount expected to be used prior to take-off;

(2) trip fuel/energy that shall be the amount of fuel/energy that is needed to enable the aircraft to fly from take-off, or from the point of in-flight replanning, to landing at the destination vertiport, diversion location or operating site, taking into account the operating conditions of point (b)(2);

(3) contingency fuel/energy that shall be the amount of fuel/energy needed to compensate for unforeseen factors that could have an influence on the fuel/energy consumption to the destination vertiport, diversion location or operating site;

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(4) final reserve fuel/energy that shall be determined based on all the following:

(i) a representative time provided in the AFM to perform a go-around from a landing decision point (LDP) and back to that LDP taking into account the certified minimum performance (CMP) of the VCA;

(ii) conservative ambient conditions from the point of view of fuel/energy consumption;

(iii) an appropriate configuration/speed to perform the go-around and approach procedures;

(iv) a conservative fuel/energy consumption;

(5) additional fuel/energy that shall be the amount of fuel/energy to enable the VCA to perform a safe landing at a vertiport, diversion location or operating site, selected along the route, taking into account the CMP of the VCA at any point of the route; this additional fuel/energy is required only if the amount of fuel/energy that is calculated according to points (c)(2) and (c)(3) is not sufficient for such event;

(6) extra fuel/energy to take into account anticipated delays or specific operational constraints; and

(7) discretionary fuel/energy, if required by the PIC;

(d) if a flight must proceed along a route or to a destination vertiport, diversion location or operating site other than that originally planned, in-flight replanning procedures for calculating the required usable fuel/energy include those referred to in point (b)(2) and in points (c)(2) to (6).

UAM.OP.VCA.195 Fuel/energy scheme – in-flight fuel/energy management

(a) The IAM operator shall establish policies and procedures ensuring that in-flight fuel/energy checks and fuel/energy management are performed.

(b) The PIC shall monitor the amount of usable fuel/energy remaining in the VCA to ensure that it is protected and not less than the fuel/energy required to proceed to the selected destination vertiport, diversion location or VEMS operating site where a safe landing can be performed.

(c) When a change to the clearance to proceed to a specific vertiport, diversion location or VEMS operating site at which the PIC has committed to land may result in landing with less than the planned final reserve fuel/energy, they shall advise air traffic control (ATC) of a ‘minimum fuel / energy’ state by declaring ‘MINIMUM FUEL’.

(d) The PIC shall declare a situation of ‘fuel/energy emergency’ by broadcasting ‘MAYDAY MAYDAY MAYDAY FUEL’ when the usable fuel/energy that is calculated to be available upon landing at the nearest vertiport, diversion location or VEMS operating site where a safe landing can be performed is less than the planned final reserve fuel/energy.

UAM.OP.VCA.210 Pilots at their assigned stations

(a) During take-off and landing, the pilot required to be on duty shall be at their assigned station.

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(b) During all other phases of flight, the pilot required to be on duty shall remain at their assigned station, unless absence is necessary for the performance of duties in connection with the operation or for physiological needs. Where absence is necessary for the above-mentioned reasons, the control of the VCA shall be handed over to another suitably qualified pilot.

(c) During all phases of flight, the pilot required to be on duty shall remain alert. If the pilot realises a lack of alertness, appropriate countermeasures shall be taken.

UAM.OP.VCA.245 Meteorological conditions

The IAM operator shall ensure that the aircraft is operated within the weather operating limitations it is certified for, and considering current and forecast weather conditions for the entire duration of the flight.

UAM.OP.VCA.250 Ice and other contaminants – ground procedures

(a) The IAM operator shall establish procedures to be followed when ground de-icing and anti-icing treatment and related inspections of the VCA are necessary for its safe operation.

(b) The PIC shall commence take-off only if the VCA is clear of any deposit that might adversely affect its performance or controllability in accordance with its AFM.

UAM.OP.VCA.255 Ice and other contaminants – flight procedures

(a) The IAM operator shall establish procedures for flights in expected or actual icing conditions.

(b) The PIC shall commence the flight or intentionally fly into expected or actual icing conditions only if the VCA is certified and equipped to operate in such conditions.

(c) If actual icing exceeds the intensity of icing for which the aircraft is certified, or if an aircraft not certified for flight in known icing conditions encounters icing, the PIC shall exit the icing conditions without delay and, if necessary, declare an emergency to ATS.

UAM.OP.VCA.260 Oil supply

Where applicable, the PIC shall commence a flight, or continue in the event of in-flight replanning, only when satisfied that the VCA carries at least the planned amount of oil to complete the flight safely, taking into account expected operating conditions.

UAM.OP.VCA.265 Take-off conditions

Before commencing take-off, the PIC shall be satisfied that:

(a) the meteorological conditions at the vertiport, diversion location or VEMS operating site and the condition of the surface for take-off intended to be used will not prevent the PIC from conducting a safe take-off and departure; and

(b) the established operating minima for the vertiport, diversion location or VEMS operating site, as applicable, will be complied with.

UAM.OP.VCA.270 Minimum flight altitudes

The PIC shall not fly below specified minimum flight altitudes except:

(a) when it is necessary for taking off or landing; or

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(b) when descending in accordance with procedures approved by the competent authority.

UAM.OP.VCA.275 Simulated abnormal or emergency situations in flight

When carrying passengers or cargo, the PIC shall not simulate abnormal or emergency situations that require the application of abnormal or emergency procedures.

UAM.OP.VCA.290 Proximity detection

When undue proximity to the ground and/or obstacles located horizontally in relation to the VCA is detected by the PIC or by a proximity warning system, the PIC shall immediately take corrective action to establish safe flight conditions.

UAM.OP.VCA.300 Approach and landing conditions

Before commencing an approach operation, the PIC shall be satisfied that:

(a) the meteorological conditions at the vertiport, diversion location or VEMS operating site will not prevent the PIC from conducting a safe approach, landing or go-around, considering the performance information contained in the operations manual (OM); and

(b) the established vertiport operating minima, or visibility and distance from cloud minima for flights conducted in accordance with VFR by day, shall be complied with.

