Based on Article 16(3), Article 86(1), Article 87(5), Article 96, Article 97(2), Article 194(2), Article 198(4), Article 199(5), Article 239, Article 249(1) and Article 265 of the Air Transport Law ("Official Gazette of RS", Nos 73/10, 57/11, 93/12, 45/15 and 66/15-other law),

Director of the Civil Aviation Directorate of the Republic of Serbia hereby adopts

REGULATION
on the conditions for performing air operations

Article 1

This Regulation lays down the following: the conditions for issuing, amending, suspending or revoking air operator certificate and the format of the certificate; the conditions for establishing and use of an air operator safety management system; the conditions for issuing prior consent for concluding lease agreement; the performance of ramp inspection of foreign aircraft landed at aerdromes in the territory of the Republic of Serbia; measures that the pilot-in-command is empowered to take in order to ensure safe operations and aircraft safety; types of specialised operations for remuneration, definition and types of high risk specialised operations, detailed conditions and the method of performing those operations, the conditions for issuing, amending, suspending or revoking authorisation of high risk commercial specialised operations, as well as the layout and the content of that authorisation; the requirements for aircraft operator who performs non-commercial operations; the content of declaration by the aircraft operator engaged in non-commercial operations certifying the operator is duly competent and has secured sufficient financial resources in order to perform the non-commercial operations; the method of conducting the check of requirements for commercial air transport, specialised operations, and non-commercial operations of complex motor-powered aircraft.

This Regulation lays down the number and content of aircrew members, and the conditions for working time, flight time, flight time duty period, breaks and rest periods of aircrew engaged in commercial air transport, other than air taxi operations, emergency aeromedical services and single-pilot operations.

The provisions of this Regulation shall apply to performing operations with planes, helicopters, balloons and sailplanes which are subject to Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency.

Article 2

Terms used in this Regulation shall have the following meanings:

(1) *Agency* means European Aviation Safety Agency;

(2) *the ECAA Agreement* means Multilateral Agreement between the European Community and its Member States, the Republic of Albania, Bosnia and Herzegovina, the Republic of Bulgaria, the Republic of Croatia, the former Yugoslav Republic of Macedonia, the Republic of Iceland, the Republic of Montenegro, the Kingdom of Norway, Romania, the Republic of Serbia and the United Nations Interim Administration Mission in Kosovo (pursuant to UN Security Council Resolution 1244 of 10 June 1999) on the establishment of a European Common Aviation Area;

(3) *competent authority* means the Civil Aviation Directorate of the Republic of Serbia (hereinafter: the Directorate);

(4) *Decision C (2009) 7633* means the Commission Decision C (2009) 7633 of 14 October 2009 authorising Austria, the United Kingdom and Malta to issue Air Operator's Certificates by way of derogation from Council Regulation (EEC) No 3922/1991 on the harmonization of technical requirements and administrative procedures in the field of civil aviation;

(5) *Directive 2003/42/EC* means Directive 2003/42/EC of the European Parliament and of the Council of 13 June 2003 on occurrence reporting in civil aviation. This Directive has been applied in the Republic of Serbia by Regulation on occurrence reporting in civil aviation ("Official Gazette of RS", 54/12 and 86/16);

(6) *Regulation No 216/2008* means Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC. This Regulation has been applied in the Republic of Serbia by Regulation on common rules in the field of civil aviation and the competences of the European Aviation Safety Agency ("Official Gazette of RS", No 23/12 and 104/17);

(7) *Regulation No 1321/2007* means Commission Regulation (EC) No 1321/2007 of 12 November 2007 laying down implementing rules for the integration into a central repository of information on civil aviation occurrences exchanged in accordance with Directive 2003/42/EC of the European Parliament and of the Council. This Regulation has been applied in the Republic of Serbia by Regulation on occurrence reporting in civil aviation ("Official Gazette of RS", No 54/12 and 86/16);

(8) *Regulation No 1330/2007* means Commission Regulation (EC) No 1330/2007 of 24 September 2007 laying down implementing rules for the dissemination to interested parties of information on civil aviation occurrences referred to in Article 7(2) of Directive 2003/42/EC of the European Parliament and of the Council. This Regulation has been applied in the Republic of Serbia by Regulation on occurrence reporting in civil aviation ("Official Gazette of RS" No 54/12 and 86/16);

(9) *Regulation No 1178/2011* means 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. This Regulation has been applied in the Republic of Serbia by Regulation on flight crew ("Official Gazette of RS", No 33/13 and 61/15);

(10) *Regulation No 2111/2005* means 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 on the identity of the operating air carrier, and repealing Article 9 of Directive 2004/36/EC. This Regulation has been applied in the Republic of Serbia by Regulation on security ramp inspection of foreign aircraft ("Official Gazette of RS", No 2/11);

(11) *Commission Regulation (EU) No 748/2012* means 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. Reference to this Regulation in Addendum 1, until its application in the Republic of Serbia, shall be deemed reference to

Regulation (EC) No 1702/2003, which has been applied in the Republic of Serbia by Regulation on airworthiness and environmental certification of aircraft and other aeronautical products, parts and appliances and on issuing maintenance licences for design and production organisations ("Official Gazette of RS", No 2/11);

(12) *Regulation (EU) No 996/2010* means 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. This Regulation has been applied in the Republic of Serbia by the Law on accident investigations for aviation, railways and waterborne transport ("Official Gazette of RS", No 66/15);

(13) *Regulation (EC) No 1107/2006* means Regulation (EC) No 1107/2006 of the European Parliament and of the Council of 5 July 2006 concerning the rights of disabled persons and persons with reduced mobility when travelling by air. This Regulation has ben applied in the Republic of Serbia by the Law on Obligations and the Basics of Property Relations in Air Transport ("Official Gazette of RS", No 87/11 and 66/15).

Other definitions used in this Regulation shall have the meanings listed in Addendum 1 to this Regulation.

The term "Community", "Community regulations", "Member State", "Agreement", or "EU operator" used in this Regulation, shall be interpreted pursuant to point (2) and point (3) of Annex II of ECAA Agreement and the appropriate provisions of the Treaty of Lisbon amending The Treaty on European Union and the Treaty Establishing the European Community.

Article 3

The conditions for issuing, amending, suspending or revoking of the air operator certificate and the format of the certificate, the conditions for establishing and use of an air operator safety management system, the conditions for issuing prior consent for concluding agreement on the lease of an aircraft, the performace of ramp inspection of foreign aircraft landed at aerdromes in the territory of the Republic of Serbia; measures that the pilot-in-command is empowered to take in order to ensure safe operations and aircraft safety; types of specialised operations for remuneration, definition and types of high risk specialised operations, detailed conditions and method of performing specialised operations, the conditions for issuing, amending, suspending or revoking specialised operations authorisation, as well as the layout and the content of that authorisation; the requirements for aircraft operator engaged in non-commercial operations; the content of the declaration by the aircraft operator engaged in non-commercial operations declares that he/she is duly competent and has secured sufficient financial resources in order to perform the non-commercial operations, the method of conducting the check of requirements for commercial air transport operations and non-commercial operations, the number and content of crew members, and the conditions for working time, flight time, flight time duty period, breaks and rest periods of crew in commercial air transport, other than air taxi operations, emergency aeromedical services and single pilot operations, shall be included in Addendum 1, printed with this Regulation and making an integral part thereof.

Addendum 1 to this Regulation transposes in national legislation 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, amended by:

(1) Commission Regulation (EU) No 800/2013 of 14 August 2013, amending Regulation (EU) No 965/2012 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;

(2) Commission Regulation (EU) No 71/2014 of 27 January 2014 amended by Regulation (EU) No 965/2012 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;

(3) Commission Regulation (EU) No 83/2014 of 29 January 2014 amending 965/2012 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;

(4) Commission Regulation (EU) No 379/2014 of 7 April 2014 amending 965/2012 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;

(5) Commission Regulation (EU) No 2015/140 of 29 January 2015 amending Regulation (EU) No 965/2012 as regards sterile flight crew compartment and correcting that Regulation;

(6) Article 4 of Commission Regulation (EU) No 2015/640 of 23 April 2015 on additional airworthiness specifications for a given type of operations and amending Regulation (EU) 965/2012;

(7) Commission Regulation (EU) No 2015/1329 of 31 July 2015 amending Regulation (EU) 965/2012 operations by Union air carriers of aircraft registered in a third country.

Besides provisions of Addendum 1, Acceptable Means of Compliance (AMC) established by the European Aviation Safety Agency (EASA) and published in its web pages, shall be applied, unless the Directorate has approved the application of alternative means of compliance pursuant to provisions of this Regulation.

The list of specialised operations in air transport which are considered high risk specialised operations, shall be published in the web page of the Directorate.

Article 4

A responsible persons assigned by an operator in accordance with ORO.AOC.135 (a) or ORO.SPO.100 (a), shall:

(1) have practical experience and proficiency of aviation safety standards in the field they have been engaged in;

(2) have an overall knowledge of air law concerning safety and the related procedures;

(3) have complete knowledge of operating specifications of AOC holder, or the privileges included in the specialised operations authorisation;

(4) be familiar with the content of the appropriate parts of operations manual;

(5) be familiar with the functioning of management system, preferably in the aviation field;

(6) have experience in perfoming manager’s tasks, preferably in organisations comparable to the operator’s organisation; and

(7) have at least five years of experience, with at least two years of experience in the appropriate work place at an aviation entity.

Besides general conditions from paragraph 1, responsible persons shall comply with the following special conditions, depending on the field of management they have been assigned for:

(1) the person responsible for air operations shall hold or have hold flight crew licence with endorsed privilege, appropriate for the type of operations the operator has been engaged in. In case the flight crew licence or the appropriate privilege are invalid at the moment of assigning the person, it is mandatory that the deputy holds the appropriate valid licence with the endorsed privilege.

(2) the person responsible for the training of the crew, or the deputy, shall have a valid flight instructor certificate, and thorough knowledge of the training plan of flight, cabin or other personnel at the operator;

(3) the person responsible for ground operations shall have thorough knowledge on organisation and performance of groundhandling operations;

(4) the person responsible for continuing airworthiness shall have the appropriate knowledge and experience as regards ensuring aircraft continuing airworthiness, in accordance with regulation laying down requirements for ensuring continuing airworthiness.

Article 5

Operators performng commercial air transport operations, specialised operations and non-commercial operations with complex motor-powered aircraft shall notify the Directorate, on a regular basis, of the training plan, flight and cabin crew checks as well as other operating personnel checks, which refer to the following calendar month.

Article 6

Air operator certificates which are valid on the date of entry into force of this Regulation shall be valid after the entry into force of this Regualtion.

Declarations of air operators engaged in non-commercial operations of complex motor-powered aircraft, given in accordance with Article 6 (2) and Article 6 (3) of the Regulation on performance of commercial air transport operations and non-commercial operations ("Official Gazette of RS", No 55/16), shall be valid upon entry into force of this Regulation.

Air operators subject to Regulation 216/2008, engaged in specialised operations for remuneration based on certificate of competence for the provision of air services issued pursuant to Regulation on the provision of air services and transport for the own use ("Official Gazette of RS", No 19/11), and who intend to perform these operations, shall submit to the Directorate declaration on competence for performing specialised operations for remuneration, or application for issuing the authorisation of high risk commercial specialised operations, when performing high risk commercial specialised operations.

The certificates of competence for the provision of air services issued pursuant to Regulation on the provision of air services and transport for the own use ("Official Gazette of RS", No 19/11) to aircraft operators subject to Regulation 216/2008, shall be revoked when submitting declaration or making a decision on the application from paragraph (3), no later than eight months from the date of entry into force of this Regulation.

Article 7

The provisions ORO.AOC.110 (d) (1) and (d) (2) and ORO.SPO.100 (c) (2) (i) and (c) (2) (ii) of Annex III of Commission Regulation (EU) No 965/2012 shall be applicable from the date of accession of the Republic of Serbia to the European Union or when the requirements for the second transitional period set forth by the ECAA agreement have been met, whichever occurs first.

By entry into force of this Regulation, provisions of Regulation on the provision of air services and transport for the own use ("Official Gazette of RS", No 19/11) shall continue to apply to specialised operations and non-commercial operations subject to Regulation (EC) No 216/2008 until adopting specific regulation.

The appropriate provisions of Regulation on organisation of working time of civil aircraft crew members ("Official Gazette of RS", No 101/08, 16/09, 93/09 and 14/10) shall be applied as regards flight time, flight time duty period, breaks and rest days of the crew engaged in air taxi operations, emergency aeromedical services or of the crew of a single pilot aircraft, and as regards flight time, flight time duty period, breaks and rest days of members of the helicopter crew.

Article 8

On the date of entry into force of this Regualtion, the following shall be repealed:

(1) Regulation on the conditions and the procedure for issuing CAT certificate of competence ("Official Gazette of RS", No 33/08, 39/09, 14/10 and 54/12 - other regualtion);

(2) Article (11) and Article (12) of Regulation on organisation of working time of civil aircraft crew members ("Official Gazette of RS", No 101/08, 16/09, 93/09 and 14/10);

(3) Regulation on the conditions for issuing, amending, suspending or revoking certificate of competence for performing commercial air operations with balloons ("Official Gazette of RS" No 32/11);

(4) Regulation on commercial and non-commercial operations ("Official Gazette of RS", No 55/16).

Article 9

This Regulation shall enter into force on the eighth day from the day of its publishing in the "Official Gazette of the Republic of Serbia".

No 5/1-01-0001/2018-0001
In Belgrade, 15 January 2018

Director

Mirjana Cizmarov

Addendum 1.

Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures concerning air operations pursuant to Regulation of the European Parliament and the Council (EC) No 216/2008

Article 1
Subject matter and scope

1. This Regulation lays down detailed rules for air operations with aeroplanes, helicopters, balloons and sailplanes, 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 Treaty.

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 Article 4(1)(b) and (c) of Regulation (EC) No 216/2008 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, and for the oversight of, operators engaged in commercial specialised operations and non-commercial operation of complex motor-powered aircraft, including non-commercial specialised operations of complex motor-powered aircraft.

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.

6. This Regulation shall not apply to air operations with tethered balloons and airships as well as tethered balloon flights.

Article 2
Definitions

For the purposes of this Regulation:

(1) ‘commercial air transport (CAT) operation’ means an aircraft operation to transport passengers, cargo or mail for remuneration or other valuable consideration;

(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;

(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;

(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;

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

(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;

(9) ‘introductory flight’ means any flight against remuneration or other valuable consideration consisting of an air tour of short duration, offered by an approved training organisation or an organisation created with the aim of promoting aerial sport or leisure aviation, for the purpose of attracting new trainees or new members;

(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.

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

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.

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.

Article 4

Ramp inspections

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.

Article 5

Air operations

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

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.

2. 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);

(iv) low visibility operations (LVO);

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

(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); and

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

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.

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

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

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

(b) other aeroplanes and helicopters as well as balloons and sailplanes in accordance with the provisions specified in Annex VII.

6. Operators shall only operate an aircraft for the purpose of commercial specialised operations as specified in Annexes III and VIII.

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. Except for crew members, persons other than those indispensable to the mission shall not be carried on board.

Article 6
Derogations

1. Deleted.

2. 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.

3. By way of derogation from Article 5(1), flights related to the introduction or modification of aircraft types conducted by design or production organisations within the scope of their privileges shall continue to be operated under the conditions set out in Member States' national law.

4. Notwithstanding Article 5, Member States may 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. These requirements shall not be less restrictive than those of Annexes III and IV.

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

(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;

(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 approved in accordance with 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.

5. By way of derogation from CAT.POL.A.300(a) of Annex IV, single-engined aeroplanes, when used in CAT operations, shall be operated at night or in instrument meteorological conditions (IMC) under the conditions set out in the existing exemptions granted by Member States in accordance with Article 8(2) of Regulation (EEC) No 3922/91.

Any change to the operation of these aeroplanes that affects the conditions set out in those exemptions shall be notified to the Commission and the Agency before the change is implemented. The Commission and the Agency shall assess the proposed change in accordance with Article 14(5) of Regulation (EC) No 216/2008.

6. Existing helicopter operations to/from a public interest site (PIS) may be conducted in derogation to CAT.POL.H.225 of Annex IV whenever the size of the PIS, the obstacle environment or the helicopter does not permit compliance with the requirements for operation in performance class 1. Such operations shall be conducted under conditions determined by Member States. Member States shall notify the Commission and the Agency of the conditions being applied.

7. By way of derogation from SPA.PBN.100 PBN of Annex V non-commercial operations with other-than complex motor-powered aeroplanes in designated airspace, on routes or in accordance with procedures where performance-based navigation (PBN) specifications are established shall continue to be operated under the conditions set out in Member States' national law until the related implementing rules are adopted and apply.

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.

Article 8

Flight time limitations

1. CAT operations with aeroplanes shall be subject to Subpart FTL of Annex III.

2. By way of derogation from paragraph 1, air taxi, emergency medical service and single pilot CAT operations by aeroplanes shall be subject to Article 8(4) of Regulation (EEC) No 3922/91 and Subpart Q of Annex III to Regulation (EEC) No 3922/91 and to related national exemptions based on safety risk assessments carried out by the competent authorities.

3. CAT operations with helicopters shall comply with national requirements.

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 (4) 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.

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.

Article 9b

Review

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;

(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.

Article 10

Entry into force

1. This Regulation shall enter into force on the third day following that of its publication in the Official Journal of the European Union.

It shall apply from 28 October 2012.

2. By way of derogation from the second subparagraph of paragraph 1, Member States may decide not to apply the provisions of Annexes I to V until 28 October 2014.

When a Member State makes use of that possibility, it shall notify the Commission and the Agency. This notification shall describe the reasons for such derogation and its duration as well as the programme for implementation containing actions envisaged and related timing.

2. By way of derogation from the second subparagraph of paragraph 1, Member States may decide not to apply the provisions of Annexes I to V until 28 October 2014.

When a Member State makes use of that possibility, it shall notify the Commission and the Agency. This notification shall describe the reasons for such derogation and its duration as well as the programme for implementation containing actions envisaged and related timing.

3. By way of derogation from the second subparagraph of paragraph 1, Member States may decide not to apply:

(a) the provisions of Annexes II and III to non-commercial operations with complex motor-powered aeroplanes and helicopters until 25 August 2016; and

(b) the provisions of Annexes II, V, VI and VII to non-commercial operations with aeroplanes, helicopters, sailplanes and balloons until 25 August 2016.

4. By way of derogation from the second subparagraph of paragraph 1, Member States may decide not to apply the provisions of Annexes II, III, VII and VIII to specialised operations until 21 April 2017.

5. By way of derogation from the second subparagraph of paragraph 1, Member States may decide not to apply the provisions of Annexes II, III and IV to:

(a) CAT operations starting and ending at the same aerodrome/operating site with Performance class B aeroplanes or non-complex helicopters until 21 April 2017; and

(b) CAT operations with balloons and sailplanes until 21 April 2017.

6. When a Member State makes use of the derogation provided for in paragraph 5 point (a), the following rules shall apply:

(a) for aeroplanes, Annex III to Regulation (EEC) No 3922/91 and related national exemptions in accordance with Article 8(2) of Regulation (EEC) No 3922/91;

(b) for helicopters, national requirements.

7. When a Member State makes use of the derogations provided for in paragraphs 3, 4 and 5, it shall notify the Commission and the Agency. This notification shall describe the reasons for the derogation and its duration, as well as the programme for implementation containing actions envisaged and related timing.

ANNEX I

Definitions for terms used in Annexes II to VIII

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;

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

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

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

(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);

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

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

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

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

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

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

(b) RVR of not less than 300 m;

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

(a) DH lower than 100 ft; and

(b) RVR not less than 200 m;

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

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

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

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

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

(19) ‘certification specifications’ (CS) means technical standards adopted by the 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;

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

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

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

(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;

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

(25) ‘contaminated runway’ means a runway of which more than 25 % of the runway surface area within the required length and width being used is covered by the following:

(a) surface water more than 3 mm (0,125 in) deep, or by slush, or loose snow, equivalent to more than 3 mm (0,125 in) of water;

(b) snow which has been compressed into a solid mass which resists further compression and will hold together or break into lumps if picked up (compacted snow); or

(c) ice, including wet ice;

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

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

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

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

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

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

(32) ‘damp runway’ means a runway where the surface is not dry, but when the moisture on it does not give it a shiny appearance;

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

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

(35) ‘dangerous goods incident’ means:

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

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

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

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

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

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

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

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

(42) ‘dry runway’ means a runway which is neither wet nor contaminated, and includes those paved runways which have been specially prepared with grooves or porous pavement and maintained to retain ‘effectively dry’ braking action even when moisture is present;

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

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

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

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

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

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

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

(c) a balloon;

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

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

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

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

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

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

(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);

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

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

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

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

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

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

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

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

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

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

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

(a) medical personnel;

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

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

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

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

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

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

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

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

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

(69) ‘hostile environment’ means:

(a) an environment in which:

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

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

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

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

(b) in any case, the following areas:

(i) for overwater operations, the open sea areas north of 45N and south of 45S designated by the authority of the State concerned;

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

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

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

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

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

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

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

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

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

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

(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;

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

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

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

(a) a safe forced landing can be accomplished;

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

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

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

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

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

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

(86) ‘offshore operations’ means operations which routinely have a substantial proportion of the flight conducted over sea areas to or from offshore locations;

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

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

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

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

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

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

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

(b) RVR of not less than 350 m;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(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;

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

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

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

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

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

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

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

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

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

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

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

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

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

(123) '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;

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

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

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

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

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

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

(128) 'wet runway' means a runway of which the surface is covered with water, or equivalent, less than specified by the 'contaminated runway' definition or when there is sufficient moisture on the runway surface to cause it to appear reflective, but without significant areas of standing water.

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

(a) The Agency shall develop acceptable means of compliance (AMC) that may be used to establish compliance with Regulation (EC) No 216/2008 and its Implementing Rules. When the AMC are complied with, the related requirements of the Implementing Rules are met.

(b) Alternative means of compliance may be used to establish compliance with the Implementing Rules.

(c) The competent authority shall establish a system to consistently evaluate that all alternative means of compliance used by itself or by organisations and persons under its oversight allow the establishment of compliance with Regulation (EC) No 216/2008 and its Implementing Rules.

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

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;

(3) inform other Member States about alternative means of compliance that were accepted.

(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.

ARO.GEN.135 Immediate reaction to a safety problem

(a) Without prejudice to Directive 2003/42/EC of the European Parliament and of the Council the competent authority shall implement a system to appropriately collect, analyse and disseminate safety information.

(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.

(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.

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;

(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 or authorised by 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.

ARO.GEN.205 Allocation of tasks to qualified entities

(a) Tasks related to the initial certification, specialised operation authorisation or continuing oversight of persons or organisations subject to 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) 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, authorisation or continuing oversight tasks performed on its behalf.

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;

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

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

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

(7) 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;

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

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

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

(11) enforcement measures taken;

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

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

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

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

SECTION III

Oversight, certification and enforcement

ARO.GEN.300 Oversight

(a) The competent authority shall verify:

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

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

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

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

(b) This verification shall:

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

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

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

(4) provide the 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.

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.

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.

(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.

(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.

(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).

(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.

ARO.GEN.345 Declaration - organisations

(a) Upon receiving a declaration from an organisation carrying out or intending to carry out activities for which a declaration is required, the competent authority shall verify that the declaration contains all the information required by Part-ORO and shall acknowledge receipt of the declaration to the organisation.

(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.

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.

(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.

The level 1 findings shall include:

(1) failure to give the competent authority access to the organisation's facilities as defined in ORO.GEN.140 during normal operating hours and after two written requests;

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

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

(4) the lack of an accountable manager.

(c) A level 2 finding shall be issued by the 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.

(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, specialised operations authorisation or specific approval or to limit or suspend it in whole or in part, depending upon the extent of the level 1 finding, until successful corrective action has been taken by the organisation.

(2) In the case of level 2 findings, the 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).

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

(e) Without prejudice to any additional enforcement measures, when the authority 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, or authorised by 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 Regulation (EU) No 1178/2011.

(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.

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.

SUBPART OPS

AIR OPERATIONS

SECTION I

Certification of commercial air transport operators

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.

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

ARO.OPS.105 Code-share arrangements

In considering the safety of a code-share agreement involving a 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.

ARO.OPS.110 Lease agreements

(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;

(3) ORO.AOC.110(e), for dry lease-out of an aircraft to any operator;

(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;

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

(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.

(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:

(1) proper coordination with the competent authority responsible for the continuing oversight of the aircraft, in accordance with Commission Regulation (EC) No 2042/2003 (8), 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.

(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.

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).

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

(c) Upon receiving an application for a change to the authorisation, the 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.

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.

(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:

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

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

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.

(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.

ARO.OPS.210 Determination of distance or local area

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

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

(a) The 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.

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

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

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

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

ARO.OPS.230 Determination of disruptive schedules

For the purpose of flight time limitations, 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.

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.

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;

(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);

(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 ART.GEN.205 is limited or reinstated after suspension or revocation.

(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.

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;

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

(c) The training in (b)(2)(i) shall be delivered by the 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;

(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

(a) Ramp inspections shall be performed in a standardised manner using the form established in either Appendix III or Appendix IV.

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

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

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.

(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;

(2) it has obtained a permit-to-fly in accordance with Commission Regulation (EC) No 1702/2003, for aircraft registered in a Member State;

(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.

ARO.RAMP.150 Agency coordination tasks

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

(1) the information referred to in ARO.RAMP.145, using the forms as established in Appendices III and IV;

(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.

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.

Appendix I

AIR OPERATOR CERTIFICATE

(Approval schedule for air transport operators)

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

<table>
<tr><td rowspan="2">[5]</td><td>State of the operator [3]</td><td>[5]</td></tr>
<tr><td>Issuing authority [4]</td><td></td></tr>
<tr><td>AOC [6]</td><td>Operator name [7]</td><td>Operational points of contact: [9]</td></tr>
<tr><td></td><td>Dba trading name [8]</td><td rowspan="3">Contact details, at which operational management can be contacted without undue delay, are listed in ……..[12]</td></tr>
<tr><td></td><td>Operator address [10]</td></tr>
<tr><td></td><td>Telephone [11:]
Fax
E-mail</td></tr>
<tr><td colspan="3">This certificate certifies that …… [13] is auhorised to perfrom commercial air operations, as defined in the attached operations specifications, in accordance with the operations manual, Annex IV to Regulation (EC) No 216/2008 and its Implementing Rules.</td></tr>
<tr><td>Date of issue [14]:</td><td>Name and signature [15]:
Title:</td><td></td></tr>
</table>

(1) Other type of transportation to be specified.

(2) Specify the type of activity, e.g. agriculture, construction, aerial photography, surveying, observation and patrol, aerial advertisement.

(3) Replaced by the name of the State of the operator.

(4) Replaced by the identification of the issuing competent authority.

(5) For use of the competent authority.

(6) Approval reference, as issued by the competent authority.

(7) Replaced by the operator's registered name.

(8) Operator's trading name, if different, Insert "DBas" (For "Doing business as") before the trading name.

(9) The contact details include the telephone and fax numbers, including the country code, and the e-mail address (if available) at which operational management can be contacted without undue delay for issues related to flight operations, airworthiness, flight and cabin crew competency, dangerous goods and other matters as appropriate.

(10) Operator's principal base of business address.

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

(12) Insertion of the controlled document, acrried on board, in which the contact details are listed, with the appropriate pargraph 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 comepetent authority representative. In addition, an official stamp may be applied on the AOC.

EASA FORM 138 Issue 1

Appendix II

OPERATIONS SPECIFICATIONS **(subject to the approved conditions in the operations manual)**				
Issuing Aythority Contact Details Telephone [1]: _____; Fax:_____; E-mail: _____				
AOC [2]: Operator Name [3]: Date [4]: Signature: Dba trading name Operations specifications:				
Aircraft model [5]: Registration marks [6]:				
Commercial operations ☐ ……..				
Area of operation [7]:				
Special limitations [8]:				
Specific approvals:	Yes	No	Specification [9]	Remarks
Dangerous goods	☐	☐		
Low visibility operations Take-off Approach and landing Take-off	 ☐ ☐	 ☐ ☐	RVR [11]: m CAT [10] …..RVR: m DH:ft	
RVSM [12] ☐ N/A	☐	☐		
ETOPS [13] ☐ N/A	☐	☐	Maximum diversion time [14]: min.	
Navigation specifications for PBN operations [15]	☐	☐		[16]
Minimum navigation performance specification	☐	☐		
Helicopter operations with the aid of night vision imaging systems	☐	☐		
Helicopter host operations	☐	☐		
Helicopter emergency medical service operations	☐	☐		
Cabin crew training [17]	☐	☐		
Issue of CC attestation [18]	☐	☐		
Continuing airworthiness	☐	☐	[19]	
Others [20]	☐	☐		

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

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

(3) Insertion of the operator's registered name and the operator's trading name, if different.

Insert 'DB' before the trading name (for "Doing business as").

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

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

(6) Either the registration marks are listed in the operations specifications or in the operations manual. In the latter case the related operations specifications must make a reference to the related page in the operation manual. In case not all specific approvals apply to the aircraft model, the registration marks of the aircraft could be entered in the remark column to the related specific approval.

(7) Listing of geographical area(s) of authorised operation (by geographical coordinates or specific routes, flight information region or national or regional boundaries).

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

(9) List in this column the most permissive criteria for each approval or the approval type (with appropriate criteria).

(10) Insertion of applicable precision approach category: LTS CAT I, CAT II, OTS CAT II, CAT IIIA, CAT IIIB or CAT IIIC. Insertion of minimum runway visual range (RVR) in meters and decision height (DH) in feet. One line is used per listed approach category.

(11) Insertion of approved minimum take-off RVR in meters. One line per approval may be used if different approvals are granted.

(12) Not applicable (N/A) box may be checked only if the aircraft maximum ceiling is below FL290.

(13) Extended range operations (ETOPS) currently applies only to two-engined aircraft. Therefore the Not applicable (N/A) box may be checked if the aicraft model has more or less than two engines.

(14) The treshold distance may also be listed (in NM), as wekk as the engine type.

(15) Performance-based navigation (PBN): one line is used for each PBN approval (e.g. area navigation (RNAV) 10, RNAV 1, required by navigation perfromance (RNP) 4,…), with appropriate limitations or conditions listed in the 'Specifications' and/or 'Remarks' columns.

(16) Limitations, conditions and regulatory basis for operational approval associated with the PBN approval (e.g. global navigation satellite system (GNSS), distance measuring equipment DME/Inertial reference unit (DME/DME/IRU),…).

(17) Approval to the conduct of the training course and examination to be completed by applicants for a cabin crew attestation as specified in Annex V (Part-CC) to Commission Regulation (EU) No 290/2012.

(18) Approval to issue cabin crew attestations as specified in Annex V (Part-CC) to Commission Regulation (EU) No 209/2012.

(19) The name of the person/organisation responsible for ensuring that he continuing airworthiness of the aircraft is maintained and a reference to the regualtion that requires the work,i.e. Annex I (Part M), Subpart G to Commission Regualtion (EC) No 2042/2003.

(20) Other approvals or data can be entered here, using one line (or one multi-line block) per authorisation (e.g. short landing operations, steep approach operations, helicopter operations to/from a public ineterest site, helicopter operations over a hostile environement located outsied 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, aircraft used for non-commercial operations).

EASA FORM 139 Issue 1

Appendix III

Proof of Ramp Inspection

Date:	Time:	Place:	Free format Information of competent authority (logo, contact details, tel./fax/e-mail)
Operator:		State:	AOC No:
Route from:	Flight No:	Route to:	Flight No:
Flight type:	Chartered by Operator:	Aircraft type:	Aircraft configuration:
Charterer`s State		Registration mark:	Construction No:
Flight crew State(s) of licensing:	Acknowledgement of Receipt(*)		
	Name: …… Function:…… Function:……	Signature:……	

A	Flight deck	Check	Remark
1	General condition		
2	Emergency exit		
3	Equipment		
	Documentation		
4	Manuals		
5	Checklists		
6	Navigation/instrument charts		
7	Minimum equipment list		
8	Certificate of registration		
9	Noise certificate (where applicable)		
10	AOC or equivalent		
11	Radio licence		
12	Certificate of Airworthiness		
	Flight data		
13	Flight preparation		
14	Mass and balance calculation		
	Safety equipment		
15	Hand fire extinguishers		
16	Life-jackets/flotation devices		
17	Harness		
18	Oxygen equipment		
19	Independent portable light		

	Flight crew	Check	Remark
20	Flight crew licence/composition		
	Journey log book / Tech. log or equivalent		
21	Journey log book or equivalent		
22	Maintenance release		
23	Defect notification and rectiication (inc.tech Log)		
24	Pre-flight inspection		

B	Cabin safety	Check	Remark
1	General internal condition		
2	Cabin crew startion and crew rest area		
3	First-aid kit / Emerg. medical kit		
4	Hand fire extinguishers		
5	Life-jackets/Flotation devices		
6	Seat belt and seat condition		
7	Emergency exit, lighting and independent portable light		
8	Slides/Life-Rafts (as required), ELT		
9	Oxygen Supply (Cabin crew and passingers)		
10	Safety instructions		
11	Cabin crew members		
12	Access to emergency exits		
13	Stowage of passenger baggage		
14	Seat capacity		

C	Aircraft condition	Check	Remark
1	General external condition		
2	Doors and hatches		
3	Flight controls		
4	Wheels, tyres and brakes		
5	Undercarriage, skids/floats		
6	Wheel well		
7	Powerplant and pylon		
8	Fan blades, propellers, rotors (main/tail)		
9	Obvious repairs		
10	Obvious unrepaired damage		
11	Leakage		

D	Cargo	Check	Remark
1	General condition of cargo compartment		
2	Dangerous goods		
3	Cargo stowage		

E	General	Check	Remark
1	General		

Action Taken

	(3d) Immediate operating ban
	(3c) Aircraft grounded by inspecting NAA
	(3b) Corrective actions before flight
	(3a) Restrictions on the aircraft operation
	(2) Information to the authority and operator
	(1) Information to the pilot-in-command
	(0) No remarks

Inspector(s) sign or code

Inspection item	Remark(s)

Crew comments (if any):

(*) Signature by any member of the crew or other representative of the inspected operator does in no way imply acceptance of the listed findings but simply a confirmation that the aircraft has been inspected on the date and at the place indicated on this document.
This report represents an indication of what was found on this occasion and must not be construed as a determination that tha aircraft is fit for the intended flight. Data submitted in this report can be subject to changes upon entering into the centralised database.

EASA FORM 136 Issue 1

Appendix IV

Ramp inspection report

Competent authority *(name)*

(State)

Ramp Inspection Report

No: _ _ _ _-_ _ _ _-_ _ _ _

Source: RI
Date: ____-____-____
Local time: ____:____

Place: ____

Operator: ____
State: ____

AOC number: ____
Type of operation ____

Route from: ____
Route to: ____

Flight number: ____
Flight number: ____

Chartered by Operator*: ____
* *(where applicable)*

Charterer's State: ____

Aircraft Type: ____
Aircraft Configuration: ____

Registration marks: ____
Construction Number: ____

Flight crew: State of Licensing: ____
2nd State of Licensing*: ____
* *(where applicable)*

Findings:

Code /	Std /	Ref /	Cat /	Finding	Detailed Description:
____-____	____	____	____	____	____
____-____	____	____	____	____	____
____-____	____	____	____	____	____
____-____	____	____	____	____	____
____-____	____	____	____	____	____

Class of actions taken:

- ☐ 3d) Immediate operating ban
- ☐ 3c) Aircraft grounded by inspecting competent authority
- ☐ 3b) Corrective actions before flight
- ☐ 3a) Restriction on aircraft flight operation
- ☐ 2) Information to the competent authority and operator
- ☐ 1) Information to pilot-in-command

Detailed Description: ____

Additional information (if any)

Inspector's names or number: ....., ...

- This report represents an indication of what was found on this occasion and must not be construed as a determination that the aircraft is fit for the intended flight.
- Data submitted in this report can be subject to changes for correct wording upon entering into the centralised database.

Item code		Checked		Remark	
	A. Flight Deck				
	General				
1.	General condition	1	☐	1	☐
2.	Emergency exit	2	☐	2	☐
3.	Equipment	3	☐	3	☐
	Documentation				
4.	Manuals	4	☐	4	☐
5.	Checklists	5	☐	5	☐
6.	Radio Navigation Charts	6	☐	6	☐
7.	Minimum Equipment List	7	☐	7	☐
8.	Certificate of registration	8	☐	8	☐
9.	Noise certificate (where applicable)	9	☐	9	☐
10.	AOC or equivalent	10	☐	10	☐
11.	Radio licence	11	☐	11	☐
12.	Certificate of airworthiness (C of A)	12	☐	12	☐
	Flight data				
13.	Flight preparation	13	☐	13	☐
14.	Mass and balance calculation	14	☐	14	☐
	Safety Equipment				
15.	Hand fire extinguishers	15	☐	15	☐
16.	Life-jackets/flotation device	16	☐	16	☐
17.	Harness	17	☐	17	☐
18.	Oxygen equipment	18	☐	18	☐
19.	Independent portable light	19	☐	19	☐
	Flight crew				
20.	Flight crew licence/composition	20	☐	20	☐
	Journey logbook/Technical log or equivalent				
21.	Journey log book, or equivalent	21	☐	21	☐
22.	Maintenance release	22	☐	22	☐
23.	Defect notification and rectification (incl. tech log)	23	☐	23	☐
24.	Pre-flight inspection	24	☐	24	☐
	B. Cabin safety				
1.	General internal condition	1	☐	1	☐
2.	Cabin crew stations and crew rest area	2	☐	2	☐
3.	First-aid kit/Emergency medical kit	3	☐	3	☐
4.	Hand fire extinguishers	4	☐	4	☐
5.	Life jackets/Flotation device	5	☐	5	☐
6.	Seat belt and seat condition	6	☐	6	☐
7.	Emergency exit, lighting and independent portable light	7	☐	7	☐
8.	Slides/Life-rafts (as required), ELT	8	☐	8	☐
9.	Oxygen supply (cabin crew and passengers)	9	☐	9	☐
10.	Safety instructions	10	☐	10	☐
11.	Cabin crew members	11	☐	11	☐
12.	Access to emergency exits	12	☐	12	☐
13.	Stowage of passenger baggage's	13	☐	13	☐
14.	Seat capacity	14	☐	14	☐
	C. Aircraft Condition				
1.	General external condition	1	☐	1	☐
2.	Doors and hatches	2	☐	2	☐
3.	Flight controls	3	☐	3	☐
4.	Wheels, tyres and brakes	4	☐	4	☐
5.	Undercarriage skids/floats	5	☐	5	☐
6.	Wheel well	6	☐	6	☐
7.	Powerplant and pylon	7	☐	7	☐
8.	Fan blades, propellers, rotors (main & tall)	8	☐	8	☐
9.	Obvious repairs	9	☐	9	☐
10.	Obvious unrepaired damage	10	☐	10	☐
11.	Leakage	11	☐	11	☐
	D. Cargo				
1.	General condition of cargo compartment	1	☐	1	☐
2.	Dangerous goods	2	☐	2	☐
3.	Stowage of cargo	3	☐	3	☐
	E. General				
1.	General	1	☐	1	☐

EASA FORM 137 Issue 1

Appendix V

List of specific approvals

Non-commercial operations and 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
…		
…		
…		
…		

EASA Form 140 Issue 1

(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/

(5) Specify the type of operation, e.g., agriculture, construction, phoptography, surveying, observation and patrol, aerial advertisement.

(6) List in this column any approved operations, e.g., Dangerous goods, LVO, RVSM, RNP, MNPS.

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

Appendix VI

AUTHORISATION OF HIGH RISK COMMERCIAL SPECIALISED OPERATIONS	
Issuing Authority [1]: Authorisation No [2]:	
Operator Name [3]: Operator address [4]: Telephone [5]: Fax: E-mail:	
Aircraft Model and Registratuion Marks [6]:	
Authorised specialised operations [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 in accordance with this authorisation, operator's Standard Operating Procedures, Annex IV to Regulation (EC) No 216/2008 and Implementing Rules.	
Date of issue [10]:	Name and Signature [11]: Title:

EASA Form 151 Issue 1

(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. E-mail to be provided if avialable.

(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). CAST/ICAO taxonomy is available at: http://www.intlaviationstandards.org/H.

The registration marks should 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 patrolm aerial advertisement.

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

(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 representativ. In addition, an official stamp may be applied on the authorisation.

ANNEX III

ORGANISATION REQUIREMENTS FOR AIR OPERATIONS

[PART-ORO]

ORO.GEN.005 Scope

This Annex establishes requirements to be followed by an air operator conducting:

(a) commercial air transport operations (CAT);

(b) commercial specialised operations;

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

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

SUBPART GEN

GENERAL REQUIREMENTS

SECTION I
General

ORO.GEN.105 Competent authority

For the purpose of this Annex, the competent authority exercising oversight over operators subject to a certification or declaration obligation 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

(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) 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, SPO authorisation or declaration.

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

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

(f) The operator shall establish procedures and instructions for the safe operation of each aircraft type, containing ground staff and crew member duties and responsibilities, for all types of operation on the ground and in flight. Those procedures and instructions shall not require

crew members to perform any activities during critical phases of flight other than those required for the safe operation of the aircraft. Procedures and instructions for a sterile flight crew compartment shall also be included.

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

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

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

(j) The operator shall establish and maintain dangerous goods training programmes for personnel as required by the technical instructions which shall be subject to review and approval by the competent authority. Training programmes shall be commensurate with the responsibilities of personnel.

(k) Notwithstanding (j), the operator of a sailplane or a balloon or of flights taking off and landing at the same aerodrome or operating site, under VFR by day, with

(i) single-engined propeller-driven aeroplanes having a maximum certified take-off mass of 5 700 kg or less and a MOPSC of 5 or less; or

(ii) other-than complex motor-powered helicopters, single-engined, with a MOPSC of 5 or less,

shall ensure that the flight crew has received an appropriate training or briefing to enable them to recognise undeclared dangerous goods brought on-board by passengers or as cargo.

ORO.GEN.115 Application for an AOC

(a) The application for an air operator certificate or an amendment to an existing certificate shall be made in a form and manner established by the 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.

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).

(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.

(d) When an operator subject to SPO authorisation wishes to use alternative means of compliance, it shall comply with (b) whenever such alternative means of compliance affects the standard operating procedures that are part of the authorisation and with (c) for the declared part of its organisation and operation.

ORO.GEN.125 Terms of approval and privileges of an AOC holder

A certified operator shall comply with the scope and privileges defined in the operations specifications attached to the operator's certificate.

ORO.GEN.130 Changes related to an AOC holder

(a) Any change affecting:

(1) the scope of the certificate or the operations specifications of an operator; or

(2) any of the elements of the operator's management system as required in ORO.GEN.200(a)(1) and (a)(2),

shall require prior approval by the 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.

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 Continued validity of an AOC

(a) The operator's certificate shall remain valid subject to:

(1) the operator remaining in compliance with the relevant requirements of 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 certificate not being surrendered or revoked.

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

ORO.GEN.140 Access

(a) For the purpose of determining compliance with the relevant requirements of Regulation (EC) No 216/2008 and its Implementing Rules, 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 ORO.GEN.105;

(2) the authority acting under the provisions of ARO.GEN.300(d), ARO.GEN.300(e) or ARO.RAMP.

(b) Access to the aircraft mentioned under (a) shall, in the case of CAT, include the possibility to enter and remain in the aircraft during flight operations unless otherwise decided by the commander for the flight crew compartment in accordance with CAT.GEN.MPA.135 in the interest of safety.

ORO.GEN.150 Findings

After receipt of notification of findings, the operator shall:

(a) identify the root cause of the non-compliance;

(b) define a corrective action plan; and

(c) demonstrate corrective action implementation to the satisfaction of the 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

(a) The operator shall report to the competent authority, and to any other organisation required by the State of the operator to be informed, any accident, serious incident and occurrence as defined in Regulation (EU) No 996/2010 of the European Parliament and of the Council and Directive 2003/42/EC.

(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.

(c) Without prejudice to Regulation (EU) No 996/2010, Directive 2003/42/EC, Commission Regulation (EC) No 1321/2007 and Commission Regulation (EC) No 1330/2007, the reports referred in paragraphs (a) and (b) shall be made in a form and manner established by the competent authority and contain all pertinent information about the condition known to the operator.

(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;

(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.

ORO.GEN.205 Contracted activities

(a) The operator shall ensure that when contracting or purchasing any part of its activity, the contracted or purchased service or product conforms to the applicable requirements.

(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.

ORO.GEN.210 Personnel requirements

(a) The operator shall appoint an accountable manager, who has the authority for ensuring that all activities can be financed and carried out in accordance with the applicable requirements. The accountable manager shall be responsible for establishing and maintaining an effective management system.

(b) A person or group of persons shall be nominated by the operator, with the responsibility of ensuring that the operator remains in compliance with the applicable requirements. Such person(s) shall be ultimately responsible to the accountable manager.

(c) The operator shall have sufficient qualified personnel for the planned tasks and activities to be performed in accordance with the applicable requirements.

(d) The operator shall maintain appropriate experience, qualification and training records to show compliance with point (c).

(e) The operator shall ensure that all personnel are aware of the rules and procedures relevant to the exercise of their duties.

ORO.GEN.215 Facility requirements

The operator shall have facilities allowing the performance and management of all planned tasks and activities in accordance with the applicable requirements.

ORO.GEN.220 Record-keeping

(a) The operator shall establish a system of record-keeping that allows adequate storage and reliable traceability of all activities developed, covering in particular all the elements indicated in ORO.GEN.200.

(b) The format of the records shall be specified in the operator’s procedures.

(c) Records shall be stored in a manner that ensures protection from damage, alteration and theft.

SUBPART AOC

AIR OPERATOR CERTIFICATION

ORO.AOC.100 Application for an air operator certificate

(a) Without prejudice to Regulation (EC) No 1008/2008 of the European Parliament and the Council, prior to commencing commercial air transport operations, the operator shall apply for and obtain an air operator certificate (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 required by ORO.AOC.135(a) together with their qualifications and experience;

(6) a copy of the operations manual required by ORO.MLR.100;

(7) a statement that all the documentation sent to the competent authority have been verified by the applicant and found in compliance with the applicable requirements.

(c) Applicants shall demonstrate to the competent authority that:

(1) they comply with all the requirements of annex IV to Regulation (EC) No 216/2008, 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;

(2) all aircraft operated have a certificate of airworthiness (CofA) in accordance with Regulation (EU) No 748/2012 or are dry leased-in in accordance with ORO.AOC.110 (d); and

(3) its organisation and management are suitable and properly matched to the scale and scope of the operation.

ORO.AOC.105 Operations specifications and privileges of an AOC holder

The privileges of the operator, including those granted in accordance with 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.

(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.

Wet lease-in

(c) The applicant for the approval of the wet lease-in of an aircraft of a third country operator shall demonstrate to the competent authority that:

(1) the third country operator holds a valid AOC issued in accordance with ICAO Annex 6;

(2) 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 (EC) No 2042/2003 and this Regulation; and

(3) the aircraft has a standard CofA issued in accordance with ICAO Annex 8.

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.

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 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;

(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 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.

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

(a) The holder of an AOC may conduct non-commercial operations with an aircraft otherwise used for commercial air transport operations that is listed in the operations specifications of its AOC, provided that the operator:

(1) describes such operations in detail in the operations manual, including:

(i) identification of the applicable requirements;

(ii) a clear identification of any differences between operating procedures used when conducting commercial air transport and non-commercial operations;

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

(2) submits the identified differences between the operating procedures referred to in (a)(1)(ii) to the competent authority for prior approval.

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

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.

ORO.AOC.135 Personnel requirements

(a) In accordance with ORO.GEN.210(b), the operator shall nominate persons responsible for the management and supervision of the following areas:

(1) flight operations;

(2) crew training;

(3) ground operations; and

(4) continuing airworthiness in accordance with Regulation (EC) No 2042/2003.

(b) *Adequacy and competency of personnel*

(1) The operator shall employ sufficient personnel for the planned ground and flight operations.

(2) All personnel assigned to, or directly involved in, ground and flight operations shall:

(i) be properly trained;

(ii) demonstrate their capabilities in the performance of their assigned duties; and

(iii) be aware of their responsibilities and the relationship of their duties to the operation as a whole.

(c) *Supervision of personnel*

(1) The operator shall appoint a sufficient number of personnel supervisors, taking into account the structure of the operator's organisation and the number of personnel employed.

(2) The duties and responsibilities of these supervisors shall be defined, and any other necessary arrangements shall be made to ensure that they can discharge their supervisory responsibilities.

(3) The supervision of crew members and personnel involved in the operation shall be exercised by individuals with adequate experience and the skills to ensure the attainment of the standards specified in the operations manual.

ORO.AOC.140 Facility requirements

In accordance with ORO.GEN.215, the operator shall:

(a) make use of appropriate ground handling facilities to ensure the safe handling of its flights;

(b) arrange operational support facilities at the main operating base, appropriate for the area and type of operation; and

(c) ensure that the available working space at each operating base is sufficient for personnel whose actions may affect the safety of flight operations. Consideration shall be given to the needs of ground crew, personnel concerned with operational control, the storage and display of essential records and flight planning by crews.

ORO.AOC.150 Documentation requirements

(a) The operator shall make arrangements for the production of manuals and any other documentation required and associated amendments.

(b) The operator shall be capable of distributing operational instructions and other information without delay.

SUBPART DEC

DECLARATION

ORO.DEC.100 Declaration

The operator of complex motor-powered aircraft engaged in non-commercial operations or non-commercial specialised operations, and the commercial specialised operator shall:

(a) provide the 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.

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).

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

(1) Wet leasing-in an aircraft of a third country operator:

(i) 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 (EC) No 2042/2003 and this Regulation;

(ii) The aircraft of a third country operator has a standard CofA issued in accordance with ICAO Annex 8;

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

(2) Dry leasing-in an aircraft registered in a third country:

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

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

(iii) Compliance with the applicable requirements of Regulation (EC) No 2042/2003 is ensured;

(iv) The aircraft is equipped in accordance with Annex VIII [Part SPO].

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.

(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.

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.

(b) The content of the OM shall reflect the requirements set out in this Annex, Annex IV (Part-CAT), Annex V (Part-SPA), Annex VI (Part-NCC) and Annex VIII (Part-SPO), as applicable, and shall not contravene the conditions contained in the operations specifications to the air operator certificate (AOC), the SPO authorisation or the declaration and the list of specific approvals, as applicable.

(c) The OM may be issued in separate parts.