UAM.OP.VCA.315 Flight hours – reporting

The IAM operator shall make available to the competent authority the amount of hours flown for each VCA operated during the previous calendar year.

SECTION 2

Manned VTOL-capable aircraft (MVCA)

UAM.OP.MVCA.050 Scope

This Section establishes additional requirements for IAM operations with manned VTOL-capable aircraft (MVCA).

UAM.OP.MVCA.100 Use of air traffic services (ATS)

The IAM operator shall ensure that:

(a) ATS appropriate to the airspace in which the operation is conducted and to the applicable rules of the air are used, whenever available;

(b) in-flight operational instructions involving a change to the ATS flight plan are coordinated with the appropriate ATS unit before transmission to the VCA;

(c) search and rescue service arrangements can be maintained whenever the use of ATS in the airspace in which the operation is conducted is not mandated for VFR flights by day;

(d) for operations in airspace designated by the competent authority as U-space airspace and not provided with air traffic control (ATC) services by an air navigation service provider (ANSP), the VCA continuously makes itself electronically conspicuous to U-space service providers.

UAM.OP. MVCA.107 Adequate vertiport and adequate diversion location

(a) The IAM operator shall use adequate vertiports for its normal operations and for diversion from the planned route as necessary.

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(b) Notwithstanding point (a), the IAM operator may use one or more adequate diversion locations while en-route to divert from the planned route as necessary.

(c) A vertiport is considered adequate if at the expected time of use it is:

(1) compatible with the dimensions and weight of the VCA;

(2) compatible with the VCA approach and departure paths;

(3) provided with rescue and firefighting services (RFFS) and other services and facilities necessary for the intended operation; and

(4) available.

(d) A diversion location is considered adequate if at the expected time of use:

(1) its characteristics, including dimensions, obstacles, and surface condition, are compatible with the VCA and allow for landing in accordance with an approved landing profile;

(2) it can be reached within the CMP of the VCA taking wind limitations into account;

(3) it has an acceptable level of RFFS protection;

(4) it is pre-surveyed; and

(5) it is available.

UAM.OP.MVCA.111 Visibility and distance from cloud minima – VFR flights

(a) The IAM operator shall establish visibility minima and distance from cloud minima for flights to be conducted in accordance with VFR by day. These minima shall not be lower than those specified in point SERA.5001 of the Annex (Part-SERA) to Regulation (EU) No 923/2012 for the airspace class being flown, except when permitted to operate as a special VFR flight.

(b) Where necessary, the IAM operator may specify in the OM additional conditions for the applicability of such minima taking into account factors such as radio coverage, terrain, nature of sites, flight conditions and ATS capacity.

(c) The flights shall be conducted with the surface in sight.

UAM.OP.MVCA.127 Take-off and landing – VFR flights by day

(a) When conducting a flight in accordance with VFR by day, the PIC should not take off or land at a vertiport or diversion location unless the reported weather conditions at that vertiport or diversion location are equal to or better than those specified in point SERA.5001 or point SERA.5005 of the Annex (Part-SERA) to Regulation (EU) No 923/2012 for the airspace class being flown.

(b) When the reported weather conditions are below those required for take-off, a take-off shall be commenced only if the PIC can determine that the visibility and distance from cloud minima along the take-off area are equal to or better than the required minimum.

(c) When no reported weather conditions are available, a take-off shall be commenced only if the PIC can determine that the visibility and distance from cloud minima along the take-off area are equal to or better than the required minimum.

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UAM.OP.MVCA.155 Carriage of special categories of passengers (SCPs)

(a) SCPs shall be carried on board under such conditions that ensure the safety of the VCA and its occupants according to procedures established by the VCA operator.

(b) SCPs shall not be allocated to, nor occupy, seats that permit direct access to emergency exits or where their presence could:

(1) impede crew members' duties;

(2) obstruct access to emergency equipment; or

(3) impede the emergency evacuation of passengers.

(c) The PIC shall be notified in advance when SCPs are to be carried on board.

UAM.OP.MVCA.160 Stowage of baggage and cargo

The IAM operator shall establish procedures to ensure that:

(a) only baggage that can be appropriately and securely stowed is taken into the passenger compartment; and

(b) all baggage and cargo on board the aircraft which might cause injury or damage, or obstruct aisles and exits if displaced, is stowed to prevent them from moving.

UAM.OP.MVCA.165 Passenger seating

With regard to potential emergency evacuation, the IAM operator shall establish procedures for passenger seating to ensure that passengers are seated where they will be able to assist the evacuation, and not impede it.

UAM.OP.MVCA.170 Passenger briefing

The IAM operator shall ensure that passengers are:

(a) given safety briefings and safety demonstrations in a manner that facilitates the execution of the applicable procedures in the event of an emergency; and

(b) provided with safety briefing material on which picture-type instructions indicate the operation of emergency equipment and emergency exits likely to be used by passengers.

UAM.OP.MVCA.175 Flight preparation

(a) An operational flight plan (OFP) shall be completed for each intended flight, taking into account the airspace in which the flight is to be conducted and the applicable rules of the air, aircraft performance, operating limitations, and relevant expected conditions along the route to be flown and at the vertiport or diversion location to be used.