(d) All operations personnel shall have easy access to the portions of the OM that are relevant to their duties.

(e) The OM shall be kept up to date. All personnel shall be made aware of the changes that are relevant to their duties.

(f) Each crew member shall be provided with a personal copy of the relevant sections of the OM pertaining to their duties. Each holder of an OM, or appropriate parts of it, shall be

responsible for keeping their copy up to date with the amendments or revisions supplied by the operator.

(g) For AOC holders:

(1) for amendments required to be notified in accordance with ORO.GEN.115(b) and ORO.GEN.130(c), the operator shall supply the 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.

(g1) For SPO authorisation holders, any amendment associated with the authorised standard operating procedures, prior approval shall be obtained before the amendment becomes effective.

(h) Notwithstanding (g) and (g1), when immediate amendments or revisions are required in the interest of safety, they may be published and applied immediately, provided that any approval required has been applied for.

(i) The operator shall incorporate all amendments and revisions required by the 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.

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

Except for operations with single engined propeller-driven aeroplanes with a MOPSC of 5 or single engined non-complex helicopters with a MOPSC of 5, taking off and landing at the same aerodrome or operating site, under VFR by day, and for operations with sailplanes and balloons, the main structure of the OM shall be as follows:

(a) Part A: General/Basic, comprising all non-type-related operational policies, instructions and procedures;

(b) Part B: Aircraft operating matters, comprising all type-related instructions and procedures, taking into account differences between types/classes, variants or individual aircraft used by the operator;

(c) Part C: Commercial air transport operations, comprising route/role/area and aerodrome/operating site instructions and information;

(d) Part D: Training, comprising all training instructions for personnel required for a safe operation.

ORO.MLR.105 Minimum equipment list

(a) 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) 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:

(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:

(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

(a) The following records shall be stored for at least 5 years.

(1) for CAT operators, records of the activities referred to in ORO.GEN.200;

(2) for declared operators, a copy of the operator's declaration, details of approvals held and operations manual;

(3) for SPO authorisation holders, in addition to (a)(2), records related to the risk assessment conducted in accordance with SPO.OP.230 and related standard operating procedures.

(b) The following information used for the preparation and execution of a flight, and associated reports, shall be stored for three months:

(1) the operational flight plan, if applicable;

(2) route-specific notice(s) to airmen (NOTAM) and aeronautical information services (AIS) briefing documentation, if edited by the operator;

(3) mass and balance documentation;

(4) notification of special loads, including written information to the commander/pilot-in-command about dangerous goods, if applicable;

(5) the journey log, or equivalent; and

(6) flight report(s) for recording details of any occurrence, or any event that the commander/pilot-in-command deems necessary to report or record;

(c) Personnel records shall be stored for the periods indicated below:

Flight crew licence and cabin crew 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 years
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 training 2 records

(d) The operator shall:

(1) maintain records of all training, checking and qualifications of each crew member, as prescribed in Part-ORO; and

(2) make such records available, on request, to the crew member concerned.

(e) The operator shall preserve the information used for the preparation and execution of a flight and personnel training records, even if the operator ceases to be the operator of that aircraft or the employer of that crew member, provided this is within the timescales prescribed in (c).

(f) If a crew member becomes a crew member for another operator, the operator shall make the crew member's records available to the new operator, provided this is within the timescales prescribed in (c).

SUBPART SEC

SECURITY

ORO.SEC.100.A Flight crew compartment security - aeroplanes

(a) In an aeroplane which is equipped with a flight crew compartment door, this 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 of a maximum certificated take-off mass exceeding 45 500 kg, or with a MOPSC of more than 60 engaged in the commercial transportation of passengers, shall be equipped with an approved 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.

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

(1) this door shall be closed prior to engine start for take-off and will be locked when required by security procedures or by the pilot-in-command until engine shut down

after landing, except when deemed necessary for authorised persons to access or egress in compliance with national civil aviation security programmes; and

(2) means shall be provided for monitoring from either pilot's station the entire door area outside the flight crew compartment to identify persons requesting entry and to detect suspicious behaviour or potential threat.

ORO.SEC.100.H Flight crew compartment security - helicopters

If installed, the flight crew compartment door on a helicopter operated for the purpose of carrying passengers shall be capable of being locked from within the flight crew compartment in order to prevent unauthorised access.

SUBPART FC

FLIGHT CREW

ORO.FC.005 Scope

This Subpart establishes requirements to be met by the operator related to flight crew training, experience and qualification and comprises:

(a) SECTION 1 specifying common requirements applicable to both non-commercial operations of complex motor-powered aircraft and any commercial operation;

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

(1) commercial air transport operations of sailplanes or balloons; or

(2) commercial air transport operations of passengers conducted under visual flight rules (VFR) by day, starting and ending at the same aerodrome or operating site and within a local area specified by the competent authority, with

- single-engined propeller-driven aeroplanes having a maximum certified take-off mass of 5 700 kg or less and a MOPSC of 5, or

- other-than complex motor-powered helicopters, single-engined, with a MOPSC of 5.

(c) SECTION 3 specifying additional requirements for commercial specialised operations and for those referred to in b(1) and (2).

SECTION 1

Common requirements

ORO.FC.100 Composition of flight crew

(a) The composition of the flight crew and the number of flight crew members at designated crew stations shall be not less than the minimum specified in the aircraft flight manual or operating limitations prescribed for the aircraft.

(b) The flight crew shall include additional flight crew members when required by the type of operation and shall not be reduced below the number specified in the operations manual.

(c) All flight crew members shall hold a licence and ratings issued or accepted in accordance with Commission Regulation (EU) No 1178/2011 (15) and appropriate to the duties assigned to them.

(d) The flight crew member may be relieved in flight of his/her duties at the controls by another suitably qualified flight crew member.

(e) When engaging the services of flight crew members who are working on a freelance or part-time basis, the operator shall verify that all applicable requirements of this Subpart and the relevant elements of 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.

ORO.FC.105 Designation as pilot-in-command/commander

(a) In accordance with 8.e of Annex IV to Regulation (EC) No 216/2008, 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 commercial air transport operations, as commander.

(b) The operator shall only designate a flight crew member to act as pilot-in-command/commander if he/she has:

(1) the minimum level of experience specified in the operations manual;

(2) adequate knowledge of the route or area to be flown and of the aerodromes, including alternate aerodromes, facilities and procedures to be used;

(3) in the case of multi-crew operations, completed an operator's command course if upgrading from co-pilot to pilot-in-command/commander.

(c) In the case of commercial operations of aeroplanes and helicopters, the pilot-in-command/commander or the pilot, to whom the conduct of the flight may be delegated, shall have had initial familiarisation training of the route or area to be flown and of the aerodromes, facilities and procedures to be used. This route/area and aerodrome knowledge shall be maintained by operating at least once on the route or area or to the aerodrome within a 12-month period.

(d) Point (c) shall not apply in the case of:

(1) performance class B aeroplanes involved in commercial air transport operations under VFR by day; and

(2) commercial air transport operations of passengers conducted under VFR by day, starting and ending at the same aerodrome or operating site or within a local area specified by the competent authority, with other-than complex motor-powered helicopters, single-engined, with a MOPSC of 5.

ORO.FC.110 Flight engineer

When a separate flight engineer station is incorporated in the design of an aeroplane, the flight crew shall include one crew member who is suitably qualified in accordance with applicable 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

(a) In the case of aeroplane or helicopter operations, the flight crew member shall complete the operator conversion training course before commencing unsupervised line flying:

(1) when changing to an aircraft for which a new type or class rating is required;

(2) when joining an operator.

(b) The operator conversion training course shall include training on the equipment installed on the aircraft as relevant to flight crew members' roles.

ORO.FC.125 Differences training and familiarisation training

(a) Flight crew members shall complete differences or familiarisation training when required by Annex I (Part-FCL) to Regulation (EU) No 1178/2011 and when changing equipment or procedures requiring additional knowledge on types or variants currently operated.

(b) The operations manual shall specify when such differences or familiarisation training is required.

ORO.FC.130 Recurrent training and checking

(a) Each flight crew member shall complete annual recurrent flight and ground training relevant to the type or variant of aircraft on which he/she operates, including training on the location and use of all emergency and safety equipment carried.

(b) Each flight crew member shall be periodically checked to demonstrate competence in carrying out normal, abnormal and emergency procedures.

ORO.FC.135 Pilot qualification to operate in either pilot's seat

Flight crew members who may be assigned to operate in either pilot's seat shall complete appropriate training and checking as specified in the operations manual.

ORO.FC.140 Operation on more than one type or variant

(a) Flight crew members operating more than one type or variant of aircraft shall comply with the requirements prescribed in this Subpart for each type or variant, unless credits related to the training, checking, and recent experience requirements are defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012 for the relevant types or variants.

(b) Appropriate procedures and/or operational restrictions shall be specified in the operations manual for any operation on more than one type or variant.

ORO.FC.145 Provision of training

(a) All the training required in this Subpart shall be conducted:

(1) in accordance with the training programmes and syllabi established by the operator in the operations manual;

(2) by appropriately qualified personnel. In the case of flight and flight simulation training and checking, the personnel providing the training and conducting the checks shall be qualified in accordance with Annex I (Part-FCL) to Regulation (EU) No 1178/2011.

(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.

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

(d) The FSTD shall replicate the aircraft used by the operator, as far as practicable. Differences between the FSTD and the aircraft shall be described and addressed through a briefing or training, as appropriate.

(e) The operator shall establish a system to adequately monitor changes to the FSTD and to ensure that those changes do not affect the adequacy of the training programmes.

SECTION 2

Additional requirements for commercial air transport operations

ORO.FC.200 Composition of flight crew

(a) There shall not be more than one inexperienced flight crew member in any flight crew.

(b) The commander may delegate the conduct of the flight to another pilot suitably qualified in accordance with 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.

(d) Specific requirements for helicopter operations.

(1) For all operations of helicopters with an MOPSC of more than 19 and for operations under IFR of helicopters with an MOPSC of more than 9:

(i) the minimum flight crew shall be two pilots; and

(ii) the commander shall be the holder of an airline transport pilot licence (helicopter) (ATPL(H)) with an instrument rating issued in accordance with Annex I (Part-FCL) to Regulation (EU) No 1178/2011.

(2) Operations not covered by (d)(1) may be operated by a single pilot under IFR or at night provided that the requirements of ORO.FC.202 are complied with.

ORO.FC.A.201 In-flight relief of flight crew members

(a) The commander may delegate the conduct of the flight to:

(1) another qualified commander; or

(2) for operations only above flight level (FL) 200, a pilot who complies with the following minimum qualifications:

(i) ATPL;

(ii) conversion training and checking, including type rating training, in accordance with ORO.FC.220;

(iii) all recurrent training and checking in accordance with ORO.FC.230 and ORO.FC.240;

(iv) route/area and aerodrome competence in accordance with ORO.FC.105.

(b) The co-pilot may be relieved by:

(1) another suitably qualified pilot;

(2) for operations only above FL 200, a cruise relief co-pilot that complies with the following minimum qualifications:

(i) valid commercial pilot licence (CPL) with an instrument rating;

(ii) conversion training and checking, including type rating training, in accordance with ORO.FC.220 except the requirement for take-off and landing training;

(iii) recurrent training and checking in accordance with ORO.FC.230 except the requirement for take-off and landing training.

(c) A flight engineer may be relieved in flight by a crew member suitably qualified in accordance with applicable national rules.

ORO.FC.202 Single-pilot operations under IFR or at night

In order to be able to fly under IFR or at night with a minimum flight crew of one pilot, as foreseen in ORO.FC.200(c)(2) and (d)(2), the following shall be complied with:

(a) The operator shall include in the operations manual a pilot's conversion and recurrent training programme that includes the additional requirements for a single-pilot operation. The pilot shall have undertaken training on the operator's procedures, in particular regarding:

(1) engine management and emergency handling;

(2) use of normal, abnormal and emergency checklist;

(3) air traffic control (ATC) communication;

(4) departure and approach procedures;

(5) autopilot management, if applicable;

(6) use of simplified in-flight documentation;

(7) single-pilot crew resource management.

(b) The recurrent checks required by ORO.FC.230 shall be performed in the single-pilot role on the relevant type or class of aircraft in an environment representative of the operation.

(c) For aeroplane operations under IFR the pilot shall have:

(1) a minimum of 50 hours flight time under IFR on the relevant type or class of aeroplane, of 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

(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.

(b) Once an operator conversion course has been commenced, the flight crew member shall not be assigned to flying duties on another type or class of aircraft until the course is completed or terminated. Crew members operating only performance class B aeroplanes may be assigned to flights on other types of performance class B aeroplanes during conversion courses to the extent necessary to maintain the operation.

(c) The amount of training required by the flight crew member for the operator's conversion course shall be determined in accordance with the standards of qualification and experience specified in the operations manual, taking into account his/her previous training and experience.

(d) The flight crew member shall complete:

(1) the operator proficiency check and the emergency and safety equipment training and checking before commencing line flying under supervision (LIFUS); and

(2) the line check upon completion of line flying under supervision. For performance class B aeroplanes, LIFUS may be performed on any aeroplane within the applicable class.

(e) In the case of aeroplanes, pilots that have been issued a type rating based on a zero flight-time training ('ZFTT') course shall:

(1) commence line flying under supervision not later than 21 days after the completion of the skill test or after appropriate training provided by the operator. The content of that training shall be described in the operations manual;

(2) complete six take-offs and landings in an FSTD not later than 21 days after the completion of the skill test under the supervision of a type rating instructor for aeroplanes ('TRI(A)') occupying the other pilot seat. The number of take-offs and landings may be reduced when credits are defined in the mandatory part of the 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.

ORO.FC.230 Recurrent training and checking

(a) Each flight crew member shall complete recurrent training and checking relevant to the type or variant of aircraft on which they operate.

(b) *Operator proficiency check*

(1) Each flight crew member shall complete operator proficiency checks as part of the normal crew complement to demonstrate competence in carrying out normal, abnormal and emergency procedures.

(2) When the flight crew member will be required to operate under IFR, the operator proficiency check shall be conducted without external visual reference, as appropriate.

(3) The validity period of the operator proficiency check shall be six calendar months. For operations under VFR by day of performance class B aeroplanes conducted during seasons not longer than eight consecutive months, one operator proficiency check shall be sufficient. The proficiency check shall be undertaken before commencing commercial air transport operations.

(4) The flight crew member involved in operations by day and over routes navigated by reference to visual landmarks with an other-than complex motor-powered helicopter may complete the operator proficiency check in only one of the relevant types held. The operator proficiency check shall be performed each time on the type least recently used for the proficiency check. The relevant helicopter types that may be grouped for the purpose of the operator proficiency check shall be contained in the operations manual.

(5) Notwithstanding ORO.FC.145(a)(2), for operations of other-than complex motor-powered helicopters by day and over routes navigated by reference to visual landmarks and performance class B aeroplanes, the check may be conducted by a suitably qualified commander nominated by the operator, trained in CRM concepts and the assessment of CRM skills. The operator shall inform the competent authority about the persons nominated.

(c) *Line check*

(1) Each flight crew member shall complete a line check on the aircraft to demonstrate competence in carrying out normal line operations described in the operations manual. The validity period of the line check shall be 12 calendar months.

(2) Notwithstanding ORO.FC.145(a)(2), line checks may be conducted by a suitably qualified commander nominated by the operator, trained in CRM concepts and the assessment of CRM skills.

(d) *Emergency and safety equipment training and checking*

Each flight crew member shall complete training and checking on the location and use of all emergency and safety equipment carried. The validity period of an emergency and safety equipment check shall be 12 calendar months.

(e) *CRM training*

(1) Elements of CRM shall be integrated into all appropriate phases of the recurrent training.

(2) Each flight crew member shall undergo specific modular CRM training. All major topics of CRM training shall be covered by distributing modular training sessions as evenly as possible over each three-year period.

(f) Each flight crew member shall undergo ground training and flight training in an FSTD or an aircraft, or a combination of FSTD and aircraft training, at least every 12 calendar months.

(g) The validity periods mentioned in (b)(3), (c) and (d) shall be counted from the end of the month when the check was taken.

(h) When the training or checks required above are undertaken within the last three months of the validity period, the new validity period shall be counted from the original expiry date.

ORO.FC.235 Pilot qualification to operate in either pilot's seat

(a) Commanders whose duties require them to operate in either pilot seat and carry out the duties of a co-pilot, or commanders required to conduct training or checking duties, shall complete additional training and checking as specified in the operations manual. The check may be conducted together with the operator proficiency check prescribed in ORO.FC.230(b).

(b) The additional training and checking shall include at least the following:

(1) an engine failure during take-off;

(2) a one-engine-inoperative approach and go-around; and

(3) a one-engine-inoperative landing.

(c) In the case of helicopters, commanders shall also complete their proficiency checks from left- and right-hand seats, on alternate proficiency checks, provided that when the type rating proficiency check is combined with the operator proficiency check the commander completes his/her training or checking from the normally occupied seat.

(d) When engine-out manoeuvres are carried out in an aircraft, the engine failure shall be simulated.

(e) When operating in the co-pilot's seat, the checks required by ORO.FC.230 for operating in the commander's seat shall, in addition, be valid and current.

(f) The pilot relieving the commander shall have demonstrated, concurrent with the operator proficiency checks prescribed in ORO.FC.230(b), practice of drills and procedures that would not, normally, be his/her responsibility. Where the differences between left- and right-hand seats are not significant, practice may be conducted in either seat.

(g) The pilot other than the commander occupying the commander's seat shall demonstrate practice of drills and procedures, concurrent with the operator proficiency checks prescribed in ORO.FC.230(b), which are the commander's responsibility acting as pilot monitoring. Where the differences between left- and right-hand seats are not significant, practice may be conducted in either seat.

ORO.FC.240 Operation on more than one type or variant

(a) The procedures or operational restrictions for operation on more than one type or variant established in the operations manual and approved by the 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.

(b) When a flight crew member operates both helicopters and aeroplanes, that flight crew member shall be limited to operations on only one type of aeroplane and one type of helicopter.

(c) Point (a) shall not apply to operations of performance class B aeroplane if they are limited to single-pilot classes of reciprocating engine aeroplanes under VFR by day. Point (b) shall not apply to operations of performance class B aeroplane if they are limited to single-pilot classes of reciprocating engine aeroplanes.

ORO.FC.A.245 Alternative training and qualification programme

(a) The aeroplane operator having appropriate experience may substitute one or more of the following training and checking requirements for flight crew by an alternative training and qualification programme (ATQP), approved by the competent authority:

(1) SPA.LVO.120 on flight crew training and qualifications;

(2) conversion training and checking;

(3) differences training and familiarisation training;

(4) command course;

(5) recurrent training and checking; and

(6) operation on more than one type or variant.

(b) The ATQP shall contain training and checking that establishes and maintains at least an equivalent level of proficiency achieved by complying with the provisions of ORO.FC.220 and ORO.FC.230. The level of flight crew training and qualification proficiency shall be demonstrated prior to being granted the ATQP approval by the competent authority.

(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.

(d) In addition to the checks required by 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 validity period shall be counted from the end of the month when the check was taken. When the LOE is undertaken within the last three months of the validity period, the new validity period shall be counted from the original expiry date.

(e) After two years of operating with an approved ATQP, the operator may, with the approval of the competent authority, extend the validity periods of the checks in ORO.FC.230 as follows:

(1) Operator proficiency check to 12 calendar months. The validity period shall be counted from the end of the month when the check was taken. When the check is undertaken within the last three months of the validity period, the new validity period shall be counted from the original expiry date.

(2) Line check to 24 calendar months. The validity period shall be counted from the end of the month when the check was taken. When the check is undertaken within the last six months of the validity period, the new validity period shall be counted from the original expiry date.

(3) Emergency and safety equipment checking to 24 calendar months. The validity period shall be counted from the end of the month when the check was taken. When the check is undertaken within the last six months of the validity period, the new validity period shall be counted from the original expiry date.

ORO.FC.A.250 Commanders holding a CPL(A)

(a) The holder of a CPL(A) (aeroplane) shall only act as commander in commercial air transport on a single-pilot aeroplane if:

(1) when carrying passengers under VFR outside a radius of 50 NM (90 km) from an aerodrome of departure, he/she has a minimum of 500 hours of flight time on aeroplanes or holds a valid instrument rating; or

(2) when operating on a multi-engine type under IFR, he/she has a minimum of 700 hours of flight time on aeroplanes, including 400 hours as pilot-in-command. These hours shall include 100 hours under IFR and 40 hours in multi-engine operations. The 400 hours as pilot-in-command may be substituted by hours operating as co-pilot within an established multi-pilot crew system prescribed in the operations manual, on the basis of two hours of flight time as co-pilot for one hour of flight time as pilot-in command.

(b) For operations under VFR by day of performance class B aeroplanes (a)(1) shall not apply.

ORO.FC.H.250 Commanders holding a CPL(H)

(a) The holder of a CPL(H) (helicopter) shall only act as commander in commercial air transport on a single-pilot helicopter if:

(1) when operating under IFR, he/she has a minimum of 700 hours total flight time on helicopters, including 300 hours as pilot-in-command. These hours shall include 100 hours under IFR. The 300 hours as pilot-in-command may be substituted by hours operating as co-pilot within an established multi-pilot crew system prescribed in the operations manual on the basis of two hours of flight time as co-pilot for one hour flight time as pilot-in command;

(2) when operating under visual meteorological conditions (VMC) at night, he/she has:

(i) a valid instrument rating; or

(ii) 300 hours of flight time on helicopters, including 100 hours as pilot-in-command and 10 hours as pilot flying at night.

SECTION 3

Additional requirements for commercial specialised operations and CAT operations referred to in ORO.FC.005(b)(1) and (2)

ORO.FC.330 Recurrent training and checking - operator proficiency check

(a) Each flight crew member shall complete operator proficiency checks to demonstrate his/her competence in carrying out normal, abnormal and emergency procedures, covering the relevant aspects associated with the specialised tasks described in the operations manual.

(b) Appropriate consideration shall be given when operations are undertaken under IFR or at night.

(c) The validity period of the operator proficiency check shall be 12 calendar months. The validity period shall be counted from the end of the month when the check was taken. When the operator proficiency check is undertaken within the last three months of the validity period, the new validity period shall be counted from the original expiry date.

SUBPART CC

CABIN CREW

ORO.CC.005 Scope

This Subpart establishes the requirements to be met by the operator when operating an aircraft with cabin crew and comprises:

(a) Section 1 specifying common requirements applicable to all operations; and

(b) Section 2 specifying additional requirements only applicable to commercial air transport operations.

SECTION 1
Common requirements

ORO.CC.100 Number and composition of cabin crew

(a) The number and composition of cabin crew shall be determined in accordance with 7.a of Annex IV to Regulation (EC) No 216/2008, taking into account operational factors or circumstances of the particular flight to be operated. Except for balloons, at least one cabin crew member shall be assigned for the operation of aircraft with an MOPSC of more than 19 when carrying one or more passenger(s).

(b) For the purpose of complying with (a), the minimum number of cabin crew shall be the greater of the following:

(1) the number of cabin crew members established during the aircraft certification process in accordance with the applicable certification specifications, for the aircraft cabin configuration used by the operator; or

(2) if the number under (1) has not been established, the number of cabin crew established during the aircraft certification process for the maximum certified passenger seating configuration reduced by 1 for every whole multiple of 50 passenger seats of the aircraft cabin configuration used by the operator falling below the maximum certified seating capacity; or

(3) one cabin crew member for every 50, or fraction of 50, passenger seats installed on the same deck of the aircraft to be operated.

(c) For operations where more than one cabin crew member is assigned, the operator shall nominate one cabin crew member to be responsible to the pilot-in-command/commander.

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.

(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 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 Regulation (EU) No 1178/2011:

(1) shall be provided with an initial training course as specified in CC.TRA.220 of that Annex; and

(2) shall successfully undergo the associated examination before undertaking other training required by this Subpart.

(b) Elements of the initial training programme may be combined with the first aircraft type specific training and operator conversion training, provided that the requirements of CC.TRA.220 are met and any such element(s) are recorded as elements of the initial training course in the training records of the cabin crew members concerned.

ORO.CC.125 Aircraft type specific training and operator conversion training

(a) Each cabin crew member shall have completed appropriate aircraft type specific training and operator conversion training, as well as the associated checks, before being:

(1) first assigned by the operator to operate as a cabin crew member; or

(2) assigned by that operator to operate on another aircraft type.

(b) When establishing the aircraft type specific and the operator conversion training programmes and syllabi, the operator shall include, where available, the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012.

(c) The aircraft type specific training programme shall:

(1) involve training and practice on a representative training device or on the actual aircraft; and

(2) cover at least the following aircraft type specific training elements:

(i) aircraft description as relevant to cabin crew duties;

(ii) all safety equipment and systems installed relevant to cabin crew duties;

(iii) operation and actual opening, by each cabin crew member, of each type or variant of normal and emergency doors and exits in the normal and emergency modes;

(iv) demonstration of the operation of the other exits including flight crew compartment windows;

(v) fire and smoke protection equipment where installed;

(vi) evacuation slide training, where fitted;

(vii) operation of the seat, restraint system and oxygen system equipment relevant to pilot incapacitation.

(d) The operator conversion training programme for each aircraft type to be operated shall:

(1) involve training and practice on a representative training device or on the actual aircraft;

(2) include training in the operator's standard operating procedures for cabin crew members to be first assigned to duties by the operator;

(3) cover at least the following operator specific training elements as relevant to the aircraft type to be operated:

(i) description of the cabin configuration;

(ii) location, removal and use of all portable safety and emergency equipment carried on-board;

(iii) all normal and emergency procedures;

(iv) passenger handling and crowd control;

(v) fire and smoke training including the use of all related fire-fighting and protective equipment representative of that carried on-board;

(vi) evacuation procedures;

(vii) pilot incapacitation procedures;

(viii) applicable security requirements and procedures;

(ix) crew resource management.

ORO.CC.130 Differences training

(a) In addition to the training required in ORO.CC.125, the cabin crew member shall complete appropriate training and checking covering any differences before being assigned on:

(1) a variant of an aircraft type currently operated; or

(2) a currently operated aircraft type or variant with different:

(i) safety equipment;

(ii) safety and emergency equipment location; or

(iii) normal and emergency procedures.

(b) The differences training programme shall:

(1) be determined as necessary on the basis of a comparison with the training programme completed by the cabin crew member, in accordance with ORO.CC.125(c) and (d), for the relevant aircraft type; and

(2) involve training and practice in a representative training device or the actual aircraft as relevant to the difference training element to be covered.

(c) When establishing a differences training programme and syllabus for a variant of an aircraft type currently operated, the operator shall include, where available, the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012.

ORO.CC.135 Familiarisation

After completion of aircraft type specific training and operator conversion training on an aircraft type, each cabin crew member shall complete appropriate supervised familiarisation on the type before being assigned to operate as a member of the minimum number of cabin crew required in accordance with ORO.CC.100.

ORO.CC.140 Recurrent training

(a) Each cabin crew member shall complete annually recurrent training and checking.

(b) Recurrent training shall cover the actions assigned to each member of the cabin crew in normal and emergency procedures and drills relevant to each aircraft type and/or variant to be operated.

(c) Aircraft type specific training elements:

(1) Recurrent training shall include annually touch-drills by each cabin crew member for simulating the operation of each type or variant of normal and emergency doors and exits for passenger evacuation.

(2) Recurrent training shall also include at intervals not exceeding three years:

(i) operation and actual opening by each cabin crew member, in a representative training device or in the actual aircraft, of each type or variant of normal and emergency exits in the normal and emergency modes;

(ii) actual operation by each cabin crew member, in a representative training device or in the actual aircraft, of the flight crew compartment security door, in both normal and emergency modes, and of the seat and restraint system, and a practical demonstration of the oxygen system equipment relevant to pilot incapacitation;

(iii) demonstration of the operation of all other exits including the flight crew compartment windows; and

(iv) demonstration of the use of the life-raft, or slide raft, where fitted.

(d) Operator specific training elements:

(1) Recurrent training shall include annually:

(i) by each cabin crew member:

(A) location and handling of all safety and emergency equipment installed or carried on board; and

(B) the donning of life-jackets, portable oxygen and protective breathing equipment (PBE);

(ii) stowage of articles in the passenger compartment;

(iii) procedures related to aircraft surface contamination;

(iv) emergency procedures;

(v) evacuation procedures;

(vi) incident and accident review;

(vii) crew resource management;

(viii) aero-medical aspects and first aid including related equipment;

(ix) security procedures.

(2) Recurrent training shall also include at intervals not exceeding three years:

(i) use of pyrotechnics (actual or representative devices);

(ii) practical demonstration of the use of flight crew checklists;

(iii) realistic and practical training in the use of all fire-fighting equipment, including protective clothing, representative of that carried in the aircraft;

(iv) by each cabin crew member:

(A) extinguishing a fire characteristic of an aircraft interior fire;

(B) donning and use of PBE in an enclosed simulated smoke-filled environment.

(e) Validity periods:

(1) The annual recurrent training validity period shall be 12 calendar months counted from the end of the month when the check was taken.

(2) If the recurrent training and checking required in (a) are undertaken within the last three calendar months of the validity period, the new validity period shall be counted from the original expiry date.

(3) For the additional triennial training elements specified in (c)(2) and (d)(2), the validity period shall be 36 calendar months counted from the end of the month when the checks were taken.

ORO.CC.145 Refresher training

(a) When a cabin crew member, during the preceding six months within the validity period of the last relevant recurrent training and checking:

(1) has not performed any flying duties, he/she shall, before being reassigned to such duties, complete refresher training and checking for each aircraft type to be operated; or

(2) has not performed flying duties on one particular aircraft type, he/she shall, before being reassigned to duties, complete on that aircraft type:

(i) refresher training and checking; or

(ii) two familiarisation flights in accordance with ORO.CC.135.

(b) The refresher training programme for each aircraft type shall at least cover

(1) emergency procedures;

(2) evacuation procedures;

(3) operation and actual opening, by each cabin crew member, of each type or variant of normal and emergency exits and of the flight crew compartment security door in the normal and emergency modes;

(4) demonstration of the operation of all other exits including the flight crew compartment windows;

(5) location and handling of all relevant safety and emergency equipment installed or carried on-board.

(c) The operator may elect to replace refresher training by recurrent training if the reinstatement of the cabin crew member's flying duties commences within the validity period of the last recurrent training and checking. If that validity period has expired, refresher training may only be replaced by aircraft type specific and operator conversion training as specified in ORO.CC.125.

SECTION 2

Additional requirements for commercial air transport operations

ORO.CC.200 Senior cabin crew member

(a) When more than one cabin crew member is required, the composition of the cabin crew shall include a senior cabin crew member nominated by the operator.

(b) The operator shall nominate cabin crew members to the position of senior cabin crew member only if they:

(1) have at least one year of experience as operating cabin crew member; and

(2) have successfully completed a senior cabin crew training course and the associated check.

(c) The senior cabin crew training course shall cover all duties and responsibilities of senior cabin crew members and shall include at least the following elements:

(1) pre-flight briefing;

(2) cooperation with the crew;

(3) review of operator requirements and legal requirements;

(4) accident and incident reporting;

(5) human factors and crew resource management (CRM); and

(6) flight and duty time limitations and rest requirements.

(d) The senior cabin crew member shall be responsible to the commander for the conduct and coordination of normal and emergency procedures specified in the operations manual, including for discontinuing non-safety-related duties for safety or security purposes.

(e) The operator shall establish procedures to select the most appropriately qualified cabin crew member to act as senior cabin crew member if the nominated senior cabin crew member becomes unable to operate. Changes to these procedures shall be notified to the competent authority.

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

(a) Whenever any passengers are on board an aircraft, the minimum number of cabin crew required in accordance with ORO.CC.100 shall be present in the passenger compartment.

(b) Subject to the conditions specified in (c), this number may be reduced:

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

(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.

(c) Conditions:

(1) procedures ensuring that an equivalent level of safety is achieved with the reduced number of cabin crew, in particular for evacuation of passengers, are established in the operations manual;

(2) the reduced cabin crew includes a senior cabin crew member as specified in ORO.CC. 200;

(3) at least one cabin crew member is required for every 50, or fraction of 50, passengers present on the same deck of the aircraft;

(4) in the case of normal ground operations with aircraft requiring more than one cabin crew member, the number determined in accordance with (c)(3) shall be increased to include one cabin crew member per pair of floor level emergency exits.

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 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.

(b) For the purpose of (a) and for cabin crew training and qualifications, the operator shall determine:

(1) each aircraft as a type or a variant taking into account, where available, the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012 for the relevant aircraft type or variant; and

(2) variants of an aircraft type to be different types if they are not similar in the following aspects:

(i) emergency exit operation;

(ii) location and type of portable safety and emergency equipment;

(iii) type-specific emergency procedures.

ORO.CC.255 Single cabin crew member operations

(a) The operator shall select, recruit, train and check the proficiency of cabin crew members to be assigned to single cabin crew member operations according to criteria appropriate to this type of operation.

(b) Cabin crew members who have no previous operating experience as single cabin crew member shall only be assigned to such type of operation after they have:

(1) completed training as required in (c) in addition to other applicable training and checking required by this Subpart;

(2) successfully passed the checks verifying their proficiency in discharging their duties and responsibilities in accordance with the procedures specified in the operations manual; and

(3) undertaken familiarisation flying of at least 20 hours and 15 sectors on the relevant aircraft type under the supervision of an appropriately experienced cabin crew member.

(c) The following additional training elements shall be covered with particular emphasis to reflect single cabin crew operations:

(1) responsibility to the commander for the conduct of normal and emergency procedures;

(2) importance of coordination and communication with the flight crew, in particular when managing unruly or disruptive passengers;

(3) review of operator requirements and legal requirements;

(4) documentation;

(5) accident and incident reporting; and

(6) flight and duty time limitations and rest requirements.

SUBPART TC

TECHNICAL CREW IN HEMS, HHO OR NVIS OPERATIONS

ORO.TC.100 Scope

This Subpart establishes the requirements to be met by the operator when operating an aircraft with technical crew members in commercial air transport helicopter emergency medical service (HEMS), night vision imaging system (NVIS) operations or helicopter hoist operations (HHO).

ORO.TC.105 Conditions for assignment to duties

(a) Technical crew members in commercial air transport HEMS, HHO or NVIS operations shall only be assigned duties if they:

(1) are at least 18 years of age;

(2) are physically and mentally fit to safely discharge assigned duties and responsibilities;

(3) have completed all applicable training required by this Subpart to perform the assigned duties;

(4) have been checked as proficient to perform all assigned duties in accordance with the procedures specified in the operations manual.

(b) Before assigning to duties technical crew members who are self-employed and/or working on a freelance or part-time basis, the operator shall verify that all applicable requirements of this Subpart are complied with, taking into account all services rendered by the technical crew member to other operator(s) to determine in particular:

(1) the total number of aircraft types and variants operated;

(2) the applicable flight and duty time limitations and rest requirements.

ORO.TC.110 Training and checking

(a) The operator shall establish a training programme in accordance with the applicable requirements of this Subpart to cover the duties and responsibilities to be performed by technical crew members.

(b) Following the completion of initial, operator conversion, differences and recurrent training, each technical crew member shall undergo a check to demonstrate their proficiency in carrying out normal and emergency procedures.

(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.

ORO.TC.115 Initial training

Before undertaking the operator conversion training, each technical crew member shall complete initial training, including:

(a) general theoretical knowledge on aviation and aviation regulations covering all elements relevant to the duties and responsibilities required of technical crew;

(b) fire and smoke training;

(c) survival training on ground and in water, appropriate to the type and area of operation;
(d) aero-medical aspects and first-aid;
(e) communication and relevant CRM elements of ORO.FC.115 and ORO.FC.215.

ORO.TC.120 Operator conversion training

Each technical crew member shall complete:
(a) operator conversion training, including relevant CRM elements,
(1) before being first assigned by the operator as a technical crew member; or
(2) when changing to a different aircraft type or class, if any of the equipment or procedures mentioned in (b) are different.
(b) Operator conversion training shall include:
(1) the location and use of all safety and survival equipment carried on the aircraft;
(2) all normal and emergency procedures;
(3) on-board equipment used to carry out duties in the aircraft or on the ground for the purpose of assisting the pilot during HEMS, HHO or NVIS operations.

ORO.TC.125 Differences training

(a) Each technical crew member shall complete differences training when changing equipment or procedures on types or variants currently operated.

(b) The operator shall specify in the operations manual when such differences training is required.

ORO.TC.130 Familiarisation flights

Following completion of the operator conversion training, each technical crew member shall undertake familiarisation flights prior to operating as a required technical crew member in HEMS, HHO or NVIS operations.

ORO.TC.135 Recurrent training

(a) Within every 12-month period, each technical crew member shall undergo recurrent training relevant to the type or class of aircraft and equipment that the technical crew member operates. Elements of CRM shall be integrated into all appropriate phases of the recurrent training.

(b) Recurrent training shall include theoretical and practical instruction and practice.

ORO.TC.140 Refresher training

(a) Each technical crew member who has not undertaken duties in the previous six months shall complete the refresher training specified in the operations manual.

(b) The technical crew member who has not performed flying duties on one particular aircraft type or class during the preceding six months shall, before being assigned on that type or class, complete either:
(1) refresher training on the type or class; or
(2) two familiarisation sectors on the aircraft type or class.

SUBPART FTL

FLIGHT AND DUTY TIME LIMITATIONS AND REST REQUIREMENTS

SECTION 1
General

ORO.FTL.100 Scope

This Subpart establishes the requirements to be met by an operator and its crew members with regard to flight and duty time limitations and rest requirements for crew members.

ORO.FTL.105 Definitions

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

(1) 'acclimatised' means a state in which a crew member's circadian biological clock is synchronised to the time zone where the crew member is. A crew member is considered to be acclimatised to a 2-hour wide time zone surrounding the local time at the point of departure. When the local time at the place where a duty commences differs by more than 2 hours from the local time at the place where the next duty starts, the crew member, for the calculation of the maximum daily flight duty period, is considered to be acclimatised in accordance with the values in the Table 1.

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;

(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;

(13) ‘flight time’ means, for aeroplanes and touring motor gliders, 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;

(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 (16), 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;

(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.

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.

(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	09:30	09:00	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

(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

Table 4

Crew members in an unknown state of acclimatisation under FRM

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.

(3) The use of the extension shall be planned in advance, and shall be limited to a maximum of:

(i) 5 sectors when the WOCL is not encroached; or

(ii) 4 sectors, when the WOCL is encroached by 2 hours or less; or

(iii) 2 sectors, when the WOCL is encroached by more than 2 hours.

(4) Extension of the maximum basic daily FDP without in-flight rest shall not be combined with extensions due to in-flight rest or split duty in the same duty period.

(5) Flight time specification schemes shall specify the limits for extensions of the maximum basic daily FDP in accordance with the certification specifications applicable to the type of operation, taking into account:

(i) the number of sectors flown; and

(ii) WOCL encroachment.

(e) Maximum daily FDP with the use of extensions due to in-flight rest

Flight time specification schemes shall specify the conditions for extensions of the maximum basic daily FDP with in-flight rest in accordance with the certification specifications applicable to the type of operation, taking into account:

(i) the number of sectors flown;

(ii) the minimum in-flight rest allocated to each crew member;

(iii) the type of in-flight rest facilities; and

(iv) the augmentation of the basic flight crew.

(f) Unforeseen circumstances in flight operations — commander's discretion

(1) The conditions to modify the limits on flight duty, duty and rest periods by the commander in the case of unforeseen circumstances in flight operations, which start at or after the reporting time, shall comply with the following:

(i) the maximum daily FDP which results after applying points (b) and (e) of point ORO.FTL.205 or point ORO.FTL.220 may not be increased by more than 2 hours unless the flight crew has been augmented, in which case the maximum flight duty period may be increased by not more than 3 hours;

(ii) if on the final sector within an FDP the allowed increase is exceeded because of unforeseen circumstances after take-off, the flight may continue to the planned destination or alternate aerodrome; and

(iii) the rest period following the FDP may be reduced but can never be less than 10 hours.

(2) In case of unforeseen circumstances which could lead to severe fatigue, the commander shall reduce the actual flight duty period and/or increase the rest period in order to eliminate any detrimental effect on flight safety.

(3) The commander shall consult all crew members on their alertness levels before deciding the modifications under subparagraphs 1 and 2.

(4) The commander shall submit a report to the operator when an FDP is increased or a rest period is reduced at his or her discretion.

(5) Where the increase of an FDP or reduction of a rest period exceeds 1 hour, a copy of the report, to which the operator shall add its comments, shall be sent by the operator to the 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.

ORO.FTL.220 Split duty

The conditions for extending the basic maximum daily FDP due to a break on the ground shall be in accordance with the following:

(a) flight time specification schemes shall specify the following elements for split duty in accordance with the certification specifications applicable to the type of operation:

(1) the minimum duration of a break on the ground; and

(2) the possibility to extend the FDP prescribed under point ORO.FTL.205(b) taking into account the duration of the break on the ground, the facilities provided to the crew member to rest and other relevant factors;

(b) the break on the ground shall count in full as FDP;

(c) split duty shall not follow a reduced rest.

ORO.FTL.225 Standby and duties at the airport

If an operator assigns crew members to standby or to any duty at the airport, the following shall apply in accordance with the certification specifications applicable to the type of operation:

(a) standby and any duty at the airport shall be in the roster and the start and end time of standby shall be defined and notified in advance to the crew members concerned to provide them with the opportunity to plan adequate rest;

(b) a crew member is considered on airport standby from reporting at the reporting point until the end of the notified airport standby period;

(c) airport standby shall count in full as duty period for the purpose of points ORO.FTL.210 and ORO.FTL.235;

(d) any duty at the airport shall count in full as duty period and the FDP shall count in full from the airport duty reporting time;

(e) the operator shall provide accommodation to the crew member on airport standby;

(f) flight time specification schemes shall specify the following elements:

(1) the maximum duration of any standby;

(2) the impact of the time spent on standby on the maximum FDP that may be assigned, taking into account facilities provided to the crew member to rest, and other relevant factors such as:

- the need for immediate readiness of the crew member,
- the interference of standby with sleep, and
- sufficient notification to protect a sleep opportunity between the call for duty and the assigned FDP;

(3) the minimum rest period following standby which does not lead to assignment of an FDP;

(4) how time spent on standby other than airport standby shall be counted for the purpose of cumulative duty periods.

ORO.FTL.230 Reserve

If an operator assigns crew members to reserve, the following requirements shall apply in accordance with the certification specifications applicable to the type of operation:

(a) reserve shall be in the roster;

(b) flight time specification schemes shall specify the following elements:

(1) the maximum duration of any single reserve period;

(2) the number of consecutive reserve days that may be assigned to a crew member.

ORO.FTL.235 Rest periods

(a) Minimum rest period at home base.

(1) The minimum rest period provided before undertaking an FDP starting at home base shall be at least as long as the preceding duty period, or 12 hours, whichever is greater.

(2) By way of derogation from point (1), the minimum rest provided under point (b) applies if the operator provides suitable accommodation to the crew member at home base.

(b) Minimum rest period away from home base.

The minimum rest period provided before undertaking an FDP starting away from home base shall be at least as long as the preceding duty period, or 10 hours, whichever is greater. This period shall include an 8-hour sleep opportunity in addition to the time for travelling and physiological needs.

(c) Reduced rest

By derogation from points (a) and (b), flight time specification schemes may reduce the minimum rest periods in accordance with the certification specifications applicable to the type of operation and taking into account the following elements:

(1) the minimum reduced rest period;

(2) the increase of the subsequent rest period; and

(3) the reduction of the FDP following the reduced rest.

(d) Recurrent extended recovery rest periods

Flight time specification schemes shall specify recurrent extended recovery rest periods to compensate for cumulative fatigue. The minimum recurrent extended recovery rest period shall be 36 hours, including 2 local nights, and in any case the time between the end of one recurrent extended recovery rest period and the start of the next extended recovery rest period shall not be more than 168 hours. The recurrent extended recovery rest period shall be increased to 2 local days twice every month.

(e) Flight time specification schemes shall specify additional rest periods in accordance with the applicable certification specifications to compensate for:

(1) the effects of time zone differences and extensions of the FDP;

(2) additional cumulative fatigue due to disruptive schedules; and

(3) a change of home base.

ORO.FTL.240 Nutrition

(a) During the FDP there shall be the opportunity for a meal and drink in order to avoid any detriment to a crew member’s performance, especially when the FDP exceeds 6 hours.

(b) An operator shall specify in its operations manual how the crew member’s nutrition during FDP is ensured.

ORO.FTL.245 Records of home base, flight times, duty and rest periods

(a) An operator shall maintain, for a period of 24 months:

(1) individual records for each crew member including:

(i) flight times;

(ii) start, duration and end of each duty period and FDP;

(iii) rest periods and days free of all duties; and

(iv) assigned home base;

(2) reports on extended flight duty periods and reduced rest periods.

(b) Upon request, the operator shall provide copies of individual records of flight times, duty periods and rest periods to:

(1) the crew member concerned; and

(2) to another operator, in relation to a crew member who is or becomes a crew member of the operator concerned.

(c) Records referred to in point CAT.GEN.MPA.100(b)(5) in relation to crew members who undertake duties for more than one operator shall be kept for a period of 24 months.

ORO.FTL.250 Fatigue management training

(a) The operator shall provide initial and recurrent fatigue management training to crew members, personnel responsible for preparation and maintenance of crew rosters and management personnel concerned.

(b) This training shall follow a training programme established by the operator and described in the operations manual. The training syllabus shall cover the possible causes and effects of fatigue and fatigue countermeasure.

Appendix 1.

DECLARATION in accordance with Commission Regulation (EU) No 965/2012 on air operations
Operator Name: 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:
Continuing airworthiness management organisation in accordance with Regulation (EC) No 2042/2003 Name and address of the organisation and approval reference (as per EASA Form 14)
Aircraft operation
Starting date of operation/applicability date of the change:
Type(s) of operation: ☐ Part-NCC: (specify if passenger and/or cargo) ☐ Part-SPO: (specify which type of activity)
Type(s) of aircraft, registration(s) and main base:
Details of approvals held (attach list of specific approvals to the declaration, if applicable)
Details of specialised operations authorisation held (attach authorisations, if applicable)
List of alternative means of compliance with references to the AMCs they replace (attach to the decaration)
Statements
☐ The management system documentation including the operations manual reflect the applicable requirements set out in Part-ORO, Part-NCC, Part-SPO and Part-SPA. All flights will be carried out in accordance with the procedures and instructions specified in the operations manual.
☐ All aircraft operated hold a valid certificate of airworthiness and comply with Commission Regulation (EC) No 2042/2003.
☐ All flight crew members and cabin crew members as applicable, are trained in accordance with the applicable requirements.
☐ (If applicable) The operator has implemented and demonstrated conformance to an officially recognised industry standard. Reference of the standard: Certification body: Date of the last conformance audit:
☐ Any change in the operation that affects the information dislosed in this declaration will be notified to the competent authority.
☐ The operator confirms that the information disclosed in this declaration is correct.
Date name and signature of the accountable manager

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.

CAT.GEN.105 Touring motor gliders, powered sailplanes and mixed balloons

(a) Powered sailplanes, excluding touring motor gliders, shall be operated and equipped in compliance with the requirements applicable to sailplanes.

(b) Touring motor gliders (TMGs) shall be operated following the requirements for:

(1) aeroplanes when they are power-driven by an engine; and

(2) sailplanes when operated without using an engine.

(c) TMGs shall be equipped in compliance with the requirements applicable to aeroplanes, unless otherwise specified in CAT.IDE.A.

(d) Mixed balloons shall be operated in accordance with the requirements for hot-air balloons.

SECTION 1

Motor-powered aircraft

CAT.GEN.MPA.100 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) 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/her individual records regarding flight and duty times and rest periods as referred to in applicable FTL requirements; and
(ii) provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements.
(c) The crew member shall not perform duties on an aircraft:
(1) when under the influence of psychoactive substances or alcohol 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/she is in any doubt of being able to accomplish his/her assigned duties; or
(5) 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.

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;
(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;
(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;

(11) decide on acceptance of the aircraft with unserviceabilities in accordance with the configuration deviation list (CDL) or the minimum equipment list (MEL);

(12) ensure that the pre-flight inspection has been carried out in accordance with the requirements of Annex I (Part-M) to Regulation (EC) No 2042/2003;

(13) be satisfied that relevant emergency equipment remains easily accessible for immediate use.

(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.

(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.

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.

CAT.GEN.MPA.124 Taxiing of aircraft

The operator shall establish procedures for taxiing of aircraft in order to ensure safe operation and in order to enhance runway safety.

CAT.GEN.MPA.125 Taxiing of aeroplanes

The operator shall ensure that an aeroplane is only taxied on the movement area of an aerodrome if the person at the controls:

(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.

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.

CAT.GEN.MPA.145 Information on emergency and survival equipment carried

The operator shall at all times have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board any of their aircraft.

CAT.GEN.MPA.150 Ditching - aeroplanes

The operator shall only operate an aeroplane with a passenger seating configuration of more than 30 on overwater flights at a distance from land suitable for making an emergency landing, greater than 120 minutes at cruising speed, or 400 NM, whichever is less, if the aeroplane complies with the ditching provisions prescribed in the applicable airworthiness code.

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

(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.

CAT.GEN.MPA.170 Alcohol and drugs

The operator shall take all reasonable measures to ensure that no person enters or is in an aircraft when under the influence of alcohol or drugs to the extent that the safety of the aircraft or its occupants is likely to be endangered.

CAT.GEN.MPA.175 Endangering safety

The operator shall take all reasonable measures to ensure that no person recklessly or negligently acts or omits to act so as to:

(a) endanger an aircraft or person therein; or

(b) cause or permit an aircraft to endanger any person or property.

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;

(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;

(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 aircraft technical log, in accordance with Annex I (Part-M) to Regulation (EC) No 2042/2003;

(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.

(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:
(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.

(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.

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 for a period of 60 days or until otherwise directed by the investigating authority.

(b) The operator shall conduct operational checks and evaluations of flight data recorder (FDR) recordings, cockpit voice recorder (CVR) recordings and data link recordings to ensure the continued serviceability of the recorders.

(c) The operator shall save the recordings for the period of operating time of the FDR as required by CAT.IDE.A.190 or CAT.IDE.H.190, except that, for the purpose of testing and maintaining the FDR, up to one hour of the oldest recorded material 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 FDR raw data into parameters expressed in engineering units.

(e) The operator shall make available any flight recorder recording that has been preserved, if so determined by the competent authority.