(b) The flight shall not be commenced unless the PIC is satisfied that:

(1) all items stipulated in point 2.c of Annex V to Regulation (EU) 2018/1139 concerning the airworthiness and registration of the aircraft, instrument and equipment, mass and centre of gravity (CG) location, baggage and cargo, and aircraft operating limitations can be complied with;

(2) the aircraft is not operated against the requirements of the configuration deviation list (CDL);

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(3) the parts of the operations manual (OM) that are required for the conduct of the planned flight are available;

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(4) the documents, additional information and forms required to be available by point IAM.GEN.MVCA.180 are on board, unless permitted to be kept on the ground in accordance with point IAM.GEN.MVCA.181;

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(5) current maps, charts and associated documentation or equivalent data are available for the intended operation of the aircraft, including any diversion that may reasonably be expected;

(6) space-based facilities, ground facilities and services that are required for the planned flight are available and adequate;

(7) the applicable requirements specified in the OM in respect of fuel/energy, oil, oxygen, minimum flight altitudes, vertiport operating minima, visibility and distance from cloud minima for VFR flights by day and the selection of adequate vertiports and diversion locations can be complied with for the planned flight;

(8) Reserved;

(9) any additional operational limitations can be complied with;

(10) any load carried is properly distributed and safely secured;

(11) an air traffic service (ATS) flight plan has been approved and flight clearance has been granted in accordance with the applicable rules of the air and the class(es) of airspace in which the operation will be conducted.

UAM.OP.MVCA.177 Submission of an air traffic services (ATS) flight plan

(a) The IAM operator shall submit an ATS flight plan as required by the applicable rules of the air for the class(es) of airspace in which the operation will be conducted.

(b) If the submission of an ATS flight plan is not required by the applicable rules of the air for the class(es) of airspace in which the operation will be conducted, the IAM operator shall ensure that adequate information is deposited with the appropriate ATS unit to permit alerting services to be activated if necessary.

(c) If the submission of an ATS flight plan is required but it is impossible to submit it from the site where the operation starts, the ATS flight plan shall be transmitted as soon as possible after take-off by the PIC or the IAM operator.

UAM.OP.MVCA.192 Fuel/energy scheme – selection of vertiports and diversion locations

(a) The PIC shall select and specify in the operational flight plan and, if so required, in the ATS flight plan, for normal operations, including training, and for the purpose of diversion:

(1) at least two safe landing options at the destination, which may be reached from the point of commitment for landing; and

(2) one or more vertiports or diversion locations to ensure safe landing in case a diversion is necessary following a CFP at any moment during the flight.

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(b) For the purpose of selecting vertiports and diversion locations in accordance with point (a), the PIC shall consider whether:

(1) the actual and forecast weather conditions indicate that at the estimated time of use the conditions at the selected vertiports and diversion locations will be at or above the applicable minima established in accordance with point UAM.OP.MVCA.111;

(2) the CMP of the VCA allows for safe landing at the selected vertiports or diversion locations;

(3) any required additional operational approvals are held.

(c) The PIC shall apply appropriate safety margins to flight planning to take possible deterioration of the meteorological conditions into account at the estimated time of landing compared to the available forecast.

UAM.OP.MVCA.193 Safe landing options at the destination

The PIC shall commit to land at one of the safe landing options in accordance with point UAM.OP.MVCA.192, when the current assessment of the meteorological conditions, traffic, and other operational conditions indicate that a safe landing can be performed at the committed landing site at the estimated time of use.

UAM.OP.MVCA.200 Special refuelling or defuelling of VCA

(a) Special refuelling or defuelling shall be performed only if the IAM operator has:

(1) developed standard operating procedures on the basis of a risk assessment; and

(2) established a training programme for its personnel involved in such operations.

(b) Special refuelling or defuelling applies to:

(1) refuelling with lift and thrust units powered on;

(2) refuelling/defuelling with passengers embarking, on board, or disembarking; and

(3) refuelling/defuelling with wide-cut fuel.

(c) Refuelling procedures with lift and thrust units powered on, and any change to those procedures, shall require the prior approval of the competent authority.

UAM.OP.MVCA.205 Charging or swapping of VCA batteries while passengers embark, are on board, or disembark

(a) The charging or swapping of VCA batteries while passengers embark, are on board, or disembark shall be performed only if the IAM operator has:

(1) developed standard operating procedures on the basis of a risk assessment; and

(2) established a training programme for its personnel involved in such operations.

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UAM.OP.MVCA.216 Use of headsets

(a) Each pilot required to be on duty at their assigned station shall wear a headset with boom microphone or equivalent. The headset shall be used as the primary device for voice communications with ATS units.

(b) The position of the boom microphone or equivalent in the cockpit shall allow its use for two-way radio communications when the VCA is taxiing under its own power and whenever deemed necessary by the PIC.

UAM.OP.MVCA.220 Emergency evacuation assisting means

The IAM operator shall establish procedures to ensure that before taxiing or ground movement, take-off and landing, and when safe and practicable to do so, all emergency evacuation assisting means that deploy automatically are armed.

UAM.OP.MVCA.225 Seats, safety belts and restraint systems

(a) *Pilots*

During take-off and landing, and whenever deemed necessary by the PIC in the interest of safety, each pilot shall be properly secured by all safety belts and restraint systems provided on their seats.

(b) *Passengers*

(1) Before take-off and landing, and during taxiing or ground movement, and whenever deemed necessary in the interest of safety, the PIC shall be satisfied that each passenger on board occupies a seat with their safety belt or restraint system properly secured.

(2) The IAM operator shall make provisions for multiple occupancy of aircraft seats that is only allowed on specified seats. The PIC shall be satisfied that aircraft seats are not used for multiple occupancy other than by one adult and one infant, with the latter being properly secured by a supplementary loop belt or other restraint device.

UAM.OP.MVCA.230 Securing of passenger compartment

(a) The IAM operator shall establish procedures to ensure that before taxiing or ground movement, take-off and landing, all exits and escape paths are unobstructed.

(b) The PIC shall ensure that before take-off and landing, and whenever deemed necessary in the interest of safety, all equipment and baggage is properly stowed and secured.

UAM.OP.MVCA.235 Life jackets

The IAM operator shall establish procedures to ensure that, when operating a VCA over water, the duration of the flight and the conditions to be encountered during the flight are duly considered when deciding whether life jackets are to be worn by all aircraft occupants.