(f) Without prejudice to Regulation (EU) No 996/2010 of the European Parliament and of the Council:

(1) CVR recordings shall only be used for purposes other than for the investigation of an accident or an incident subject to mandatory reporting, if all crew members and maintenance personnel concerned consent.

(2) FDR recordings or data link recordings shall only be used for purposes other than for the investigation of an accident or an incident which is subject to mandatory reporting, if such records are:

(i) used by the operator for airworthiness or maintenance purposes only; or

(ii) de-identified; or

(iii) disclosed under secure procedures.

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.

SECTION 2
Non motor-powered aircraft

CAT.GEN.NMPA.100 Responsibilities of the commander

(a) The commander shall:

(1) be responsible for the safety of all crew members and passengers on board, as soon as the commander arrives on board of 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 balloons, from the moment the inflating of the envelope is started until the envelope is deflated, unless the commander has delegated the responsibility to another qualified person during the filling phase until the commander arrives as specified in the operations manual (OM);

(ii) for sailplanes, from the moment the launch procedure is started until the sailplane comes to a rest at the end of the flight;

(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 not to embark and to disembark any person 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) ensure that all passengers have received a safety briefing;

(7) ensure that all operational procedures and checklists are complied with in accordance with the operations manual;

(8) ensure that the pre-flight inspection has been carried out in accordance with the requirements of Annex I (Part-M) to Regulation (EC) No 2042/2003;

(9) be satisfied that relevant emergency equipment remains easily accessible for immediate use;

(10) comply with the relevant requirements of the operator's occurrence reporting schemes;

(11) comply with all flight and duty time limitations (FTL) and rest requirements applicable to his/her activities;

(12) when undertaking duties for more than one operator:

(i) maintain his/her individual records regarding flight and duty times and rest periods as referred to in applicable FTL requirements; and

(ii) provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements.

(b) The commander shall not perform duties on an aircraft:

(1) when under the influence of psychoactive substances or alcohol 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/she is in any doubt of being able to accomplish his/her assigned duties; or

(5) 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.

(c) The commander shall, in an emergency situation that requires immediate decision and action, take any action the commander 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.

(d) The commander of a balloon shall:

(1) be responsible for the pre-flight briefing of those persons assisting in the inflation and deflation of the envelope;

(2) ensure that no person is smoking on board or within the direct vicinity of the balloon; and

(3) ensure that persons assisting in the inflation and deflation of the envelope wear appropriate protective clothing.

CAT.GEN.NMPA.105 Additional balloon crew member

(a) When a balloon carries more than 19 passengers, at least one additional crew member appropriately experienced and trained shall be present on board to assist passengers in the event of an emergency.

(b) The additional crew member shall not perform duties on a balloon:

(1) when under the influence of psychoactive substances or alcohol;

(2) when unfit due to injury, fatigue, medication, sickness or other similar causes; or

(3) until a reasonable time period has elapsed after deep water diving or following blood donation.

CAT.GEN.NMPA.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.NMPA.115 Common language

The operator shall ensure that all crew members can communicate with each other in a common language.

CAT.GEN.NMPA.120 Portable electronic devices

The operator shall not permit any person to use a portable electronic device (PED) on board an aircraft that could adversely affect the performance of the aircraft's systems and equipment and shall take all reasonable measures to prevent such use.

CAT.GEN.NMPA.125 Information on emergency and survival equipment carried

The operator shall at all times have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board any of their aircraft.

CAT.GEN.NMPA.130 Alcohol and drugs

The operator shall take all reasonable measures to ensure that no person enters or is in an aircraft when under the influence of alcohol or drugs to the extent that the safety of the aircraft or its occupants is likely to be endangered.

CAT.GEN.NMPA.135 Endangering safety

The operator shall take all reasonable measures to ensure that no person recklessly or negligently acts or omits to act so as to:

(a) endanger an aircraft or person therein or on the ground; or

(b) cause or permit an aircraft to endanger any person or property.

CAT.GEN.NMPA.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 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, if applicable;

(5) a copy of the air operator certificate (AOC);

(6) the operations specifications relevant to the aircraft type, issued with the AOC, 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) the aircraft technical log, in accordance with 29
(Part-M) to Regulation (EC) No 2042/2003, if applicable;
(11) the MEL or CDL, if applicable;
(12) details of the filed air traffic service (ATS) flight plan, if applicable;
(13) 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;
(14) procedures and visual signals information for use by intercepting and intercepted aircraft;
(15) information concerning search and rescue services for the area of the intended flight;
(16) appropriate notices to airmen (NOTAMs) and aeronautical information service (AIS) briefing documentation;
(17) appropriate meteorological information;
(18) passenger manifests, if applicable;
(19) for sailplanes, mass and balance documentation and for balloons, mass documentation;
(20) the operational flight plan, if applicable; and
(21) 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, manuals and information specified there may be carried in the retrieve vehicle or retained at the aerodrome or operating site on flights intending to:

(1) take off and land at the same aerodrome or operating site; or
(2) remain within a local area specified in the operations manual.

CAT.GEN.NMPA.145 Provision of documentation and records

The commander shall, within a reasonable time of being requested to do so by a person authorised by an authority, provide to that person the documentation required to be carried on board.

CAT.GEN.NMPA.150 Transport of dangerous goods

(a) The transport of dangerous goods shall not be permitted, except when:
(1) they are not subject to the Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Doc 9284-AN/905) 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.

(b) The operator shall establish procedures to ensure that all reasonable measures are taken to prevent dangerous goods from being carried on board inadvertently.

(c) The operator shall provide personnel with the necessary information enabling them to carry out their responsibilities.

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:

(1) operations under VFR by day of other-than complex motor-powered aeroplanes;

(2) helicopters with an MCTOM of 3 175 kg or less operated by day and over routes navigated by reference to visual landmarks; or

(3) local helicopter operations,

provided that search and rescue service arrangements can be maintained.

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:

(1) other-than complex motor-powered aeroplanes; and

(2) helicopters.

CAT.OP.MPA.106 Use of isolated aerodromes - aeroplanes

(a) Using an isolated aerodrome as destination aerodrome with aeroplanes requires the prior approval by the competent authority.

(b) An isolated aerodrome is one for which the alternate and final fuel reserve required to the nearest adequate destination alternate aerodrome is more than:

(1) for aeroplanes with reciprocating engines, fuel to fly for 45 minutes plus 15 % of the flying time planned to be spent at cruising level or two hours, whichever is less; or

(2) for aeroplanes with turbine engines, fuel to fly for two hours at normal cruise consumption above the destination aerodrome, including final reserve fuel.

CAT.OP.MPA.107 Adequate aerodrome

The operator shall consider an aerodrome as adequate if, at the expected time of use, the aerodrome is available and equipped with necessary ancillary services such as air traffic services (ATS), sufficient lighting, communications, weather reporting, navigation aids and emergency services.

CAT.OP.MPA.110 Aerodrome operating minima

(a) The operator shall establish aerodrome operating minima for each departure, destination or alternate aerodrome planned to be used. These minima shall not be lower than those established for such aerodromes by the State in which the aerodrome is located, except when specifically approved by that State. Any increment specified by the competent authority shall be added to the minima.

(b) The use of a head-up display (HUD), head-up guidance landing system (HUDLS) or enhanced vision system (EVS) may allow operations with lower visibilities than the established aerodrome operating minima if approved in accordance with SPA.LVO.

(c) When establishing aerodrome operating minima, the operator shall take the following into account:

(1) the type, performance and handling characteristics of the aircraft;

(2) the composition, competence and experience of the flight crew;

(3) the dimensions and characteristics of the runways/final approach and take-off areas (FATOs) that may be selected for use;

(4) the adequacy and performance of the available visual and non-visual ground aids;

(5) the equipment available on the aircraft for the purpose of navigation and/or control of the flight path during the take-off, the approach, the flare, the landing, rollout and the missed approach;

(6) for the determination of obstacle clearance, the obstacles in the approach, missed approach and the climb-out areas necessary for the execution of contingency procedures;

(7) the obstacle clearance altitude/height for the instrument approach procedures;

(8) the means to determine and report meteorological conditions; and

(9) the flight technique to be used during the final approach.

(d) The operator shall specify the method of determining aerodrome operating minima in the operations manual.

(e) The minima for a specific approach and landing procedure shall only be used if all the following conditions are met:

(1) the ground equipment shown on the chart required for the intended procedure is operative;

(2) the aircraft systems required for the type of approach are operative;

(3) the required aircraft performance criteria are met; and

(4) the crew is appropriately qualified.

CAT.OP.MPA.115 Approach flight technique - aeroplanes

(a) All approaches shall be flown as stabilised approaches unless otherwise approved by the competent authority for a particular approach to a particular runway.

(b) Non-precision approaches

(1) The continuous descent final approach (CDFA) technique shall be used for all non-precision approaches.

(2) Notwithstanding (1), another approach flight technique may be used for a particular approach/runway combination if approved by the competent authority. In such cases, the applicable minimum runway visual range (RVR):

(i) shall be increased by 200 m for category A and B aeroplanes and by 400 m for category C and D aeroplanes; or

(ii) for aerodromes where there is a public interest to maintain current operations and the CDFA technique cannot be applied, shall be established and regularly reviewed by the competent authority taking into account the operator's experience, training programme and flight crew qualification.

CAT.OP.MPA.120 Airborne radar approaches (ARAs) for overwater operations - helicopters

(a) An ARA shall only be undertaken if:

(1) the radar provides course guidance to ensure obstacle clearance; and

(2) either:

(i) the minimum descent height (MDH) is determined from a radio altimeter; or

(ii) the minimum descent altitude (MDA) plus an adequate margin is applied.

(b) ARAs to rigs or vessels under way shall only be conducted in multi-crew operations.

(c) The decision range shall provide adequate obstacle clearance in the missed approach from any destination for which an ARA is planned.

(d) The approach shall only be continued beyond decision range or below MDA/H when visual reference with the destination has been established.

(e) For single-pilot operations, appropriate increments shall be added to the MDA/H and decision range.

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.

(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.

CAT.OP.MPA.130 Noise abatement procedures - aeroplanes

(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.

(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:

(1) ground facilities and services, including meteorological services, adequate for the planned operation are provided;

(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.

(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.

CAT.OP.MPA.136 Routes and areas of operation - single-engined aeroplanes

The operator shall ensure that operations of single-engined aeroplanes are only conducted along routes, or within areas, where surfaces are available that permit a safe forced landing to be executed.

CAT.OP.MPA.137 Routes and areas of operation - helicopters

The operator shall ensure that:

(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

(a) Unless approved by the competent authority in accordance with Annex V (Part-SPA), Subpart F, the operator shall not operate a two-engined aeroplane over a route that contains a point further from an adequate aerodrome, under standard conditions in still air, than:

(1) for performance class A aeroplanes with either:

(i) a maximum operational passenger seating configuration (MOPSC) of 20 or more; or

(ii) a maximum take-off mass of 45 360 kg or more,

the distance flown in 60 minutes at the one-engine-inoperative (OEI) cruising speed determined in accordance with (b);

(2) for performance class A aeroplanes with:

(i) an MOPSC of 19 or less; and

(ii) a maximum take-off mass less than 45 360 kg,

the distance flown in 120 minutes or, subject to approval by the competent authority, up to 180 minutes for turbo-jet aeroplanes, at the OEI cruise speed determined in accordance with (b);

(3) for performance class B or C aeroplanes:

(i) the distance flown in 120 minutes at the OEI cruise speed determined in accordance with (b); or

(ii) 300 NM, whichever is less.

(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 VMO (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.

(d) To obtain the approval referred to in (a)(2), the operator shall provide evidence that:

(1) the aeroplane/engine combination holds an extended range operations with two-engined aeroplanes (ETOPS) type design and reliability approval for the intended operation;

(2) a set of conditions has been implemented to ensure that the aeroplane and its engines are maintained to meet the necessary reliability criteria; and

(3) the flight crew and all other operations personnel involved are trained and suitably qualified to conduct the intended operation.

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.

CAT.OP.MPA.150 Fuel policy

(a) The operator shall establish a fuel policy for the purpose of flight planning and in-flight replanning to ensure that every flight carries sufficient fuel for the planned operation and

reserves to cover deviations from the planned operation. The fuel policy and any change to it require prior approval by the competent authority.

(b) The operator shall ensure that the planning of flights is based upon at least:

(1) procedures contained in the operations manual and:

(i) data provided by the aircraft manufacturer; or

(ii) current aircraft-specific data derived from a fuel consumption monitoring system; and

(2) the operating conditions under which the flight is to be conducted including:

(i) aircraft fuel consumption data;

(ii) anticipated masses;

(iii) expected meteorological conditions; and

(iv) air navigation services provider(s) procedures and restrictions.

(c) The operator shall ensure that the pre-flight calculation of usable fuel required for a flight includes:

(1) taxi fuel;

(2) trip fuel;

(3) reserve fuel consisting of:

(i) contingency fuel;

(ii) alternate fuel, if a destination alternate aerodrome is required;

(iii) final reserve fuel; and

(iv) additional fuel, if required by the type of operation; and

(4) extra fuel if required by the commander.

(d) The operator shall ensure that in-flight replanning procedures for calculating usable fuel required when a flight has to proceed along a route or to a destination aerodrome other than originally planned includes:

(1) trip fuel for the remainder of the flight; and

(2) reserve fuel consisting of:

(i) contingency fuel;

(ii) alternate fuel, if a destination alternate aerodrome is required;

(iii) final reserve fuel; and

(iv) additional fuel, if required by the type of operation; and

(3) extra fuel if required by the commander.

CAT.OP.MPA.151 Fuel policy - alleviations

(a) Notwithstanding CAT.OP.MPA.150(b) to (d), for operations of performance class B aeroplanes the operator shall ensure that the pre-flight calculation of usable fuel required for a flight includes:

(i) taxi fuel, if significant;

(ii) trip fuel;

(iii) reserve fuel, consisting of:

(A) contingency fuel that is not less than 5 % of the planned trip fuel or, in the event of in-flight replanning, 5 % of the trip fuel for the remainder of the flight; and

(B) final reserve fuel to fly for an additional period of 45 minutes for reciprocating engines or 30 minutes for turbine engines;

(iv) alternate fuel to reach the destination alternate aerodrome via the destination, if a destination alternate aerodrome is required; and

(v) extra fuel, if specified by the commander.

(a1) Notwithstanding CAT.OP.MPA.150(b) to (d), for operations taking off and landing at the same aerodrome or operating site with ELA2 aeroplanes under VFR by day the operator shall specify the minimum final reserve fuel in the OM. This minimum final reserve fuel shall not be less than the amount needed to fly for a period of 45 minutes.

(b) Notwithstanding CAT.OP.MPA.150(b) to (d), for helicopters with an MCTOM of 3 175 kg or less, by day and over routes navigated by reference to visual landmarks or local helicopter operations, the fuel policy shall ensure that, on completion of the flight, or series of flights the final reserve fuel is not less than an amount sufficient for:

(1) 30 minutes flying time at normal cruising speed; or

(2) 20 minutes flying time at normal cruising speed when operating within an area providing continuous and suitable precautionary landing sites.

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

(b) provided with a safety briefing card on which picture-type instructions indicate the operation of emergency equipment and exits likely to be used by passengers.

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;

(6) ground facilities and services required for the planned flight are available and adequate;

(7) the provisions specified in the operations manual in respect of fuel, oil, oxygen, minimum safe altitudes, aerodrome operating minima and availability of alternate aerodromes, where required, can be complied with for the planned flight; and

(8) any additional operational limitation can be complied with.

(c) Notwithstanding (a), an operational flight plan is not required for operations under VFR of:

(1) other-than complex motor-powered aeroplane taking off and landing at the same aerodrome or operating site; or

(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.

CAT.OP.MPA.180 Selection of aerodromes - aeroplanes

(a) Where it is not possible to use the departure aerodrome as a take-off alternate aerodrome due to meteorological or performance reasons, the operator shall select another adequate take-off alternate aerodrome that is no further from the departure aerodrome than:

(1) for two-engined aeroplanes:

(i) one hour flying time at an OEI cruising speed according to the AFM in still air standard conditions based on the actual take-off mass; or

(ii) the ETOPS diversion time approved in accordance with Annex V (Part-SPA), Subpart F, subject to any MEL restriction, up to a maximum of two hours, at the OEI cruising speed according to the AFM in still air standard conditions based on the actual take-off mass;

(2) for three and four-engined aeroplanes, two hours flying time at the OEI cruising speed according to the AFM in still air standard conditions based on the actual take-off mass.

If the AFM does not contain an OEI cruising speed, the speed to be used for calculation shall be that which is achieved with the remaining engine(s) set at maximum continuous power.

(b) The operator shall select at least one destination alternate aerodrome for each instrument flight rules (IFR) flight unless the destination aerodrome is an isolated aerodrome or:

(1) the duration of the planned flight from take-off to landing or, in the event of in-flight replanning in accordance with CAT.OP.MPA.150(d), the remaining flying time to destination does not exceed six hours; and

(2) two separate runways are available and usable at the destination aerodrome and the appropriate weather reports and/or forecasts for the destination aerodrome indicate that, for the period from one hour before until one hour after the expected time of arrival at the destination aerodrome, the ceiling will be at least 2 000 ft or circling height + 500 ft, whichever is greater, and the ground visibility will be at least 5 km.

(c) The operator shall select two destination alternate aerodromes when:

(1) the appropriate weather reports and/or forecasts for the destination aerodrome indicate that during a period commencing one hour before and ending one hour after the estimated time of arrival, the weather conditions will be below the applicable planning minima; or

(2) no meteorological information is available.

(d) The operator shall specify any required alternate aerodrome(s) in the operational flight plan.

CAT.OP.MPA.181 Selection of aerodromes and operating sites - helicopters

(a) For flights under instrument meteorological conditions (IMC), the commander shall select a take-off alternate aerodrome within one hour flying time at normal cruising speed if it would not be possible to return to the site of departure due to meteorological reasons.

(b) For IFR flights or when flying under VFR and navigating by means other than by reference to visual landmarks, the commander shall specify at least one destination alternate aerodrome in the operational flight plan unless:

(1) the destination is a coastal aerodrome and the helicopter is routing from offshore;

(2) for a flight to any other land destination, the duration of the flight and the meteorological conditions prevailing are such that, at the estimated time of arrival at the site of intended landing, an approach and landing is possible under visual meteorological conditions (VMC); or

(3) the site of intended landing is isolated and no alternate is available; in this case, a point of no return (PNR) shall be determined.

(c) The operator shall select two destination alternate aerodromes when:

(1) the appropriate weather reports and/or forecasts for the destination aerodrome indicate that during a period commencing one hour before and ending one hour after the estimated time of arrival, the weather conditions will be below the applicable planning minima; or

(2) no meteorological information is available for the destination aerodrome.

(d) The operator may select off-shore destination alternate aerodromes when the following criteria are applied:

(1) an off-shore destination alternate aerodrome shall be used only after a PNR. Prior to the PNR, on-shore alternate aerodromes shall be used;

(2) OEI landing capability shall be attainable at the alternate aerodrome;

(3) to the extent possible, deck availability shall be guaranteed. The dimensions, configuration and obstacle clearance of individual helidecks or other sites shall be assessed in order to establish operational suitability for use as an alternate aerodrome by each helicopter type proposed to be used;

(4) weather minima shall be established taking accuracy and reliability of meteorological information into account;

(5) the MEL shall contain specific provisions for this type of operation; and

(6) an off-shore alternate aerodrome shall only be selected if the operator has established a procedure in the operations manual.

(e) The operator shall specify any required alternate aerodrome(s) in the operational flight plan.

CAT.OP.MPA.185 Planning minima for IFR flights - aeroplanes

(a) *Planning minima for a take-off alternate aerodrome*

The operator shall only select an aerodrome as a take-off alternate aerodrome when the appropriate weather reports and/or forecasts indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the aerodrome, the weather conditions will be at or above the applicable landing minima specified in accordance with CAT.OP.MPA.110. The ceiling shall be taken into account when the only approach operations available are non-precision approaches (NPA) and/or circling operations. Any limitation related to OEI operations shall be taken into account.

(b) *Planning minima for a destination aerodrome other than an isolated destination aerodrome*

The operator shall only select the destination aerodrome when:

(1) the appropriate weather reports and/or forecasts indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival

at the aerodrome, the weather conditions will be at or above the applicable planning minima as follows:

(i) RVR/visibility (VIS) specified in accordance with CAT.OP.MPA.110; and

(ii) for an NPA or a circling operation, the ceiling at or above MDH;

or

(2) two destination alternate aerodromes are selected.

(c) *Planning minima for a destination alternate aerodrome, isolated aerodrome, fuel en-route alternate (fuel ERA) aerodrome, en-route alternate (ERA) aerodrome*

The operator shall only select an aerodrome for one of these purposes when the appropriate weather reports and/or forecasts indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the aerodrome, the weather conditions will be at or above the planning minima in Table 1.

Table 1

Planning minima

Destination alternate aerodrome, isolated destination aerodrome, fuel ERA and ERA aerodrome

Type of approach	**Planning minima**
CAT II and CAT III	CAT I RVR
CATI	NPA RVR/VIS Ceiling shall be at or above MDH
NPA	NPA RVR/VIS + 1000 m Ceiling shall be at or above MDH + 200 ft
Circling	Circling

CAT.OP.MPA.186 Planning minima for IFR flights - helicopters

(a) *Planning minima for take-off alternate aerodrome(s)*

The operator shall only select an aerodrome or landing site as a take-off alternate aerodrome when the appropriate weather reports and/or forecasts indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the take-off alternate aerodrome, the weather conditions will be at or above the applicable landing minima specified in accordance with CAT.OP.MPA.110. The ceiling shall be taken into account when the only approach operations available are NPA operations. Any limitation related to OEI operations shall be taken into account.

(b) *Planning minima for destination aerodrome and destination alternate aerodrome(s)*

The operator shall only select the destination and/or destination alternate aerodrome(s) when the appropriate weather reports and/or forecasts indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the aerodrome or operating site, the weather conditions will be at or above the applicable planning minima as follows:

(1) except as provided in CAT.OP.MPA.181(d), planning minima for a destination aerodrome shall be:

(i) RVR/VIS specified in accordance with CAT.OP.MPA.110; and

(ii) for NPA operations, the ceiling at or above MDH;

(2) planning minima for destination alternate aerodrome(s) are as shown in Table 1.

Table 1

Planning minima destination alternate aerodrome

Type of approach	**Planning minima**
CAT II and III	CAT I RVR
CAT I	CAT I + 200 ft/ 400 m visibility
NPA	NPA RVR/VIS + 400 m Ceiling shall be at or above MDH + 200 ft

CAT.OP.MPA.190 Submission of the ATS flight plan

(a) If an ATS flight plan is not submitted because it is not required by the rules of the air, adequate information shall be deposited in order to permit alerting services to be activated if required.

(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.195 Refuelling/defuelling with passengers embarking, on board or disembarking

(a) An aircraft shall not be refuelled/defuelled with Avgas (aviation gasoline) or wide-cut type fuel or a mixture of these types of fuel, when passengers are embarking, on board or disembarking.

(b) For all other types of fuel, necessary precautions shall be taken and the aircraft shall be properly manned by qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

CAT.OP.MPA.200 Refuelling/defuelling with wide-cut fuel

Refuelling/defuelling with wide-cut fuel shall only be conducted if the operator has established appropriate procedures taking into account the high risk of using wide-cut fuel types.

CAT.OP.MPA.205 Push back and towing - aeroplanes

Push back and towing procedures specified by the operator shall be conducted in accordance with established aviation standards and procedures.

CAT.OP.MPA.210 Crew members at stations

(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.

(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.

(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.

CAT.OP.MPA.245 Meteorological conditions - all aircraft

(a) On IFR flights the commander shall only:

(1) commence take-off; or

(2) continue beyond the point from which a revised ATS flight plan applies in the event of in-flight replanning,

when information is available indicating that the expected weather conditions, at the time of arrival, at the destination and/or required alternate aerodrome(s) are at or above the planning minima.

(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 weather conditions at the destination, or at least one destination alternate aerodrome, are at or above the applicable aerodrome operating minima.

(c) On VFR flights, the commander shall only commence take-off when the appropriate weather reports and/or forecasts indicate that the meteorological conditions along the part of the route to be flown under VFR will, at the appropriate time, be at or above the VFR limits.

CAT.OP.MPA.246 Meteorological conditions - aeroplanes

In addition to CAT.OP.MPA.245, on IFR flights with aeroplanes, the commander shall only continue beyond:

(a) the decision point when using the reduced contingency fuel (RCF) procedure; or

(b) the pre-determined point when using the pre-determined point (PDP) procedure,

when information is available indicating that the expected weather conditions, at the time of arrival, at the destination and/or required alternate aerodrome(s) are at or above the applicable aerodrome operating minima.

CAT.OP.MPA.247 Meteorological conditions - helicopters

In addition to CAT.OP.MPA.245:

(a) On VFR flights overwater out of sight of land with helicopters, the commander shall only commence take-off when the appropriate weather reports and/or forecasts indicate that the cloud ceiling will be above 600 ft by day or 1 200 ft by night.

(b) Notwithstanding (a), when flying between helidecks 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:

Table 1

Minima for flying between helidecks located in class G airspace

	Day		**Night**	
	Height (*)	**Visibility**	**Height (*)**	**Visibility**
Single-pilot	300 ft	3 km	500 ft	5 km
Two pilots	300 ft	2 km (**)	500 ft	5 km (***)
(*) The cloud base shall be such as to allow flight at the specified height, 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 visibilty down to 1500 m provided the destination or an intermediate structure is continuously visible.				

(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.

CAT.OP.MPA.260 Fuel and oil supply

The commander shall only commence a flight or continue in the event of in-flight replanning when satisfied that the aircraft carries at least the planned amount of usable fuel and oil to complete the flight safely, taking into account the expected operating conditions.

CAT.OP.MPA.265 Take-off conditions

Before commencing take-off, the commander shall be satisfied that:

(a) according to the information available to him/her, the weather at the aerodrome or operating site and the condition of the runway or FATO intended to be used would not prevent a safe take-off and departure; and

(b) established aerodrome operating minima will be complied with.

CAT.OP.MPA.270 Minimum flight altitudes

The commander or the pilot to whom conduct of the flight has been delegated shall not fly below specified minimum altitudes except when:

(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.

CAT.OP.MPA.280 In-flight fuel management - aeroplanes

The operator shall establish a procedure to ensure that in-flight fuel checks and fuel management are carried out according to the following criteria.

(a) *In-flight fuel checks*

(1) The commander shall ensure that fuel checks are carried out in-flight at regular intervals. The usable remaining fuel shall be recorded and evaluated to:

(i) compare actual consumption with planned consumption;

(ii) check that the usable remaining fuel is sufficient to complete the flight, in accordance with (b); and

(iii) determine the expected usable fuel remaining on arrival at the destination aerodrome.

(2) The relevant fuel data shall be recorded.

(b) *In-flight fuel management*

(1) The flight shall be conducted so that the expected usable fuel remaining on arrival at the destination aerodrome is not less than:

(i) the required alternate fuel plus final reserve fuel; or

(ii) the final reserve fuel if no alternate aerodrome is required.

(2) If an in-flight fuel check shows that the expected usable fuel remaining on arrival at the destination aerodrome is less than:

(i) the required alternate fuel plus final reserve fuel, the commander shall take into account the traffic and the operational conditions prevailing at the destination aerodrome, at the destination alternate aerodrome and at any other adequate aerodrome in deciding whether to proceed to the destination aerodrome or to divert so as to perform a safe landing with not less than final reserve fuel; or

(ii) the final reserve fuel if no alternate aerodrome is required, the commander shall take appropriate action and proceed to an adequate aerodrome so as to perform a safe landing with not less than final reserve fuel.

(3) The commander shall declare an emergency when the calculated usable fuel on landing, at the nearest adequate aerodrome where a safe landing can be performed, is less than final reserve fuel.

(4) Additional conditions for specific procedures

(i) On a flight using the RCF procedure, to proceed to the destination 1 aerodrome, the commander shall ensure that the usable fuel remaining at the decision point is at least the total of:

(A) trip fuel from the decision point to the destination 1 aerodrome;

(B) contingency fuel equal to 5 % of trip fuel from the decision point to the destination 1 aerodrome;

(C) destination 1 aerodrome alternate fuel, if a destination 1 alternate aerodrome is required; and

(D) final reserve fuel.

(ii) On a flight using the PDP procedure to proceed to the destination aerodrome, the commander shall ensure that the usable fuel remaining at the PDP is at least the total of:

(A) trip fuel from the PDP to the destination aerodrome;

(B) contingency fuel from the PDP to the destination aerodrome; and

(C) additional fuel.

CAT.OP.MPA.281 In-flight fuel management - helicopters

(a) The operator shall establish a procedure to ensure that in-flight fuel checks and fuel management are carried out.

(b) The commander shall ensure that the amount of usable fuel remaining in flight is not less than the fuel required to proceed to an aerodrome or operating site where a safe landing can be made, with final reserve fuel remaining.

(c) The commander shall declare an emergency when the actual usable fuel on board is less than final reserve fuel.

CAT.OP.MPA.285 Use of supplemental oxygen

The commander shall ensure that flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen continuously whenever the cabin altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft.

CAT.OP.MPA.290 Ground proximity detection

When undue proximity to the ground is detected by a flight crew member or by a ground proximity warning system, the pilot flying shall take corrective action immediately to establish safe flight conditions.

CAT.OP.MPA.295 Use of airborne collision avoidance system (ACAS)

The operator shall establish operational procedures and training programmes when ACAS is installed and serviceable. When ACAS II is used, such procedures and training shall be in accordance with Commission Regulation (EU) No 1332/2011.

CAT.OP.MPA.300 Approach and landing conditions

Before commencing an approach to land, the commander shall be satisfied that, according to the information available to him/her, the weather at the aerodrome and the condition of the runway or FATO intended to be used should not prevent a safe approach, landing or missed approach, having regard to the performance information contained in the operations manual.

CAT.OP.MPA.305 Commencement and continuation of approach

(a) The commander or the pilot to whom conduct of the flight has been delegated may commence an instrument approach regardless of the reported RVR/VIS.

(b) If the reported RVR/VIS is less than the applicable minimum the approach shall not be continued:

(1) below 1 000 ft above the aerodrome; or

(2) into the final approach segment in the case where the DA/H or MDA/H is more than 1 000 ft above the aerodrome.

(c) Where the RVR is not available, RVR values may be derived by converting the reported visibility.

(d) If, after passing 1 000 ft above the aerodrome, the reported RVR/VIS falls below the applicable minimum, the approach may be continued to DA/H or MDA/H.

(e) The approach may be continued below DA/H or MDA/H and the landing may be completed provided that the visual reference adequate for the type of approach operation and for the intended runway is established at the DA/H or MDA/H and is maintained.

(f) The touchdown zone RVR shall always be controlling. If reported and relevant, the midpoint and stopend RVR shall also be controlling. The minimum RVR value for the midpoint shall be 125 m or the RVR required for the touchdown zone if less, and 75 m for the stopend. For aircraft equipped with a rollout guidance or control system, the minimum RVR value for the midpoint shall be 75 m.

CAT.OP.MPA.310 Operating procedures - threshold crossing height - aeroplanes

The operator shall establish operational procedures designed to ensure that an aeroplane conducting precision approaches crosses the threshold of the runway by a safe margin, with the aeroplane in the landing configuration and attitude.

CAT.OP.MPA.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.

CAT.OP.MPA.320 Aircraft categories

(a) Aircraft categories shall be based on the indicated airspeed at threshold (VAT) which is equal to the stalling speed (VSO) multiplied by 1,3 or one-g (gravity) stall speed (VS1g) multiplied by 1,23 in the landing configuration at the maximum certified landing mass. If both VSO and VS1g are available, the higher resulting VAT shall be used.

(b) The aircraft categories specified in the table below shall be used.

Table 1

Aircraft categories corresponding to V_{AT} values

Aircraft 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 VAT 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.

SECTION 2

Non motor-powered aircraft

CAT.OP.NMPA.100 Use of aerodromes and operating sites

The operator shall only use aerodromes and operating sites that are adequate for the type(s) of aircraft and operation(s) concerned.

CAT.OP.NMPA.105 Noise abatement procedures - balloons and powered sailplanes

The commander shall take into account the effect of aircraft noise while ensuring that safety has priority over noise abatement.

CAT.OP.NMPA.110 Fuel or ballast supply and planning - balloons

(a) The operator shall ensure that the fuel or ballast carried is sufficient for the intended flight duration plus a reserve of 30 minutes of flight.

(b) Fuel or ballast supply calculations shall be based upon at least the following operating conditions under which the flight is to be conducted:

(1) data provided by the balloon manufacturer;

(2) anticipated masses;

(3) expected meteorological conditions; and

(4) air navigation services provider(s) procedures and restrictions.

(c) The calculations shall be documented in an operational flight plan.

CAT.OP.NMPA.115 Carriage of special categories of passengers (SCPs)

Persons requiring special conditions, assistance and/or devices when carried on a flight shall be considered as SCPs and be carried under conditions that ensure the safety of the aircraft and its occupants according to procedures established by the operator.

CAT.OP.NMPA.120 Passenger briefing

The operator shall ensure that passengers are given a safety briefing before or, where appropriate, during the flight.

CAT.OP.NMPA.125 Flight preparation

Before commencing the flight, the commander shall:

(a) ascertain by every reasonable means available that the ground facilities including communication facilities and navigation aids available and directly required on such a flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted; and

(b) 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 shall include:

(1) a study of available current weather 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 weather conditions.

CAT.OP.NMPA.130 Submission of the ATS flight plan

(a) If an ATS flight plan is not submitted because it is not required by the rules of the air, adequate information shall be deposited in order to permit alerting services to be activated if required.

(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.NMPA.135 Securing of passenger and pilot compartments - balloons

The commander shall ensure that before take-off and landing, and whenever deemed necessary in the interest of safety:

(a) all equipment and baggage are properly secured; and

(b) emergency evacuation remains possible.

CAT.OP.NMPA.140 Smoking on board

No person shall be allowed to smoke on board a sailplane or balloon.

CAT.OP.NMPA.145 Meteorological conditions

The commander shall only commence or continue a VFR flight if the latest available meteorological information indicates that the weather conditions along the route and at the intended destination at the estimated time of use will be at or above the applicable VFR operating minima.

CAT.OP.NMPA.150 Ice and other contaminants - ground procedures

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 in accordance with the AFM.

CAT.OP.NMPA.155 Take-off conditions

Before commencing take-off, the commander shall be satisfied that according to the information available to him/her, the weather at the aerodrome or operating site would not prevent a safe take-off and departure.

CAT.OP.NMPA.160 Simulated abnormal situations in flight

The commander shall ensure that when carrying passengers abnormal or emergency situations that require the application of abnormal or emergency procedures are not simulated.

CAT.OP.NMPA.165 In-flight fuel and ballast management - balloons

The commander shall check at regular intervals that the amount of usable fuel and ballast remaining in flight is not less than the fuel and ballast needed to complete the intended flight and the reserve planned for landing.

CAT.OP.NMPA.170 Use of supplemental oxygen

The commander shall ensure that flight crew members engaged in performing duties essential to the safe operation of the aircraft in flight use supplemental oxygen continuously whenever the pressure altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the pressure altitude exceeds 13 000 ft.

CAT.OP.NMPA.175 Approach and landing conditions

Before commencing an approach to land, the commander shall be satisfied that, according to the information available to him/her, the weather at the intended aerodrome or operating site and the condition of the surface intended to be used would not prevent a safe approach and landing.

CAT.OP.NMPA.180 Operational limitations - hot-air balloons

(a) A hot-air balloon shall not land during night, except in emergency situation.

(b) A hot-air balloon may take-off during night, provided sufficient fuel is carried for a landing during day.

CAT.OP.NMPA.185 Operational limitations - sailplanes

A sailplane shall only be operated during day.

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.

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.

(d) For performance purposes, a damp runway, other than a grass runway, may be considered to be dry.

(e) The operator shall take account of charting accuracy when assessing the take-off requirements of the applicable chapters.

CHAPTER 2
Performance class A

CAT.POL.A.200 General

(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.

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 V1 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) 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

(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.

(b) The gradient of the 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 net flight path shall permit the aeroplane to continue flight from the cruising altitude to an aerodrome where a landing can be made in accordance with CAT.POL.A.225 or CAT.POL.A.230, as appropriate. The 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 in accordance with the following:

(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;

(3) fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used; and

(4) the aerodrome where the aeroplane is assumed to land after engine failure shall meet the following criteria:

(i) the performance requirements at the expected landing mass are met; and

(ii) weather reports and/or forecasts and field condition reports indicate that a safe landing can be accomplished at the estimated time of landing.

(d) The operator shall increase the width margins of (b) and (c) to 18,5 km (10 NM) if the navigational accuracy does not meet at least required navigation performance 5 (RNP5).

CAT.POL.A.220 En-route - aeroplanes with three or more engines, two engines inoperative

(a) At no point along the intended track shall an aeroplane having three or more engines be more than 90 minutes, at the all-engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met, unless it complies with (b) to (f).

(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 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 requiring ice protection systems to be operable, the effect of their use on the net flight path data shall be taken into account. If the navigational accuracy does not meet at least RNP5, the operator shall increase the width margin given above 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 more than 90 minutes, at the all-engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met.

(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, if a safe procedure is used.

(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 to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at least 1 500 ft directly over the landing area and thereafter to fly level for 15 minutes.

CAT.POL.A.225 Landing - destination and alternate aerodromes

(a) The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) shall not exceed the maximum landing mass specified for the altitude and the ambient temperature expected for the estimated time of landing at the destination aerodrome and alternate aerodrome.

CAT.POL.A.230 Landing - dry runways

(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 at any alternate aerodrome shall allow a full stop landing from 50 ft above the threshold:

(1) for turbo-jet powered aeroplanes, within 60 % of the landing distance available (LDA); and

(2) for turbo-propeller powered aeroplanes, within 70 % of the LDA.

(b) For steep approach operations, the operator shall use the landing distance data factored in accordance with (a), based on a screen height of less than 60 ft, but not less than 35 ft, and shall comply with CAT.POL.A.245.

(c) For short landing operations, the operator shall use the landing distance data factored in accordance with (a) and shall comply with CAT.POL.A.250.

(d) 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; and

(3) the runway slope in the direction of landing if greater than ± 2 %.

(e) 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.

(f) If the operator is unable to comply with (e)(1) for a destination aerodrome having a single runway where a landing depends upon a specified wind component, the aeroplane may be dispatched if two alternate aerodromes are designated that permit full compliance with (a) to (e). Before commencing an approach to land at the destination aerodrome, the commander shall check that a landing can be made in full compliance with (a) to (d) and CAT.POL.A.225.

(g) If the operator is unable to comply with (e)(2) for the destination aerodrome, the aeroplane shall be only dispatched if an alternate aerodrome is designated that allows full compliance with (a) to (e).

CAT.POL.A.235 Landing - wet and contaminated runways

(a) When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be wet, the LDA shall be at least 115 % of the required landing distance, determined in accordance with CAT.POL.A.230.

(b) When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be contaminated, the LDA shall be at least the landing distance determined in accordance with (a), or at least 115 % of the landing distance determined in accordance with approved contaminated landing distance data or equivalent, whichever is greater. The operator shall specify in the operations manual if equivalent landing distance data are to be applied.

(c) A landing distance on a wet runway shorter than that required by (a), but not less than that required by CAT.POL.A.230(a), may be used if the AFM includes specific additional information about landing distances on wet runways.

(d) A landing distance on a specially prepared contaminated runway shorter than that required by (b), but not less than that required by CAT.POL.A.230(a), may be used if the AFM includes specific additional information about landing distances on contaminated runways.

(e) For (b), (c) and (d), the criteria of CAT.POL.A.230 shall be applied accordingly, except that CAT.POL.A.230(a) shall not be applied to (b) above.

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
(4) the flight crew has obtained adequate knowledge of the route to be flown and of the procedures to be used in accordance with ORO.OPS.FC.

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.

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

(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.

CHAPTER 3
Performance class B

CAT.POL.A.300 General

(a) The operator shall not operate a single-engined aeroplane:

(1) at night; or

(2) in IMC except under special VFR.

(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.

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

(4) not more than 50 % of the reported headwind component or not less than 150 % of the reported tailwind component.

(e) The requirements in (a)(3), (a)(4), (a)(5), (b)(2) and (c)(2) shall not be applicable to VFR operations by day.

CAT.POL.A.315 En-route - multi-engined aeroplanes

(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 %.

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.

(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 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 %.

CAT.POL.A.325 Landing - destination and alternate aerodromes

The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) shall not exceed the maximum landing mass specified for the altitude and the ambient temperature expected at the estimated time of landing at the destination aerodrome and alternate aerodrome.

CAT.POL.A.330 Landing - dry runways

(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 at 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 runway surface condition and the type of runway surface; and

(4) the runway slope in the direction of landing.

(b) For steep approach operations, the operator shall use landing distance data factored in accordance with (a) based on a screen height of less than 60 ft, but not less than 35 ft, and comply with CAT.POL.A.345.

(c) For short landing operations, the operator shall use landing distance data factored in accordance with (a) and comply with CAT.POL.A.350.

(d) For dispatching the aeroplane in accordance with (a) to (c), 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.

(e) If the operator is unable to comply with (d)(2) for the destination aerodrome, the aeroplane shall only be dispatched if an alternate aerodrome is designated that permits full compliance with (a) to (d).

CAT.POL.A.335 Landing - wet and contaminated runways

(a) When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be wet, the LDA shall be equal to or exceed the required landing distance, determined in accordance with CAT.POL.A.330, multiplied by a factor of 1,15.

(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.

(c) A landing distance on a wet runway shorter than that required by (a), but not less than that required by CAT.POL.A.330(a), may be used if the AFM includes specific additional information about landing distances on wet runways.

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 VMC (minimum control speed on or near ground) and 1,2 VS1 (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.

(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

(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;
(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.

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 V1 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;

(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 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.

(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.

(d) The width margins of (a) shall be increased to 18,5 km (10 NM) if the navigational accuracy does not meet at least RNP5.

(e) Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.

CAT.POL.A.420 En-route - aeroplanes with three or more engines, two engines inoperative

(a) At no point along the intended track shall an aeroplane having three or more engines be more than 90 minutes, at the all-engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met, unless it complies with (b) to (e).

(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) 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 at the expected landing mass are met.

(c) The two engines are assumed to fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes, at the all-engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met.

(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 to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at an altitude of a least 450 m (1 500 ft) directly over the landing area and thereafter to fly level for 15 minutes.

(e) The available rate of climb of the aeroplane shall be taken to be 150 ft per minute less than that specified.

(f) The width margins of (b) shall be increased to 18,5 km (10 NM) if the navigational accuracy does not meet at least RNP5.

(g) Fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used.

CAT.POL.A.425 Landing - destination and alternate aerodromes

The landing mass of the aeroplane determined in accordance with CAT.POL.A.105(a) shall not exceed the maximum landing mass specified in the AFM for the altitude and, if accounted for in the AFM, the ambient temperature expected for the estimated time of landing at the destination aerodrome and alternate aerodrome.

CAT.POL.A.430 Landing - dry runways

(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

(4) the slope of the runway in the direction of landing.

(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

(a) When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be wet, the LDA shall be equal to or exceed the required landing distance, determined in accordance with CAT.POL.A.430, multiplied by a factor of 1,15.

(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

(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:

(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;

(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.

(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

(a) The mass of the helicopter and flight path at all points along the route, with the critical engine inoperative and the meteorological conditions expected for the flight, shall permit compliance with (1), (2) or (3):

(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 terrain and obstacles along the route within 9,3 km (5 NM) on either side of the intended track.

(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 CAT.POL.H.220. The flight path clears vertically, by at least 300 m (1 000 ft) or 600 m (2 000 ft) in areas of mountainous terrain, all terrain and obstacles along the route within 9,3 km (5 NM) on either side of the intended track. Drift-down techniques may be used.

(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 CAT.POL.H.220, without flying at any time below the appropriate minimum flight altitude. Obstacles within 900 m on either side of the route need to be considered.

(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.

(c) The width margins of (a)(1) and (a)(2) shall be increased to 18,5 km (10 NM) if the navigational accuracy cannot be met for 95 % of the total flight time.

CAT.POL.H.220 Landing

(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.

(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:

(1) the PIS was in use before 1 July 2002;

(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 (VTOSS) 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.

(c) The operations manual shall contain for each PIS: a diagram or annotated photograph, showing the main aspects, the dimensions, the non-conformance with the requirements performance class 1, the main hazards and the contingency plan should an incident occur.

CHAPTER 3
Performance class 2

CAT.POL.H.300 General

Helicopters operated in performance class 2 shall be certified in category A or equivalent as determined by the 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

(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.

(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 Vy (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.

(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.

(b) To obtain and maintain such approval the operator shall:

(1) only conduct these operations in the areas and under the conditions specified in the approval;

(2) not conduct these operations under a HEMS approval;

(3) substantiate that helicopter limitations, or other justifiable considerations, preclude the use of the appropriate performance criteria; and

(4) be approved in accordance with CAT.POL.H.305(b).

(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.

(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;

(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.

(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.

(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.

(e) The operator shall obtain approval by the competent authority if he/she wishes to use an onboard integrated mass and balance computer system or a stand-alone computerised mass and balance system as a primary source for dispatch. The operator shall demonstrate the accuracy and reliability of that system.

SECTION 4
Sailplanes

CAT.POL.S.100 Operating limitations

(a) During any phase of operation, the loading, the mass and the centre of gravity (CG) position of the sailplane shall comply with any limitation specified in the AFM or the operations manual (OM) 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 sailplane.

CAT.POL.S.105 Weighing

(a) The operator shall ensure that the mass and the CG of the sailplane have been established by actual weighing prior to initial entry into service. The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented. Such information shall be made available to the commander. The sailplane 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 sailplane or in accordance with Regulation (EC) No 2042/2003 as applicable.

CAT.POL.S.110 Performance

The commander shall only operate the sailplane 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.

SECTION 5
Balloons

CAT.POL.B.100 Operating limitations

(a) During any phase of operation, the loading and the mass of the balloon shall comply with any limitation specified in the AFM or the operations manual (OM) 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 balloon.

CAT.POL.B.105 Weighing

(a) The operator shall ensure that the mass of the balloon has been established by actual weighing prior to initial entry into service. The accumulated effects of modifications and

repairs on the mass shall be accounted for and properly documented. Such information shall be made available to the commander. The balloon shall be reweighed if the effect of modifications on the mass is not accurately known.

(b) The weighing shall be accomplished by the manufacturer of the balloon or in accordance with Regulation (EC) No 2042/2003 as applicable.

CAT.POL.B.110 System for determining the mass

(a) The operator of a balloon shall establish a system specifying how the following items are accurately determined for each flight so to enable the commander to verify that the limitations of the AFM are complied with:

(1) balloon empty mass;

(2) mass of the traffic load;

(3) mass of the fuel or ballast load;

(4) take-off mass;

(5) loading of the balloon performed under the supervision of the commander or qualified personnel;

(6) preparation and disposition of all documentation.

(b) The mass computation based on electronic calculations shall be replicable by the commander.

(c) The mass documentation shall be prepared prior to each flight and documented in an operational flight plan.

CAT.POL.B.115 Performance

The commander shall only operate the balloon 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, EQUIPMENT

SECTION 1
Aeroplanes

CAT.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 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.

(b) Instruments and equipment not required by this Subpart that do not need to be approved in accordance with the applicable airworthiness requirements, but are carried on a flight, shall comply with the following:

(1) the information provided by these instruments, equipment or accessories shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008 or CAT.IDE.A.330, CAT.IDE.A.335, CAT.IDE.A.340 and CAT.IDE.A.345; and

(2) the instruments and equipment shall not affect the airworthiness of the aeroplane, even in the case of failures or malfunction.

(c) If equipment is to be used by one flight crew member at his/her station during flight, it shall be readily operable from that station. When a single item of equipment is required to be operated by more than one flight crew member it shall be installed so that the equipment is readily operable from any station at which the equipment is required to be operated.

(d) Those instruments that are used by any flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision that he/she normally assumes when looking forward along the flight path.

(e) All required emergency equipment shall be easily accessible for immediate use.

CAT.IDE.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

(b) the operator is approved by the competent authority to operate the aeroplane within the constraints of the master minimum equipment list (MMEL).

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;
(iii) Pressure altitude;
(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:
(1) Pressure altitude;
(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.

(b) Two means of measuring and displaying pressure altitude.

(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:

(1) Pressure altitude;

(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.

(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.

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;

(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.

(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:

(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 2021; or

(2) the preceding 2 hours in all other cases.

(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.

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;

(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.

(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.

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.

(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.

(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.

(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.A.185(d) and (e).

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);

(3) a seat belt with upper torso restraint system on each passenger seat and restraining belts on each berth in the case of aeroplanes with an MCTOM of less than 5 700 kg and with an MOPSC of less than nine, after 8 April 2015;

(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.

(b) A seat belt with upper torso restraint system shall:

(1) have a single point release;

(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.

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 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
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.

(b) The oxygen supply referred to in (a) shall be calculated using an average flow rate of at least 3 litres standard temperature pressure dry (STPD)/minute/person. This oxygen supply 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.

(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.

(d) The first-aid oxygen equipment shall be capable of generating a mass flow to each user of at least 4 litres STPD per minute.

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) 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.

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 ar 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 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 number in Table 1 refer to passengers actually carried on board, including persons younger than 24 months.

CAT.IDE.A.240 Supplemental oxygen - non-pressurised aeroplanes

Non-pressurised aeroplanes operated at pressure altitudes above 10 000 ft shall be equipped with supplemental oxygen equipment capable of storing and dispensing the oxygen supplies in accordance with Table 1.

Table 1

Oxygen minimum requirements for non-pressurised aeroplanes

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 altituds 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 number 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.

(d) Aeroplanes shall be equipped with an additional portable PBE installed adjacent to the hand fire extinguisher referred to in CAT.IDE.A.250, or adjacent to the entrance of the cargo compartment, in case the hand fire extinguisher is installed in a cargo compartment.

(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.

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

MOPS	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.