UAM.OP.MVCA.240 Smoking on board

The PIC shall not allow smoking on board at any time.

UAM.OP.MVCA.245 Meteorological conditions

(a) The PIC shall:

(1) commence the flight; or

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(2) if applicable, continue beyond the point from which a revised ATS flight plan applies in the event of in-flight replanning;

(3) continue towards the planned destination vertiport,

only when the current meteorological reports or a combination of current reports and forecasts indicate that the expected meteorological conditions at the departure vertiport, along the route to be flown, and at the destination vertiport, at the time of arrival, are at or above the planning minima established in accordance with point UAM.OP. MVCA.111.

UAM.OP.MVCA.285 Use of supplemental oxygen

The PIC shall ensure that all pilots engaged in the performance of duties essential to the safe operation of the VCA during flight use supplemental oxygen continuously whenever the cabin altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft.

UAM.OP.MVCA.295 Use of airborne collision avoidance system (ACAS)

The IAM operator shall establish operational procedures and training programmes when an ACAS is installed and serviceable so that the flight crew is appropriately trained in the avoidance of collisions and competent in the use of ACAS II equipment.

SUBPART C

VTOL-CAPABLE AIRCRAFT (VCA) PERFORMANCE AND OPERATING LIMITATIONS

UAM.POL.VCA.050 Scope

This Subpart establishes performance requirements and operating limitations for IAM operations with VTOL-capable aircraft (VCA).

UAM.POL.VCA.100 Type of operation

VCA shall be operated in accordance with the applicable performance requirements for the intended type of operation to be conducted.

UAM.POL.VCA.105 VTOL-capable aircraft (VCA) performance data

VCA shall be operated in accordance with the certified performance data and limitations contained in the AFM.

UAM.POL.VCA.110 General performance requirements

(a) The mass of the VCA:

(1) at the start of the take-off; or

(2) in the event of in-flight replanning, at the point from which the revised operational flight plan applies;

shall not be greater than the mass at which the requirements of this Subpart can be complied with for the flight to be conducted, considering expected reductions in mass as the flight proceeds and such fuel jettisoning as applicable.

(b) The approved performance data contained in the AFM shall be used to determine compliance with the requirements of this Subpart, supplemented as necessary with other data as prescribed in the relevant requirement. The IAM operator shall specify such other data in the operations manual (OM). When applying the factors prescribed in this Subpart, any operational factors already incorporated in the performance data contained in the AFM shall be considered to avoid double application of factors.

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(c) When showing compliance with the requirements of this Subpart, the following parameters shall be taken into account:

(1) the mass of the VCA;

(2) the configuration of the VCA;

(3) the environmental conditions, in particular:

(i) density altitude;

(ii) wind:

(A) except as provided in point (C), for take-off, take-off flight path and landing, the correction for wind shall not be more than 50 % of any reported steady headwind component of 5 kt or greater;

(B) when take-off and landing with a tailwind component is permitted in the AFM, and in all cases for the take-off flight path, the correction for tailwind shall not be less than 150 % of any reported wind component;

(C) when precise wind-measuring equipment enables the accurate measurement of wind velocity over the point of take-off and landing, wind components in excess of 50 % may be taken into account by the IAM operator, provided that the IAM operator demonstrates to the competent authority that the proximity to the FATO and accuracy enhancements of the wind-measuring equipment provide an equivalent level of safety;

(4) the operating techniques; and

(5) the operation of any systems that have an adverse effect on the VCA performance.

UAM.POL.VCA.115 Obstacle accountability

For operations to/from final approach and take-off areas (FATO), the IAM operator shall, during pre-fight planning and for the purpose of obstacle-clearance calculations:

(a) consider an obstacle located beyond the FATO, in the take-off flight path or the missed approach flight path, if its lateral distance to the nearest point on the surface below the intended flight path is not farther than the following:

(1) for flights to be conducted in accordance with VFR:

(i) ‘0,75 × D’;

(ii) plus the greater of ‘0,25 × D’ or ‘3 m’;

(iii) plus:

(A) 0,10 × distance DR for operations under VFR by day; or

(B) Reserved;

(b) consider an obstacle located in the backup or lateral transition area for take-offs using a backup or a lateral transition procedure, if its lateral distance from the nearest point on the surface below the intended flight path is not farther than:

(1) ‘0,75 × D’;

(2) plus the greater of ‘0,25 × D’ or ‘3 m’;

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(3) plus:

(i) 0,10 × distance DR for operations under VFR by day; or

(ii) reserved;

(c) disregard obstacles situated beyond the FATO in the take-off flight path or the missed approach flight path if their lateral distance to the nearest point on the surface below the intended flight path is farther than the following:

(1) 3 × D for VFR day operations if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;

(2) reserved.

UAM.POL.VCA.120 Take-off

(a) The take-off mass of the VCA shall not exceed the maximum take-off mass specified in the AFM for the certified take-off procedure or procedures to be used.

(b) The IAM operator shall take into account:

(1) the appropriate parameters of point UAM.POL.VCA.110(c); and

(2) the obstacles identified in accordance with point UAM.POL.VCA.115.

(c) In addition, for VCA operations from a FATO:

(1) the take-off mass shall be such that:

(i) it is possible to reject the take-off and land on the FATO if a CFP has been recognised at or before the take-off decision point (TDP);

(ii) the rejected take-off distance required (RTODRV) does not exceed the rejected take-off distance available (RTODAV); and

(iii) the TODRV does not exceed the TODAV, unless the VCA with a CFP recognised at or before the TDP can, when continuing the take-off, clear all obstacles to the end of the TODRV by a vertical margin of not less than 10,7 m (35 ft).

(2) That part of the take-off up to and including TDP shall be conducted in sight of the surface such that a rejected take-off can be conducted safely.

(d) For take-offs using a backup or lateral transition procedure, with a CFP recognised at or before the TDP, all obstacles in the backup or lateral transition area shall be cleared by an adequate margin.