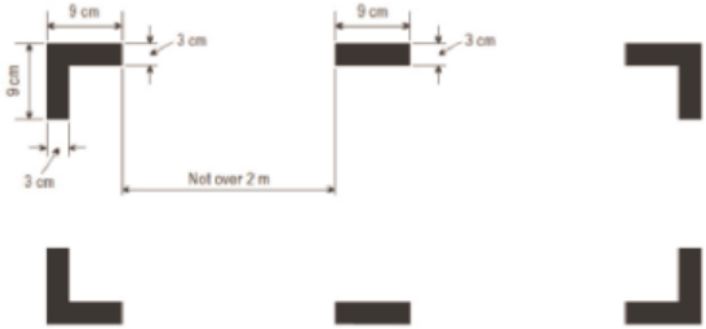
(b) In the case of aeroplanes with an MOPSC of more than 200, an additional crash axe or crowbar shall be installed in or near the rearmost galley area.

(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.

Figure 1



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) 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.

(c) In the case of aeroplanes with an MOPSC of 19 or less and type certified on the basis of the Agency's airworthiness codes, the emergency lighting system, referred to in (a) shall include the equipment referred to in (b)(1) to (3).

(d) In the case of aeroplanes with an MOPSC of 19 or less that are not certified on the basis of the Agency's airworthiness codes, the emergency lighting system, referred to in (a) shall include the equipment referred to in (b)(1).

(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)

(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.

(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.

(c) An ELT of any type shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

CAT.IDE.A.285 Flight over water

(a) The following aeroplanes shall be equipped with a life-jacket for each person on board or equivalent flotation device for each person on board younger than 24 months, stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided:

(1) landplanes operated over water at a distance of more than 50 NM from the shore or taking off or landing at an aerodrome where the take-off or approach path is so disposed over water that there would be a likelihood of a ditching; and

(2) seaplanes operated over water.

(b) Each life-jacket or equivalent individual flotation device shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

(c) Seaplanes operated over water shall be equipped with:

(1) a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the seaplane on water, appropriate to its size, weight and handling characteristics; and

(2) equipment for making the sound signals as prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

(d) Aeroplanes operated over water at a distance away from land suitable for making an emergency landing, greater than that corresponding to:

(1) 120 minutes at cruising speed or 400 NM, whichever is the lesser, in the case of aeroplanes capable of continuing the flight to an aerodrome with the critical engine(s) becoming inoperative at any point along the route or planned diversions; or

(2) for all other aeroplanes, 30 minutes at cruising speed or 100 NM, whichever is the lesser,

shall be equipped with the equipment specified in (e).

(e) Aeroplanes complying with (d) shall carry the following equipment:

(1) life-rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in an emergency, and being of sufficient size to accommodate all the survivors in the event of a loss of one raft of the largest rated capacity;

(2) a survivor locator light in each life-raft;

(3) life-saving equipment to provide the means for sustaining life, as appropriate for the flight to be undertaken; and

(4) at least two survival ELTs (ELT(S)).

CAT.IDE.A.305 Survival equipment

(a) Aeroplanes operated over areas in which search and rescue would be especially difficult shall be equipped with:

(1) signalling equipment to make the distress signals;

(2) at least one ELT(S); and

(3) additional survival equipment for the route to be flown taking account of the number of persons on board.

(b) The additional survival equipment specified in (a)(3) does not need to be carried when the aeroplane:

(1) remains within a distance from an area where search and rescue is not especially difficult corresponding to:

(i) 120 minutes at one-engine-inoperative (OEI) cruising speed for aeroplanes capable of continuing the flight to an aerodrome with the critical engine(s) becoming inoperative at any point along the route or planned diversion routes; or

(ii) 30 minutes at cruising speed for all other aeroplanes;

(2) remains within a distance no greater than that corresponding to 90 minutes at cruising speed from an area suitable for making an emergency landing, for aeroplanes certified in accordance with the applicable airworthiness standard.

CAT.IDE.A.325 Headset

(a) Aeroplanes shall be equipped with a headset with a boom or throat microphone or equivalent for each flight crew member at their assigned station in the flight crew compartment.

(b) Aeroplanes operated under IFR or at night shall be equipped with a transmit button on the manual pitch and roll control for each required flight crew member.

CAT.IDE.A.330 Radio communication equipment

(a) Aeroplanes shall be equipped with the radio communication equipment required by the applicable airspace requirements.

(b) The radio communication equipment shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

CAT.IDE.A.335 Audio selector panel

Aeroplanes operated under IFR shall be equipped with an audio selector panel operable from each required flight crew member station.

CAT.IDE.A.340 Radio equipment for operations under VFR over routes navigated by reference to visual landmarks

Aeroplanes operated under VFR over routes navigated by reference to visual landmarks shall be equipped with radio communication equipment necessary under normal radio propagation conditions to fulfil the following:

(a) communicate with appropriate ground stations;

(b) communicate with appropriate ATC stations from any point in controlled airspace within which flights are intended; and

(c) receive meteorological information.

CAT.IDE.A.345 Communication and navigation 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 and navigation equipment in accordance with the applicable airspace requirements.

(b) Radio communication equipment shall include at least two independent radio communication systems necessary under normal operating conditions to communicate with an appropriate ground station from any point on the route, including diversions.

(c) Notwithstanding (b), aeroplanes operated for short haul operations in the North Atlantic minimum navigation performance specifications (NAT MNPS) airspace and not crossing the North Atlantic shall be equipped with at least one long range communication system, in case alternative communication procedures are published for the airspace concerned.

(d) Aeroplanes shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with the flight plan.

(e) Aeroplanes operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodrome.

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.

CAT.IDE.A.355 Electronic navigation data management

(a) The operator shall only use electronic navigation data products that support a navigation application meeting standards of integrity that are adequate for the intended use of the data.

(b) When the electronic navigation data products support a navigation application needed for an operation for which Annex V (Part-SPA) requires an approval, the operator shall demonstrate to the competent authority that the process applied and the delivered products meet standards of integrity that are adequate for the intended use of the data.

(c) The operator shall continuously monitor the integrity of both the process and the products, either directly or by monitoring the compliance of third party providers.

(d) The operator shall ensure the timely distribution and insertion of current and unaltered electronic navigation data to all aeroplanes that require it.

SECTION 2

Helicopters

CAT.IDE.H.100 Instruments and equipment - general

(a) Instruments and equipment required by this Subpart shall be approved in accordance with the applicable airworthiness requirements, except for the following items:

(1) Spare fuses;

(2) Independent portable lights;

(3) An accurate time piece;

(4) Chart holder;

(5) First-aid kit;

(6) Megaphones;

(7) Survival and signalling equipment;

(8) Sea anchors and equipment for mooring; and

(9) Child restraint devices.

(b) Instruments and equipment not required by this Subpart that do not need to be approved in accordance with the applicable airworthiness requirements but are carried on a flight, shall comply with the following:

(1) the information provided by these instruments, equipment or accessories shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008 or CAT.IDE.H.330, CAT.IDE.H.335, CAT.IDE.H.340 and CAT.IDE.H.345; and

(2) the instruments and equipment shall not affect the airworthiness of the helicopter, even in the case of failures or malfunction.

(c) If equipment is to be used by one flight crew member at his/her station during flight, it shall be readily operable from that station. When a single item of equipment is required to be operated by more than one flight crew member it shall be installed so that the equipment is readily operable from any station at which the equipment is required to be operated.

(d) Those instruments that are used by any flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his/her station, with the minimum practicable deviation from the position and line of vision that he/she normally assumes when looking forward along the flight path.

(e) All required emergency equipment shall be easily accessible for immediate use.

CAT.IDE.H.105 Minimum equipment for flight

A flight shall not be commenced when any of the helicopter's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

(a) the helicopter is operated in accordance with the operator's MEL; or

(b) the operator is approved by the competent authority to operate the helicopter within the constraints of the MMEL.

CAT.IDE.H.115 Operating lights

(a) Helicopters operated under VFR by day shall be equipped with an anti-collision light system.

(b) Helicopters operated at night or under IFR shall, in addition to (a), be equipped with:

(1) lighting supplied from the helicopter's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the helicopter;

(2) lighting supplied from the helicopter's electrical system to provide illumination in all passenger compartments;

(3) an independent portable light for each required crew member readily accessible to crew members when seated at their designated stations;

(4) navigation/position lights;

(5) two landing lights of which at least one is adjustable in flight so as to illuminate the ground in front of and below the helicopter and the ground on either side of the helicopter; and

(6) lights to conform with the International Regulations for Preventing Collisions at Sea if the helicopter is amphibious.

CAT.IDE.H.125 Operations under VFR by day - flight and navigational instruments and associated equipment

(a) Helicopters operated under VFR by day shall be equipped with the following equipment, available at the pilot's station:

(1) A means of measuring and displaying:

(i) Magnetic heading;

(ii) Time in hours, minutes, and seconds;

(iii) Pressure altitude;

(iv) Indicated airspeed;

(v) Vertical speed;

(vi) Slip; and

(vii) Outside air temperature.

(2) A means of indicating when the supply of power to the required flight instruments is not adequate.

(b) Whenever two pilots are required for the operation, an additional separate means of displaying the following shall be available for the second pilot:

(1) Pressure altitude;

(2) Indicated airspeed;

(3) Vertical speed; and

(4) Slip.

(c) Helicopters with an MCTOM of more than 3 175 kg or any helicopter operating over water when out of sight of land or when the visibility is less than 1 500 m, shall be equipped with a means of measuring and displaying:

(1) Attitude; and

(2) Heading.

(d) A means for preventing malfunction of the airspeed indicating systems due to condensation or icing shall be available for helicopters with an MCTOM of more than 3 175 kg or an MOPSC of more than nine.

CAT.IDE.H.130 Operations under IFR or at night - flight and navigational instruments and associated equipment

Helicopters operated under VFR at night or under IFR shall be equipped with the following equipment, available at the pilot's station:

(a) A means of measuring and displaying:

(1) Magnetic heading;

(2) Time in hours, minutes and seconds;

(3) Indicated airspeed;

(4) Vertical speed;

(5) Slip;

(6) Attitude;

(7) Stabilised heading; and

(8) Outside air temperature.

(b) Two means of measuring and displaying pressure altitude. For single-pilot operations under VFR at night one pressure altimeter may be substituted by a radio altimeter.

(c) A means of indicating when the supply of power to the required flight instruments is not adequate.

(d) A means of preventing malfunction of the airspeed indicating systems required in (a)(3) and (h)(2) due to either condensation or icing.

(e) A means of annunciating to the flight crew the failure of the means required in (d) for helicopters:

(1) issued with an individual CofA on or after 1 August 1999; or

(2) issued with an individual CofA before 1 August 1999 with an MCTOM of more than 3 175 kg, and with an MOPSC of more than nine.

(f) A standby means of measuring and displaying attitude that:

(1) is powered continuously during normal operation and, in the event of a total failure of the normal electrical generating system, is powered from a source independent of the normal electrical generating system;

(2) operates independently of any other means of measuring and displaying attitude;

(3) is capable of being used from either pilot's station;

(4) is operative automatically after total failure of the normal electrical generating system;

(5) provides reliable operation for a minimum of 30 minutes or the time required to fly to a suitable alternate landing site when operating over hostile terrain or offshore, whichever is greater, after total failure of the normal electrical generating system, taking into account other loads on the emergency power supply and operational procedures;

(6) is appropriately illuminated during all phases of operation; and

(7) is associated with a means to alert the flight crew when operating under its dedicated power supply, including when operated by emergency power.

(g) An alternate source of static pressure for the means of measuring altitude, airspeed and vertical speed.

(h) Whenever two pilots are required for the operation, a separate means for displaying for the second pilot:

(1) Pressure altitude;

(2) Indicated airspeed;

(3) Vertical speed;

(4) Slip;

(5) Attitude; and

(6) Stabilised heading.

(i) For IFR operations, a chart holder in an easily readable position that can be illuminated for night operations.

CAT.IDE.H.135 Additional equipment for single-pilot operation under IFR

Helicopters operated under IFR with a single-pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

CAT.IDE.H.145 Radio altimeters

(a) Helicopters on flights over water shall be equipped with a radio altimeter capable of emitting an audio warning below a pre-set height and a visual warning at a height selectable by the pilot, when operating:

(1) out of sight of the land;

(2) in a visibility of less than 1 500 m;

(3) at night; or
(4) at a distance from land corresponding to more than three minutes at normal cruising speed.

CAT.IDE.H.160 Airborne weather detecting equipment

Helicopters with an MOPSC of more than nine and operated under IFR or at night shall be equipped with airborne weather detecting equipment when current weather reports indicate that thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather detecting equipment, may be expected to exist along the route to be flown.

CAT.IDE.H.165 Additional equipment for operations in icing conditions at night

(a) Helicopters operated in expected or actual icing conditions at night shall be equipped with a means to illuminate or detect the formation of ice.

(b) The means to illuminate the formation of ice shall not cause glare or reflection that would handicap crew members in the performance of their duties.

CAT.IDE.H.170 Flight crew interphone system

Helicopters operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

CAT.IDE.H.175 Crew member interphone system

Helicopters shall be equipped with a crew member interphone system when carrying a crew member other than a flight crew member.

CAT.IDE.H.180 Public address system

(a) Helicopters with an MOPSC of more than nine shall be equipped with a public address system, with the exception of (b).

(b) Notwithstanding (a) helicopters with an MOPSC of more than nine and less than 20 are exempted from having a public address system, if:

(1) the helicopter is designed without a bulkhead between pilot and passengers; and
(2) the operator is able to demonstrate that when in flight, the pilot's voice is audible and intelligible at all passengers' seats.

CAT.IDE.H.185 Cockpit voice recorder

(a) The following helicopter types shall be equipped with a cockpit voice recorder (CVR):
(1) all helicopters with an MCTOM of more than 7 000 kg; and
(2) helicopters with an MCTOM of more than 3 175 kg and first issued with an individual CofA on or after 1 January 1987.
(b) The CVR shall be capable of retaining the data recorded during at least:
(1) the preceding two hours for helicopters referred to in (a)(1) and (a)(2), when first issued with an individual CofA on or after 1 January 2016;
(2) the preceding one hour for helicopters referred to in (a)(1), when first issued with an individual CofA on or after 1 August 1999 and before 1 January 2016;

(3) the preceding 30 minutes for helicopters referred to in (a)(1), when first issued with an individual CofA before 1 August 1999; or

(4) the preceding 30 minutes for helicopters referred to in (a)(2), when first issued with an individual CofA before 1 January 2016.

(c) 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.

(d) 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.

(e) In addition to (d), 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.

(f) The CVR shall have a device to assist in locating it in water.

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.

(d) The FDR shall automatically start to record the data prior to the helicopter being capable of moving under its own power and shall stop automatically after the helicopter is incapable of moving under its own power.

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter.

CAT.IDE.H.195 Data link recording

(a) Helicopters first issued with an individual CofA on or after 8 April 2014 that have the capability to operate data link communications and are required to be equipped with a CVR, shall record on a recorder, where applicable:

(1) data link communication messages related to ATS communications to and from the helicopter, including messages applying to the following applications:

(i) data link initiation;

(ii) controller-pilot communication;

(iii) addressed surveillance;

(iv) flight information;

(v) as far as is practicable, given the architecture of the system, aircraft broadcast surveillance;

(vi) as far as is practicable, given the architecture of the system, aircraft operational control data;

(vii) as far as is practicable, given the architecture of the system, graphics;

(2) information that enables correlation to any associated records related to data link communications and stored separately from the helicopter; and

(3) information on the time and priority of data link communications messages, taking into account the system's architecture.

(b) The recorder shall use a digital method of recording and storing data and information and a method of readily retrieving that data shall be available. The recording method shall allow the data to match the data recorded on the ground.

(c) The recorder shall be capable of retaining data recorded for at least the same duration as set out for CVRs in CAT.IDE.H.185.

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.

(e) The requirements applicable to the start and stop logic of the recorder are the same as the requirements applicable to the start and stop logic of the CVR contained in CAT.IDE.H.185(d) and (e).

CAT.IDE.H.200 Flight data and cockpit voice combination recorder

Compliance with CVR and FDR requirements may be achieved by the carriage of one combination recorder.

CAT.IDE.H.205 Seats, seat safety belts, restraint systems and child restraint devices

(a) Helicopters shall be equipped with:

(1) a seat or berth for each person on board who is aged 24 months or more;

(2) a seat belt on each passenger seat and restraining belts for each berth;

(3) for helicopters first issued with an individual CofA on or after 1 August 1999, a safety belt with upper torso restraint system for use on each passenger seat for each passenger aged 24 months or more;

(4) a child restraint device (CRD) for each person on board younger than 24 months;

(5) a seat belt with upper torso restraint system incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration on each flight crew seat;

(6) a seat belt with upper torso restraint system on each seat for the minimum required cabin crew.

(b) A seat belt with upper torso restraint system shall:

(1) have a single point release; and

(2) on flight crew seats and on the seats for the minimum required cabin crew include two shoulder straps and a seat belt that may be used independently.

CAT.IDE.H.210 Fasten seat belt and no smoking signs

Helicopters in which not all passenger seats are visible from the flight crew seat(s) shall be equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

CAT.IDE.H.220 First-aid kits

(a) Helicopters shall be equipped with at least one first-aid kit.

(b) First-aid kits shall be:

(1) readily accessible for use;

(2) kept up to date.

CAT.IDE.H.240 Supplemental oxygen - non-pressurised helicopters

Non-pressurised helicopters operated at pressure altitudes above 10 000 ft shall be equipped with supplemental oxygen equipment capable of storing and dispensing the oxygen supplies in accordance with the following tables.

CAT.IDE.H.240 Supplemental oxygen - non-pressurised helicopters

Non-pressurised helicopters operated at pressure altitudes above 10 000 ft shall be equipped with supplemental oxygen equipment capable of storing and dispensing the oxygen supplies in accordance with the following tables.

Table 1

Oxygen minimum requirements for complex non-pressurised helicopters

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 passenger actuallty 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 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 esceeding 13 000 ft.

(*) Passenger numbers in Table 2 refer to passenger actuallty carried on board including persons younger than 24 months.

CAT.IDE.H.250 Hand fire extinguishers

(a) Helicopters shall be equipped with at least one hand fire extinguisher in the flight crew compartment.

(b) At least one hand fire extinguisher shall be located in, or readily accessible for use in, each galley not located on the main passenger compartment.

(c) At least one hand fire extinguisher shall be available for use in each cargo compartment that is accessible to crew members in flight.

(d) The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is intended to be used and to minimise the hazard of toxic gas concentration in compartments occupied by persons.

(e) The helicopter shall be equipped with at least a number of hand fire extinguishers in accordance with Table 1, conveniently located to provide adequate availability for use in each passenger compartment.

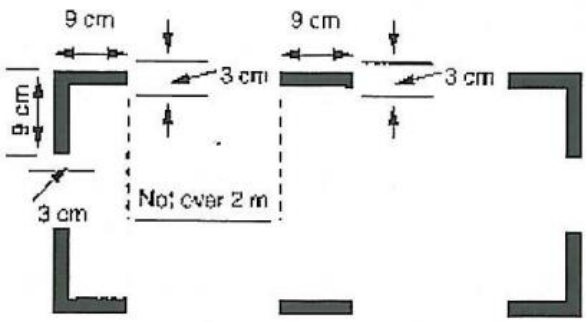
Table 1
Number of hand fire extinguishers

MOPSC	Number of extinguishers
7-30	1
31-60	2
61-200	3

CAT.IDE.H.260 Marking of break-in points

If areas of the helicopter's fuselage suitable for break-in by rescue crews in an emergency are marked, such areas shall be marked as shown in Figure 1.

Figure 1



CAT.IDE.H.270 Megaphones

Helicopters with an MOPSC of more than 19 shall be equipped with one portable battery-powered megaphone readily accessible for use by crew members during an emergency evacuation.

CAT.IDE.H.275 Emergency lighting and marking

(a) Helicopters with an MOPSC of more than 19 shall be equipped with:

(1) an emergency lighting system having an independent power supply to provide a source of general cabin illumination to facilitate the evacuation of the helicopter; and

(2) emergency exit marking and locating signs visible in daylight or in the dark.

(b) Helicopters shall be equipped with emergency exit markings visible in daylight or in the dark when operated:

(1) in performance class 1 or 2 on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;

(2) in performance class 3 on a flight over water at a distance corresponding to more than three minutes flying time at normal cruising speed.

CAT.IDE.H.280 Emergency locator transmitter (ELT)

(a) Helicopters shall be equipped with at least one automatic ELT.

(b) Helicopters operating in performance class 1 or 2 used in offshore operations on a flight over water in a hostile environment and at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed shall be equipped with an automatically deployable ELT (ELT(AD)).

(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.

CAT.IDE.H.295 Crew survival suits

Each crew member shall wear a survival suit when operating:

(a) in performance class 1 or 2 on a flight over water in support of offshore operations, at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, 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, or when the estimated rescue time exceeds the estimated survival time;

(b) in performance class 3 on a flight over water beyond autorotational distance or safe forced landing distance from land, when the weather report or forecasts available to the commander indicate that the sea temperature will be less than plus 10 °C during the flight.

CAT.IDE.H.300 Life-rafts, survival ELTs and survival equipment on extended overwater flights

Helicopters operated:

(a) in performance class 1 or 2 on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed;

(b) in performance class 3 on a flight over water at a distance corresponding to more than three minutes flying time at normal cruising speed, shall be equipped with:

(1) in the case of a helicopter carrying less than 12 persons, at least one life-raft with a rated capacity of not less than the maximum number of persons on board, stowed so as to facilitate its ready use in an emergency;

(2) in the case of a helicopter carrying more than 11 persons, at least two life-rafts, stowed so as to facilitate their ready use in an emergency, sufficient together to accommodate all persons capable of being carried on board and, if one is lost, the remaining life-raft(s) having, the overload capacity sufficient to accommodate all persons on the helicopter;

(3) at least one survival ELT (ELT(S)) for each required life-raft; and

(4) life-saving equipment, including means of sustaining life, as appropriate to the flight to be undertaken.

CAT.IDE.H.305 Survival equipment

Helicopters operated over areas in which search and rescue would be especially difficult shall be equipped with:

(a) signalling equipment to make distress signals;

(b) at least one ELT(S); and

(c) additional survival equipment for the route to be flown taking account of the number of persons on board.

CAT.IDE.H.310 Additional requirements for helicopters conducting offshore operations in a hostile sea area

Helicopters operated in offshore operations in a hostile sea area, at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, shall comply with the following:

(a) 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, or when the estimated rescue time exceeds the calculated survival time, or the flight is planned to be conducted at night, all persons on board shall wear a survival suit.

(b) All life-rafts carried in accordance with CAT.IDE.H.300 shall be installed so as to be usable in the sea conditions in which the helicopter's ditching, flotation and trim characteristics were evaluated in order to comply with the ditching requirements for certification.

(c) 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.

(d) All emergency exits, including crew emergency exits, and the means for opening them shall be conspicuously marked for the guidance of occupants using the exits in daylight or in the dark. Such markings shall be designed to remain visible if the helicopter is capsized and the cabin is submerged.

(e) All 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 occupants' egress in all sea conditions up to the maximum required to be evaluated for ditching and flotation.

(f) All doors, windows or other openings in the passenger compartment assessed as suitable for the purpose of underwater escape shall be equipped so as to be operable in an emergency.

(g) Life-jackets shall be worn at all times, unless the passenger or crew member is wearing an integrated survival suit that meets the combined requirement of the survival suit and life-jacket.

CAT.IDE.H.315 Helicopters certified for operating on water - miscellaneous equipment

Helicopters certified for operating on water shall be equipped with:

(a) a sea anchor and other equipment necessary to facilitate mooring, anchoring or manoeuvring the helicopter on water, appropriate to its size, weight and handling characteristics; and

(b) equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

CAT.IDE.H.320 All helicopters on flights over water - ditching

(a) Helicopters shall be designed for landing on water or certified for ditching in accordance with the relevant airworthiness code when operated in performance class 1 or 2 on a flight over water in a hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruise speed.

(b) Helicopters shall be designed for landing on water or certified for ditching in accordance the relevant airworthiness code or fitted with emergency flotation equipment when operated in:

(1) performance class 1 or 2 on a flight over water in a non-hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruise speed;

(2) performance class 2, when taking off or landing over water, except in the case of helicopter emergency medical services (HEMS) operations, where for the purpose of minimising exposure, the landing or take-off at a HEMS operating site located in a congested environment is conducted over water;

(3) performance class 3 on a flight over water beyond safe forced landing distance from land.

CAT.IDE.H.325 Headset

Whenever a radio communication and/or radio navigation system is required, helicopters shall be equipped with a headset with boom microphone or equivalent and a transmit button on the flight controls for each required pilot and/or crew member at his/her assigned station.

CAT.IDE.H.330 Radio communication equipment

(a) Helicopters shall be equipped with the radio communication equipment required by the applicable airspace requirements.

(b) The radio communication equipment shall provide for communication on the aeronautical emergency frequency 121,5 MHz.

CAT.IDE.H.335 Audio selector panel

Helicopters operated under IFR shall be equipped with an audio selector panel operable from each required flight crew member station.

CAT.IDE.H.340 Radio equipment for operations under VFR over routes navigated by reference to visual landmarks

Helicopters operated under VFR over routes that can be navigated by reference to visual landmarks shall be equipped with radio communication equipment necessary under normal radio propagation conditions to fulfil the following:

(a) communicate with appropriate ground stations;

(b) communicate with appropriate ATC stations from any point in controlled airspace within which flights are intended; and

(c) receive meteorological information.

CAT.IDE.H.345 Communication and navigation 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 and navigation equipment in accordance with the applicable airspace requirements.

(b) Radio communication equipment shall include at least two independent radio communication systems necessary under normal operating conditions to communicate with an appropriate ground station from any point on the route, including diversions.