UAM.POL.VCA.125 Take-off flight path

(a) From the end of the take-off distance required for VCA (TODRV), following a CFP being recognised at or after the take-off decision point (TDP):

(1) the take-off mass shall be such that the take-off flight path provides vertical clearance, above all obstacles located in the climb path, of not less than 10,7 m (35 ft) for operations under VFR by day;

(2) when a change of direction of more than 15° is made, allowance shall be made for the ability to maintain the climb gradient to comply with the obstacle-clearance requirements in accordance with the AFM; this change of direction is not to be initiated before reaching a height of 61 m (200 ft) above the take-off surface unless it is part of an approved take-off procedure in the AFM.

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(b) When showing compliance with point (a), the relevant parameters of point UAM.POL.VCA.110(c) shall be considered at the vertiport, diversion location or operating site of departure.

UAM.POL.VCA.130 En route

(a) The mass of the VCA and the flight path at all points along the route following a critical failure for performance (CFP), and taking into account the meteorological conditions expected for the flight, shall permit compliance with the following:

(1) Reserved.

(2) Reserved.

(3) The mass of the VCA shall permit its operation at or above the minimum level established in accordance with point SERA.5005(f) of the Annex (Part-SERA) to Regulation (EU) No 923/2012 and a descent from the cruising altitude to the landing decision point (LDP) above the vertiport, diversion location or operating site where the landing can be conducted in accordance with point UAM.POL.VCA.135.

(b) When showing compliance with point (a), all the following shall apply:

(1) the CFP is assumed to occur at the most critical point along the route;

(2) the effects of winds on the flight path are considered;

(3) fuel jettisoning, if applicable, is planned to be performed only to an extent consistent with reaching the vertiport, diversion location or operating site with the required fuel/energy reserves and using a safe procedure; and

(4) fuel jettisoning, if applicable, is not planned below 300 m (1 000 ft) above terrain.

UAM.POL.VCA.135 Landing

(a) The landing mass of the VCA at the estimated time of landing shall not exceed the maximum mass specified in the AFM for the certified landing procedure to be used.

(b) The IAM operator shall take into account:

(1) the relevant parameters of point UAM.POL.VCA.110(c); and

(2) the obstacles identified in accordance with point UAM.POL.VCA.115.

(c) If a critical failure for performance (CFP) is recognised at any point at or before the landing decision point (LDP), it is possible either to land and stop within the runway or FATO, or perform a balked landing by clearing all obstacles in the flight path by a vertical margin of 10,7 m (35 ft).

(d) If a CFP is recognised at any point at or after the LDP, it is possible to land and stop within the runway or FATO by clearing all obstacles in the approach path.

UAM.POL.VCA.140 Mass and balance, and loading

(a) During any phase of the operation, the loading, mass, and centre of gravity (CG) of the VCA shall comply with the limitations specified in the AFM, or the operations manual (OM), if more restrictive.

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(b) The IAM operator shall establish the mass and the CG of any aircraft it operates by actual weighing prior to initial entry into service and thereafter at intervals of 4 years if individual VCA masses are used, or at intervals of 9 years if fleet masses are used. The accumulated effects of modifications and repairs on the mass and balance of the aircraft shall be considered and properly documented. The VCA shall be reweighed if the effect of modifications on its mass and balance is not accurately known.

(c) The weighing shall be accomplished by the manufacturer of the aircraft or by an approved maintenance organisation.

(d) The IAM operator shall determine the mass of all operating items and crew members (pilots and, if applicable, technical crew), included in the VCA dry operating mass, by actual weighing or by using standard masses. The influence of their position on the aircraft's CG shall be determined.

(e) The IAM operator shall establish the mass of the traffic load, including any ballast, by actual weighing or by determining the mass of the traffic load in accordance with standard passenger and, if applicable, baggage masses.

(f) The IAM operator can use standard masses for other load items if it demonstrates to the competent authority that these items have the same mass or that their masses are within specified tolerances.

(g) The IAM operator shall determine the mass of the fuel load and/or of the energy storage unit as follows:

(1) for the *fuel load*, by using the actual density or, if not known, the density calculated in accordance with a method specified in the operations manual (OM);

(2) for the *energy storage unit*, by weighing or by using standard masses specified in the OM.

(h) The IAM operator shall ensure that the loading of:

(1) the VCA is performed under the supervision of qualified personnel; and

(2) the traffic load is consistent with the data used for the calculation of the aircraft mass and balance.

(i) The IAM operator shall comply with additional structural limits such as the floor strength limitations, the maximum load per running metre, the maximum mass per cargo compartment, and the maximum seating limit.

(j) The IAM operator shall specify in the OM the principles and methods applied for the loading and in the mass and balance system that meet the requirements of points (a) to (i). That system shall cover all types of the operator's intended operations.

UAM.POL.VCA.145 Mass and balance data, and mass and balance documentation

(a) The IAM operator shall establish mass and balance data and shall produce mass and balance documentation prior to each flight, specifying the load and its distribution. The mass and balance documentation shall enable the PIC to determine that the load and its distribution is such that the mass and balance limits of the aircraft are not exceeded. The mass and balance documentation shall contain the following information:

(1) VCA registration and type;

(2) flight identification, number and date;

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(3) full name of the PIC;

(4) full name of the person that has prepared the documentation;

(5) dry operating mass and the corresponding CG of the aircraft:

(6) mass of the fuel or energy storage unit at take-off, and the mass of trip fuel;

(7) mass of consumables other than fuel, if applicable;

(8) traffic load components, including passengers, baggage, freight and ballast;

(9) take-off mass, landing mass, and zero fuel mass;

(10) applicable aircraft CG positions; and

(11) the limiting mass and CG values.

The information above shall be available in flight-planning documents or in mass and balance systems.

(b) When mass and balance data and mass and balance documentation are generated by a computerised mass and balance system, the operator shall:

(1) verify the integrity of the output data to ensure that the data is within the AFM limitations; and

(2) specify the instructions and procedures for its use in its operations manual (OM).

(c) The person that supervises the loading of the aircraft shall confirm by hand-written signature or equivalent that the load and its distribution are in accordance with the mass and balance documentation given to the PIC. The PIC shall indicate their acceptance by handwritten signature or equivalent.

(d) The IAM operator shall specify procedures for last-minute changes to the load to ensure that:

(1) any last-minute change following the completion of the mass and balance documentation is brought to the attention of the PIC and entered in the flight-planning documents containing the mass and balance documentation;

(2) the maximum last-minute change allowed in passenger numbers or hold load is specified; and

(3) new mass and balance documentation is prepared if the maximum passenger number is exceeded.

SUBPART D

INSTRUMENTS, DATA AND EQUIPMENT

SECTION 1

VTOL-capable aircraft (VCA)

UAM.IDE.VCA.050 Scope

This Section establishes the requirements for IAM operations with VTOL-capable aircraft (VCA).

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UAM.IDE.VCA.100 Instruments and equipment

(a) The instruments, data and equipment required by this Subpart, as well as by the type-certification requirements and airspace requirements, shall be installed on or carried in the VCA according to the conditions under which the operation is to be conducted.

Instruments and equipment required by this Subpart, as well as by the type-certification requirements and airspace requirements, shall be approved in accordance with the applicable airworthiness requirements, except for the following items:

(1) first-aid kits;

(2) survival and signalling equipment;

(3) sea anchors and equipment for mooring; and

(4) child restraint devices.

(b) Instruments and equipment not required by this Annex, as well as any other equipment which is not required pursuant to this Regulation, but carried on a flight, shall comply with the following:

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(1) the information provided by these instruments, equipment or accessories shall not be used by the pilot to comply with Annex II and with point 2.1 of Annex IX to Regulation (EU) 2018/1139 or with points UAM.IDE.MVCA.330 and UAM.IDE.MVCA.345 of this Annex; and

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(2) the instruments and equipment shall not affect the airworthiness of the aircraft, even in the case of failure or malfunction.

(c) If equipment is to be used by the pilot at their assigned station during the flight, it shall be installed so as to be easily operable from that station. When a single item of equipment is to be used by more than one person at their assigned stations, it shall be installed so as to be readily operable from any station.

(d) Those instruments that are used by the pilot shall be so arranged as to permit the pilot to see the indications readily from their assigned station with the minimum practicable deviation from the position and line of vision that the pilot normally assumes when looking forward along the flight path.

(e) All required emergency equipment shall be easily accessible for immediate use.

UAM.IDE.VCA.105 Minimum equipment required for a flight

A flight shall not commence when any of the aircraft instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

(a) the aircraft is operated in accordance with the operator’s minimum equipment list (MEL); or

(b) the operator is approved by the competent authority to operate the aircraft within the constraints of the master minimum equipment list (MMEL) in accordance with point ORO.MLR.105(j) of Annex III.

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SECTION 2

Manned VTOL-capable aircraft (MVCA)

UAM.IDE.MVCA.050 Scope

This Section establishes additional requirements for IAM operations with manned VTOL-capable aircraft (MVCA).

UAM.IDE.MVCA.115 Operating lights

A VCA operated under VFR by day shall be equipped with anti-collision lights.

UAM.IDE.MVCA.125 Flight instruments and associated equipment

(a) The VCA shall be equipped with the flight instruments and equipment specified in its type-certification approval for flights to be conducted in accordance with VFR by day.

(b) Additional flight instruments and equipment shall be installed on or carried in the VCA, as necessary, according to the expected operating conditions and crew workload.

UAM.IDE.MVCA.140 Fuel/energy measuring and displaying equipment

(a) The VCA shall be equipped with means of measuring and displaying to the pilot in flight the remaining usable amount of fuel/energy.

(b) A conservative estimate of the amount of fuel/energy necessary to complete the remaining part of the flight shall be displayed to the pilot in flight unless provided by other means as per point UAM.OP.VCA.195(a).

UAM.IDE.MVCA.145 Height-determination equipment

(a) The VCA shall, for flights over water, be equipped with a means to determine the height of the aircraft in relation to the water surface, capable of emitting an audio warning below a preset value and a visual warning at a height selectable by the pilot, when operating:

(1) at a distance from land corresponding to more than 3 minutes flying time at normal cruising speed;

(2) reserved;

(3) reserved;

(4) out of sight of the land.

UAM.IDE.MVCA.170 Crew interphone system

For operations with more than one crew member, the VCA shall be equipped with an interphone system, including headsets and microphones, for use by all the crew members.

UAM.IDE.MVCA.180 Public address system (PAS)

The VCA shall be equipped with a PAS, unless the IAM operator is able to demonstrate that when in flight, the pilot's voice is audible and intelligible at all passengers' seats.

UAM.IDE.MVCA.185 Cockpit voice recorder (CVR)

(a) A VCA with an MCTOM of more than 5 700 kg shall be equipped with a CVR.

(b) The CVR shall be capable of retaining the data recorded during at least the preceding 2 hours.

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(c) The CVR shall record with reference to a timescale on means other than magnetic tape or magnetic wire:

(1) voice communications transmitted from or received in the flight crew compartment by radio;

(2) crew members' voice communications using the interphone system and the public address system (PAS), if installed;

(3) the aural environment of the flight crew compartment, including the audio signals received from the flight crew microphone;

(4) voice or audio signals identifying navigation or approach aids introduced into a headset or a speaker.

(d) The CVR shall, depending on the availability of electrical power, record as early as possible during the cockpit checks at the beginning of the flight prior to the VCA being capable of moving under its own power until the cockpit checks immediately following lift and thrust units powering off at the end of the flight. In any case, the CVR shall automatically start to record prior to the aircraft moving under its own power and shall continue to record until the termination of the flight.

(e) A function to modify CVR recordings shall be at the disposal of the PIC so that recordings made prior to the operation of that function cannot be retrieved using normal replay or copying techniques.

(f) If the CVR is not deployable, it shall have a device to assist in locating it under water with a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter (ELT).

UAM.IDE.MVCA.190 Flight data recorder (FDR)

(a) A VCA with an MCTOM of more than 5 700 kg shall be equipped with a FDR that uses a digital method of recording and storing data, and for which a method of readily retrieving that data from the storage medium is available.

(b) The FDR shall record the parameters required to determine accurately the flight path, speed, attitude, engine(s) power, operation, configuration, and any parameter that has been established during the type certification of the VCA and shall be capable of retaining the data recorded during at least the preceding 25 hours.

(c) Data shall be obtained from the VCA sources that enable accurate correlation with information displayed to the pilot(s).

(d) The FDR shall automatically start to record the data not later than the VCA is capable of moving under its own power and shall stop automatically following lift and thrust units powering off at the end of the flight.

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water with a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic ELT.

UAM.IDE.MVCA.191 Flight recorder

(a) A VCA with an MCTOM of 5 700 kg or less shall be equipped with a flight recorder.

(b) The flight recorder shall record by means of flight data and/or images information that is sufficient to determine the flight path and aircraft speed, as well as:

(1) audio from the flight crew compartment in multi-crew and VEMS operations; or

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(2) radio communications with air traffic service (ATS) units, where applicable.

(c) The flight recorder shall be capable of retaining the flight data and/or images, as well as audio, recorded during at least the preceding 5 hours.

(d) The flight recorder shall automatically start to record prior to the VCA being capable of moving under its own power and shall stop automatically following lift and thrust units powering off at the end of the flight.

(e) If the flight recorder records images or audio of the flight crew compartment, a function to modify image and audio recordings shall be at the disposal of the PIC, so that the recordings made prior to the operation of that function cannot be retrieved using normal replay or copying techniques.

(f) As an alternative to points (b) and (c), some flight data, images or audio may be transmitted and recorded remotely if approved as part of the aircraft type certification.

UAM.IDE.MVCA.200 Flight data and cockpit voice combination recorder

Compliance with the CVR and FDR requirements may be achieved by the carriage of one combination recorder.

UAM.IDE.MVCA.205 Seats, seat safety belts, restraint systems, and child restraint devices (CRDs)

(a) The VCA shall be equipped with:

(1) a seat or berth for each person on board that is aged 24 months or older;

(2) a seat belt with an upper-torso restraint system for use on each passenger seat and restraining belts on each berth;

(3) a child restraint device (CRD) for each person on board that is younger than 24 months; and

(4) a four-point upper-torso restraint system that includes a seat belt with two shoulder straps, on each pilot seat.

(b) A seat belt with upper-torso restraint system shall:

(1) have a single-point release; and

(2) on the pilot seat, incorporate a device that will automatically restrain the occupant's torso in the event of rapid deceleration.

UAM.IDE.MVCA.210 'FASTEN SEAT BELT' and 'NO SMOKING' signs

The VCA shall be equipped with a means of indicating to all persons on board when seat belts shall be fastened, and that smoking is not allowed at any time.

UAM.IDE.MVCA.220 First-aid kits

(a) The VCA shall be equipped with at least one first-aid kit.

(b) First-aid kits shall be:

(1) readily accessible for use;

(2) kept up to date.

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UAM.IDE.MVCA.240 Supplemental oxygen – non-pressurised aircraft

Non-pressurised VCA operated at pressure altitudes above 10 000 ft shall be equipped with supplemental oxygen equipment capable of storing and dispensing oxygen in accordance with the following table:

Table

Minimum requirements regarding supplemental oxygen in non-pressurised aircraft

Supply for:	Flight duration and cabin pressure altitude
person(s) piloting the aircraft	For the entire flying time at pressure altitudes above 13 000 ft and for any period that exceeds 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.
100 % of passengers ([1])	For the entire flying time at pressure altitudes above 13 000 ft.
10 % of passengers ([1])	For the entire flying time beyond 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13 000 ft.

([1]) Passenger percentages in this table refer to passengers carried on board, including persons younger than 24 months of age.

UAM.IDE.MVCA.250 Handheld fire extinguishers

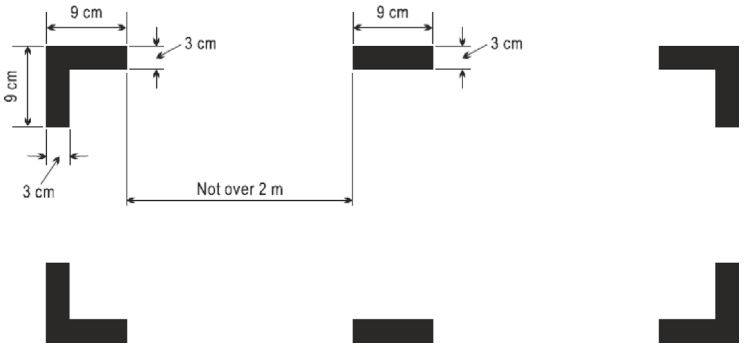
(a) The VCA shall be equipped with at least one handheld fire extinguisher in the flight crew compartment, which shall be readily accessible for use.

(b) At least one handheld fire extinguisher shall be located in the passenger compartment if the handheld fire extinguisher located in the flight crew compartment cannot be easily accessed by the passengers.

(c) The type and quantity of the fire-extinguishing agent of the handheld fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the handheld fire extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

UAM.IDE.MVCA.260 Marking of break-in points

If areas on the VCA's fuselage that are suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in the figure below.



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UAM.IDE.MVCA.275 Emergency lighting and marking

The VCA shall be equipped with:

(a) an emergency lighting system independent of the VCA normal electric power supply to facilitate the evacuation of passengers from the aircraft; and

(b) emergency-exit marking and locating signs visible in daylight, in the dark and in a smoke filled cabin.

UAM.IDE.MVCA.280 Emergency locator transmitters (ELTs)

The VCA shall be equipped (fitted) with at least one approved automatic ELT or, alternatively, with such other approved automatic aircraft tracking device in combination with a locator beacon that shall enable rescue services to be alerted, to reach the accident site and to accurately locate survivors.

UAM.IDE.MVCA.300 Flights over water

(a) A VCA that carries passengers shall be certified:

(1) for ditching, when operated over water in a hostile sea at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;

(2) for ditching or emergency flotation, when operated over water in a non-hostile sea at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;

(3) for limited overwater operations, if not meeting the criteria referred to in point (a)(1) or (a)(2), and when one or more of the following conditions apply:

(i) the total flying time over water is longer than 3 minutes;

(ii) the landing or take-off is performed over water.

(b) A VCA that does not carry passengers shall be certified:

(1) for ditching or emergency flotation, when operated over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;

(2) for limited overwater operations, if not meeting the criteria referred to in point (b)(1) and when one or more of the following conditions apply:

(i) the total flying time over water is longer than 3 minutes;

(ii) the landing or take-off is performed over water.

(c) A VCA that operates on water shall be certified for operations on water in addition to meeting the criteria referred to in point (a) or (b).

(d) A VCA that operates on floating surfaces shall be certified for operations on floating surfaces in addition to meeting the criteria referred to in point (a) or (b).

(e) The VCA shall carry a survival ELT (ELT(S)) that is buoyant and can be automatically activated for flights over water, except for limited overwater operations.

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UAM.IDE.MVCA.305 Life jackets and other equipment

(a) Except as specified in point (c) for flights over water as defined in point UAM.IDE.MVCA.300, the VCA shall be equipped as a minimum with a life jacket for each person on board, stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided, with the restrain system fastened. If it is not possible to have the life jackets readily accessible with the restrain system fastened, each person shall wear a life jacket on or, if that person is younger than 24 months, an equivalent flotation device.

(b) Each life jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons in the water.

(c) For flights over water in a hostile sea at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, for the purpose of support to activities related to non-renewable and renewable-energy sources and support to vessels:

(1) each person on board shall wear a life jacket during the entire operation unless integrated survival suits that meet the combined requirement of the survival suit and life jacket are worn;

(2) each person on board shall wear a survival suit as appropriate with regard to the water temperature and estimated rescue time; the level of insulation provided shall be sufficient for the prevailing conditions and not excessive;

(3) each person on board shall carry an emergency breathing system (EBS) and shall be instructed in its use.

UAM.IDE.MVCA.310 Life rafts

(a) The VCA shall equipped with one or more life rafts for flights over water in a hostile sea area at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed or shall carry at least one life raft stowed so as to facilitate its ready use in an emergency for flights over water in a non-hostile sea at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed. The life rafts shall have sufficient capacity, separately or together, to accommodate all persons carried on board the VCA.

(b) All required life rafts shall allow for their ready use in an emergency.

(c) Each required life raft shall contain at least one ELT(S).

(d) Each required life raft shall be usable in the sea conditions in which the VCA's ditching, flotation, and trim characteristics have been evaluated for the purpose of certification.

(e) Each required life raft shall contain life-saving equipment, including means of sustaining life, as appropriate to the flight to be undertaken.

UAM.IDE.MVCA.311 Survival equipment

(a) A VCA operated over areas where search and rescue would be particularly difficult shall be equipped with:

(1) signalling equipment to make distress signals;

(2) at least one ELT(S); and

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(3) additional survival equipment for the route to be flown taking into account the number of persons on board.

UAM.IDE.MVCA.315 Equipment for on-water operations

(a) A VCA certified for operating on water shall be equipped with:

(1) a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the VCA on water, appropriate to its size, weight and handling characteristics; and

(2) equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

UAM.IDE.MVCA.325 Headsets

The VCA shall be equipped with a headset with boom microphone or equivalent and a transmit button on the flight controls for each pilot of the VCA at their assigned station.

UAM.IDE.MVCA.330 Radio communication equipment

(a) The VCA shall be equipped with at least one radio communication system connected to the aircraft's primary power supply and as many more radio communication systems as necessary for the type of operation to be conducted and the class(es) of airspace in which the operation shall take place.

(b) The radio communication equipment shall allow flight crews under normal operating conditions to:

(1) communicate with appropriate ground stations from any point on the route, including diversions;

(2) communicate with appropriate ATC stations from any point in controlled airspace within which flights are intended to be operated; and

(3) receive meteorological information.

(c) The radio communication equipment shall allow for communication on the 121,5 MHz aeronautical emergency frequency.

UAM.IDE.MVCA.345 Navigation equipment

(a) The VCA shall be equipped with navigation equipment for flights in accordance with VFR by day and in accordance with the applicable airspace requirements.

(b) The VCA shall be equipped with sufficient navigation equipment to ensure that, in the event of failure of one item of equipment at any phase of the flight, the remaining equipment shall allow for safe navigation in accordance with the flight plan.

UAM.IDE.MVCA.350 Transponders

When required by the class of airspace being flown, the VCA operated under VFR by day shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

UAM.IDE.MVCA.355 Management of aeronautical databases

(a) The IAM operator shall:

(1) ensure that the aeronautical databases to be used on certified aircraft system applications meet the data quality requirements that are adequate for the intended use of the data;

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(2) ensure the timely distribution and update of current and unaltered aeronautical databases to all aircraft that require them;

(3) report to the database provider instances of erroneous, inconsistent or missing data that might be reasonably expected to constitute a hazard to flight, notwithstanding any other occurrence-reporting requirements as defined in Regulation (EU) No 376/2014. In such cases, the IAM operator shall inform all personnel concerned, and shall ensure that the affected data is not used.