(c) Helicopters shall have sufficient navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment shall allow safe navigation in accordance with the flight plan.

(d) Helicopters operated on flights in which it is intended to land in IMC shall be equipped with suitable equipment capable of providing guidance to a point from which a visual landing can be performed for each aerodrome at which it is intended to land in IMC and for any designated alternate aerodromes.

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.

SECTION 3
Sailplanes

CAT.IDE.S.100 Instruments and equipment - general

(a) Instruments and equipment required by this Subpart shall be approved in accordance with Regulation (EU) No 748/2012 if they are:

(1) used by the flight crew to control the flight path;

(2) used to comply with CAT.IDE.S.140;

(3) used to comply with CAT.IDE.S.145; or

(4) installed in the sailplane.

(b) The following items, when required by this Subpart, do not need an equipment approval:

(1) independent portable light;

(2) accurate time piece; and

(3) survival and signalling equipment.

(c) Instruments and equipment not required by this Subpart as well as any other equipment that is not required by other Annexes, but is carried on a flight, shall comply with the following:

(1) the information provided by these instruments or equipment shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008; and

(2) the instruments and equipment shall not affect the airworthiness of the sailplane, even in the case of failures or malfunction.

(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.

CAT.IDE.S.105 Minimum equipment for flight

A flight shall not be commenced when any of the sailplane instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless the sailplane is operated in accordance with the minimum equipment list (MEL).

CAT.IDE.S.110 Operations under VFR - flight and navigational instruments

(a) Sailplanes operated under VFR by day shall be equipped with a means of measuring and displaying:

(1) in the case of powered sailplanes, magnetic heading;

(2) time in hours, minutes and seconds;

(3) pressure altitude; and

(4) indicated airspeed.

(b) Sailplanes operating in conditions where the sailplane cannot be maintained in a desired attitude without reference to one or more additional instruments, shall be, in addition to (a), equipped with a means of measuring and displaying:

(1) vertical speed;

(2) attitude or turn and slip; and

(3) magnetic heading.

CAT.IDE.S.115 Cloud flying - flight and navigational instruments

Sailplanes performing cloud flying shall be equipped with a means of measuring and displaying:

(a) magnetic heading;

(b) time in hours, minutes and seconds;

(c) pressure altitude;

(d) indicated airspeed;

(e) vertical speed; and

(f) attitude or turn and slip.

CAT.IDE.S.120 Seats and restraint systems

(a) Sailplanes shall be equipped with:

(1) a seat for each person on board; and

(2) a seat belt with upper torso restraint system for each seat according to the AFM.

(b) A seat belt with upper torso restraint system shall have a single point release.

CAT.IDE.S.125 Supplemental oxygen

Sailplanes operated at pressure altitudes above 10 000 ft shall be equipped with oxygen storage and dispensing apparatus carrying enough breathing oxygen to supply:

(a) crew members for any period in excess of 30 minutes when the pressure altitude will be between 10 000 ft and 13 000 ft; and

(b) all crew members and passengers for any period that the pressure altitude will be above 13 000 ft.

CAT.IDE.S.130 Flight over water

The commander of a sailplane operated over water shall determine the risks to survival of the occupants of the sailplane in the event of a ditching, based on which he/she shall determine the carriage of:

(a) a life-jacket, or equivalent individual floatation device, for each person on board, that shall be worn or stowed in a position that is readily accessible from the seat of the person for whose use it is provided;

(b) an emergency locator transmitter (ELT) or a personal locator beacon (PLB), carried by a crew member or a passenger, capable of transmitting simultaneously on 121,5 MHz and 406 MHz; and

(c) equipment for making distress signals, when operating a flight:

(1) over water beyond gliding distance from the land; or

(2) where the take-off or approach path is so disposed over water that in the event of a mishap there would be a likelihood of ditching.

CAT.IDE.S.135 Survival equipment

Sailplanes operated over areas in which search and rescue would be especially difficult shall be equipped with such signalling devices and life-saving equipment as appropriate to the area overflown.

CAT.IDE.S.140 Radio communication equipment

(a) When required by the airspace being flown, sailplanes shall be equipped with radio communication equipment capable of conducting two-way communication with those aeronautical stations or 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.

CAT.IDE.S.145 Navigation equipment

Sailplanes shall be equipped with any navigation equipment necessary to proceed in accordance with:

(a) the ATS flight plan if applicable; and

(b) the applicable airspace requirements.

CAT.IDE.S.150 Transponder

When required by the airspace being flown, sailplanes shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

SECTION 4
Balloons

CAT.IDE.B.100 Instruments and equipment - general

(a) Instruments and equipment required by this Subpart shall be approved in accordance with Regulation (EC) No 748/2012 if they are:

(1) used by the flight crew to determine the flight path;

(2) used to comply with CAT.IDE.B.155; or

(3) installed in the balloon.

(b) The following items, when required by this Subpart, do not need an equipment approval:

(1) independent portable light;

(2) accurate time piece;

(3) first-aid kit;

(4) survival and signalling equipment;

(5) alternative source of ignition;

(6) fire blanket or fire resistant cover;

(7) drop line; and

(8) knife.

(c) Instruments and equipment not required by this Subpart as well as any other equipment that is not required by other Annexes, but is carried on a flight, shall comply with the following:

(1) the information provided by these instruments or equipment shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008; and

(2) the instruments and equipment shall not affect the airworthiness of the balloon, even in the case of failures or malfunction.

(d) Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is assigned.

(e) All required emergency equipment shall be easily accessible for immediate use.

CAT.IDE.B.105 Minimum equipment for flight

A flight shall not be commenced when any of the balloon instruments, items of equipment or functions, required for the intended flight, are inoperative, unless the balloon is operated in accordance with the minimum equipment list (MEL).

CAT.IDE.B.110 Operating lights

Balloons operated at night shall be equipped with:

(a) anti-collision lights;

(b) a means to provide adequate illumination for all instruments and equipment essential to the safe operation of the balloon; and

(c) an independent portable light.

CAT.IDE.B.115 Operations under VFR - flight and navigational instruments and associated equipment

Balloons operated under VFR shall be equipped with:

(a) a means of displaying drift direction; and

(b) a means of measuring and displaying:

(1) time in hours, minutes and seconds;

(2) vertical speed, if required by the AFM;

(3) pressure altitude, if required by the AFM, if required by air space requirements or when altitude needs to be controlled for the use of oxygen; and

(4) except for gas balloons, the pressure of each burning gas supply line.

CAT.IDE.B.120 Restraint systems

Balloons with a separate compartment for the commander shall be equipped with a restraint system for the commander.

CAT.IDE.B.125 First-aid kit

(a) Balloons shall be equipped with a first-aid kit.

(b) An additional first-aid kit shall be carried in the retrieve vehicle.

(c) The first-aid kit shall be:

(1) readily accessible for use; and

(2) kept up-to-date.

CAT.IDE.B.130 Supplemental oxygen

Balloons operated at pressure altitudes above 10 000 ft shall be equipped with oxygen storage and dispensing apparatus carrying enough breathing oxygen to supply:

(a) crew members for any period in excess of 30 minutes when the pressure altitude will be between 10 000 ft and 13 000 ft; and

(b) all crew members and passengers for any period that the pressure altitude will be above 13 000 ft.

CAT.IDE.B.135 Hand fire extinguishers

Hot-air balloons shall be equipped with at least one hand fire extinguisher as required by the applicable airworthiness code.

CAT.IDE.B.140 Flight over water

The commander of a balloon operated over water shall determine the risks to survival of the occupants of the balloon in the event of a ditching, based on which he/she shall determine the carriage of:

(a) 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 station of the person for whose use it is provided;

(b) an emergency locator transmitter (ELT) or a personal locator beacon (PLB), carried by a crew member or a passenger, capable of transmitting simultaneously on 121,5 MHz and 406 MHz; and

(c) equipment for making distress signals.

CAT.IDE.B.145 Survival equipment

Balloons operated over areas in which search and rescue would be especially difficult shall be equipped with such signalling devices and life-saving equipment as appropriate to the area overflown.

CAT.IDE.B.150 Miscellaneous equipment

(a) Balloons shall be equipped with protective gloves for each crew member.

(b) Hot-air balloons shall be equipped with:

(1) an alternative source of ignition;

(2) a means of measuring and indicating fuel quantity;

(3) a fire blanket or fire resistant cover; and

(4) a drop line of at least 25 m in length.

(c) Gas balloons shall be equipped with:

(1) a knife; and

(2) a drop line of at least 20 m in length made of natural fibre or electrostatic conductive material.

CAT.IDE.B.155 Radio communication equipment

(a) When required by airspace requirements, balloons shall be equipped with radio communication equipment at the pilot's station, capable of conducting two-way communication with those aeronautical stations or 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.

CAT.IDE.B.160 Transponder

When required by the airspace being flown, balloons shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

ANNEX V

SPECIFIC APPROVALS
[PART-SPA]

SUBPART A

GENERAL REQUIREMENTS

SPA.GEN.100 Competent authority

(a) The competent authority for issuing a specific approval shall be:

(1) for the commercial operator the authority of the Member State in which the operator has its principal place of business;

(2) for the non-commercial operator the authority of the State in which the operator is established or residing.

(b) Notwithstanding (a)(2), for the non-commercial operator using aircraft registered in a third country, the applicable requirements under this Annex for the approval of the following operations shall not apply if these approvals are issued by a third country State of Registry:

(1) Performance-based navigation (PBN);

(2) Minimum operational performance specifications (MNPS);

(3) Reduced vertical separation minima (RVSM) airspace.

SPA.GEN.105 Application for a specific approval

(a) The operator applying for the initial issue of a specific approval shall provide to 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;

(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.

(c) The operator shall retain records relating to (a) and (b) at least for the duration of the operation requiring a specific approval, or, if applicable, in accordance with Annex III (Part-ORO).

SPA.GEN.110 Privileges of an operator holding a specific approval

The scope of the activity that an operator is approved to conduct shall be documented and specified:

(a) for operators holding an air operator certificate (AOC) in the operations specifications to the AOC;

(b) for all other operators in the list of specific approvals.

SPA.GEN.115 Changes to a specific approval

When the conditions of a specific approval are affected by changes, the operator shall provide the relevant documentation to the competent authority and obtain prior approval for the operation.

SPA.GEN.120 Continued validity of a specific approval

Specific approvals shall be issued for an unlimited duration and shall remain valid subject to the operator remaining in compliance with the requirements associated with the specific approval and taking into account the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012.

SUBPART B

PERFORMANCE-BASED NAVIGATION (PBN) OPERATIONS

SPA.PBN.100 PBN operations

Aircraft shall only be operated in designated airspace, on routes or in accordance with procedures where performance-based navigation (PBN) specifications are established if the operator has been granted an approval by the competent authority to conduct such operations. No specific approval is required for operations in area navigation 5 (RNAV5 (basic area navigation, B-RNAV)) designated airspace.

SPA.PBN.105 PBN operational approval

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

(a) the relevant airworthiness approval of the RNAV system has been obtained;

(b) a training programme for the flight crew members involved in these operations has been established;

(c) operating procedures have been established specifying:

(1) the equipment to be carried, including its operating limitations and appropriate entries in the minimum equipment list (MEL);

(2) flight crew composition and experience requirements;

(3) normal procedures;

(4) contingency procedures;

(5) monitoring and incident reporting;

(6) electronic navigation data management.

SUBPART C

OPERATIONS WITH SPECIFIED MINIMUM NAVIGATION PERFORMANCE (MNPS)

SPA.MNPS.100 MNPS operations

Aircraft shall only be operated in designated minimum navigation performance specifications (MNPS) airspace in accordance with regional supplementary procedures, where

minimum navigation performance specifications are established, if the operator has been granted an approval by the competent authority to conduct such operations.

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)

SPA.RVSM.100 RVSM operations

Aircraft shall only be operated in designated airspace where a reduced vertical separation minimum of 300 m (1 000 ft) applies between flight level (FL) 290 and FL 410, inclusive, if the operator has been granted an approval by the competent authority to conduct such operations.

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) 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

LOW VISIBILITY OPERATIONS (LVO)

SPA.LVO.100 Low visibility operations

The operator shall only conduct the following low visibility operations (LVO) when approved by the competent authority:

(a) low visibility take-off (LVTO) operation;

(b) lower than standard category I (LTS CAT I) operation;

(c) standard category II (CAT II) operation;

(d) other than standard category II (OTS CAT II) operation;

(e) standard category III (CAT III) operation;

(f) approach operation utilising enhanced vision systems (EVS) for which an operational credit is applied to reduce the runway visual range (RVR) minima by no more than one third of the published RVR.

SPA.LVO.105 LVO approval

To obtain an LVO approval from the competent authority, the operator shall demonstrate compliance with the requirements of this Subpart.

SPA.LVO.110 General operating requirements

(a) The operator shall only conduct LTS CAT I operations if:

(1) each aircraft concerned is certified for operations to conduct CAT II operations; and

(2) the approach is flown:

(i) auto-coupled to an auto-land that needs to be approved for CAT IIIA operations; or

(ii) using an approved head-up display landing system (HUDLS) to at least 150 ft above the threshold.

(b) The operator shall only conduct CAT II, OTS CAT II or CAT III operations if:

(1) each aircraft concerned is certified for operations with a decision height (DH) below 200 ft, or no DH, and equipped in accordance with the applicable airworthiness requirements;

(2) a system for recording approach and/or automatic landing success and failure is established and maintained to monitor the overall safety of the operation;

(3) the DH is determined by means of a radio altimeter;

(4) the flight crew consists of at least two pilots;

(5) all height call-outs below 200 ft above the aerodrome threshold elevation are determined by a radio altimeter.

(c) The operator shall only conduct approach operations utilising an EVS if:

(1) the EVS is certified for the purpose of this Subpart and combines infra-red sensor image and flight information on the HUD;

(2) for operations with an RVR below 550 m, the flight crew consists of at least two pilots;

(3) for CAT I operations, natural visual reference to runway cues is attained at least at 100 ft above the aerodrome threshold elevation;

(4) for approach procedure with vertical guidance (APV) and non-precision approach (NPA) operations flown with CDFA technique, natural visual reference to runway cues is attained at least at 200 ft above the aerodrome threshold elevation and the following requirements are complied with:

(i) the approach is flown using an approved vertical flight path guidance mode;

(ii) the approach segment from final approach fix (FAF) to runway threshold is straight and the difference between the final approach course and the runway centreline is not greater than 2^{o};

(iii) the final approach path is published and not greater than $3{,}7^{o}$;

(iv) the maximum cross-wind components established during certification of the EVS are not exceeded.

SPA.LVO.115 Aerodrome related requirements

(a) The operator shall not use an aerodrome for LVOs below a visibility of 800 m unless:

(1) the aerodrome has been approved for such operations by the State of the aerodrome; and

(2) low visibility procedures (LVP) have been established.

(b) If the operator selects an aerodrome where the term LVP is not used, the operator shall ensure that there are equivalent procedures that adhere to the requirements of LVP at the aerodrome. This situation shall be clearly noted in the operations manual or procedures manual including guidance to the flight crew on how to determine that the equivalent LVP are in effect.

SPA.LVO.120 Flight crew training and qualifications

The operator shall ensure that, prior to conducting an LVO:

(a) each flight crew member:

(1) complies with the training and checking requirements prescribed in the operations manual, including flight simulation training device (FSTD) training, in operating to the limiting values of RVR/VIS (visibility) and DH specific to the operation and the aircraft type;

(2) is qualified in accordance with the standards prescribed in the operations manual;

(b) the training and checking is conducted in accordance with a detailed syllabus.

SPA.LVO.125 Operating procedures

(a) The operator shall establish procedures and instructions to be used for LVOs. These procedures and instructions shall be included in the operations manual or procedures manual and contain the duties of flight crew members during taxiing, take-off, approach, flare, landing, rollout and missed approach operations, as appropriate.

(b) Prior to commencing an LVO, the pilot-in-command/commander shall be satisfied that:

(1) the status of the visual and non-visual facilities is sufficient;

(2) appropriate LVPs are in force according to information received from air traffic services (ATS);

(3) flight crew members are properly qualified.

SPA.LVO.130 Minimum equipment

(a) The operator shall include the minimum equipment that has to be serviceable at the commencement of an LVO in accordance with the aircraft flight manual (AFM) or other approved document in the operations manual or procedures manual, as applicable.

(b) The pilot-in-command/commander shall be satisfied that the status of the aircraft and of the relevant airborne systems is appropriate for the specific operation to be conducted.

SUBPART F

EXTENDED RANGE OPERATIONS WITH TWO-ENGINED AEROPLANES (ETOPS)

SPA.ETOPS.100 ETOPS

In commercial air transport operations, two-engined aeroplanes shall only be operated beyond the threshold distance determined in accordance with CAT.OP.MPA.140 if the operator has been granted an ETOPS operational approval by the competent authority.

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	Planing minima
Precision approach	DA/H + 200 ft RVR/VIS + 800 m
Non-precision approach or Circling approach	MDA/H + 400 ft RVR/VIS + 1500 m

(*) VIS: visibility; MDA/H: minimum descent altitude/height

SUBPART G

TRANSPORT OF DANGEROUS GOODS

SPA.DG.100 Transport of dangerous goods

Except as provided for in Annex IV (Part-CAT), Annex VI (Part-NCC), Annex VII (Part-NCO) and Annex VIII (Part-SPO), the operator shall only transport dangerous goods by air if the operator has been approved by the competent authority.

SPA.DG.105 Approval to transport dangerous goods

To obtain the approval to transport dangerous goods, the operator shall in accordance with the technical instructions:

(a) establish and maintain a training programme for all personnel involved and demonstrate to the competent authority that adequate training has been given to all personnel;

(b) establish operating procedures to ensure the safe handling of dangerous goods at all stages of air transport, containing information and instructions on:

(1) the operator's policy to transport dangerous goods;

(2) the requirements for acceptance, handling, loading, stowage and segregation of dangerous goods;

(3) actions to take in the event of an aircraft accident or incident when dangerous goods are being carried;

(4) the response to emergency situations involving dangerous goods;

(5) the removal of any possible contamination;

(6) the duties of all personnel involved, especially with relevance to ground handling and aircraft handling;

(7) inspection for damage, leakage or contamination;

(8) dangerous goods accident and incident reporting.

SPA.DG.110 Dangerous goods information and documentation

The operator shall, in accordance with the technical instructions:

(a) provide written information to the pilot-in-command/commander:

(1) about dangerous goods to be carried on the aircraft;

(2) for use in responding to in-flight emergencies;

(b) use an acceptance checklist;

(c) ensure that dangerous goods are accompanied by the required dangerous goods transport document(s), as completed by the person offering dangerous goods for air transport, except when the information applicable to the dangerous goods is provided in electronic form;

(d) ensure that where a dangerous goods transport document is provided in written form, a copy of the document is retained on the ground where it will be possible to obtain access to it within a reasonable period until the goods have reached their final destination;

(e) ensure that a copy of the information to the pilot-in-command/commander is retained on the ground and that this copy, or the information contained in it, is readily accessible to the aerodromes of last departure and next scheduled arrival, until after the flight to which the information refers;

(f) retain the acceptance checklist, transport document and information to the pilot-in-command/commander for at least three months after completion of the flight;

(g) retain the training records of all personnel for at least three years.

SUBPART H

HELICOPTER OPERATIONS WITH NIGHT VISION IMAGING SYSTEMS

SPA.NVIS.100 Night vision imaging system (NVIS) operations

(a) Helicopters shall only be operated under VFR at night with the aid of NVIS if the operator has been approved by the competent authority.

(b) To obtain such approval by the competent authority, the operator shall:

(1) operate in commercial air transport (CAT) and hold a CAT AOC in accordance with Annex III (Part-ORO);

(2) demonstrate to the competent authority:

(i) compliance with the applicable requirements contained in this Subpart;

(ii) the successful integration of all elements of the NVIS.

SPA.NVIS.110 Equipment requirements for NVIS operations

(a) Before conducting NVIS operations each helicopter and all associated NVIS equipment shall have been issued with the relevant airworthiness approval in accordance with Regulation (EU) No 748/2012.

(b) *Radio altimeter*. The helicopter shall be equipped with a radio altimeter capable of emitting an audio warning below a pre-set height and an audio and visual warning at a height selectable by the pilot, instantly discernable during all phases of NVIS flight.

(c) *Aircraft NVIS compatible lighting*. To mitigate the reduced peripheral vision cues and the need to enhance situational awareness, the following shall be provided:

(1) NVIS-compatible instrument panel flood-lighting, if installed, that can illuminate all essential flight instruments;

(2) NVIS-compatible utility lights;

(3) portable NVIS compatible flashlight; and

(4) a means for removing or extinguishing internal NVIS non-compatible lights.

(d) *Additional NVIS equipment*. The following additional NVIS equipment shall be provided:

(1) a back-up or secondary power source for the night vision goggles (NVG);

(2) a helmet with the appropriate NVG attachment.

(e) All required NVGs on an NVIS flight shall be of the same type, generation and model.

(f) *Continuing airworthiness*

(1) Procedures for continuing airworthiness shall contain the information necessary for carrying out ongoing maintenance and inspections on NVIS equipment installed in the helicopter and shall cover, as a minimum:

(i) helicopter windscreens and transparencies;

(ii) NVIS lighting;

(iii) NVGs; and

(iv) any additional equipment that supports NVIS operations.

(2) Any subsequent modification or maintenance to the aircraft shall be in compliance with the NVIS airworthiness approval.

SPA.NVIS.120 NVIS operating minima

(a) Operations shall not be conducted below the VFR weather minima for the type of night operations being conducted.

(b) The operator shall establish the minimum transition height from where a change to/from aided flight may be continued.

SPA.NVIS.130 Crew requirements for NVIS operations

(a) *Selection*. The operator shall establish criteria for the selection of crew members for the NVIS task.

(b) *Experience*. The minimum experience for the commander shall not be less than 20 hours VFR at night as pilot-in-command/commander of a helicopter before commencing training.

(c) *Operational training*. All pilots shall have completed the operational training in accordance with the NVIS procedures contained in the operations manual.

(d) *Recency*. All pilots and NVIS technical crew members conducting NVIS operations shall have completed three NVIS flights in the last 90 days. Recency may be re-established on a training flight in the helicopter or an approved full flight simulator (FFS), which shall include the elements of (f)(1).

(e) *Crew composition*. The minimum crew shall be the greater of that specified:

(1) in the aircraft flight manual (AFM);

(2) for the underlying activity; or

(3) in the operational approval for the NVIS operations.

(f) Crew training and checking

(1) Training and checking shall be conducted in accordance with a detailed syllabus approved by the competent authority and included in the operations manual.

(2) Crew members

(i) Crew training programmes shall: improve knowledge of the NVIS working environment and equipment; improve crew coordination; and include measures to minimise the risks associated with entry into low visibility conditions and NVIS normal and emergency procedures.

(ii) The measures referred to in (f)(2)(i) shall be assessed during:

(A) night proficiency checks; and

(B) line checks.

SPA.NVIS.140 Information and documentation

The operator shall ensure that, as part of its risk analysis and management process, risks associated with the NVIS environment are minimised by specifying in the operations manual: selection, composition and training of crews; levels of equipment and dispatch criteria; and operating procedures and minima, such that normal and likely abnormal operations are described and adequately mitigated.

SUBPART I

HELICOPTER HOIST OPERATIONS

SPA.HHO.100 Helicopter hoist operations (HHO)

(a) Helicopters shall only be operated for the purpose of CAT hoist operations if the operator has been approved by the competent authority.

(b) To obtain such approval by the competent authority, the operator shall:

(1) operate in CAT and hold a CAT AOC in accordance with Annex III (Part-ORO);

(2) demonstrate to the competent authority compliance with the requirements contained in this Subpart.

SPA.HHO.110 Equipment requirements for HHO

(a) The installation of all helicopter hoist equipment, including any radio equipment to comply with SPA.HHO.115, and any subsequent modifications, shall have an airworthiness approval appropriate to the intended function. Ancillary equipment shall be designed and tested to the appropriate standard as required by the competent authority.

(b) Maintenance instructions for HHO equipment and systems shall be established by the operator in liaison with the manufacturer and included in the operator's helicopter maintenance programme as required by Regulation (EC) No 2042/2003.

SPA.HHO.115 HHO communication

Two-way radio communication shall be established with the organisation for which the HHO is being provided and, where possible, a means of communicating with ground personnel at the HHO site for:

(a) day and night offshore operations;

(b) night onshore operations, except for HHO at a helicopter emergency medical services (HEMS) operating site.

SPA.HHO.125 Performance requirements for HHO

Except for HHO at a HEMS operating site, HHO shall be capable of sustaining a critical engine failure with the remaining engine(s) at the appropriate power setting without hazard to the suspended person(s)/cargo, third parties or property.

SPA.HHO.130 Crew requirements for HHO

(a) *Selection*. The operator shall establish criteria for the selection of flight crew members for the HHO task, taking previous experience into account.

(b) *Experience*. The minimum experience level for the commander conducting HHO flights shall not be less than:

(1) Offshore:

(i) 1 000 hours as pilot-in-command/commander of helicopters, or 1 000 hours as co-pilot in HHO of which 200 hours is as pilot-in-command under supervision; and

(ii) 50 hoist cycles conducted offshore, of which 20 cycles shall be at night if night operations are being conducted, where a hoist cycle means one down-and-up cycle of the hoist hook.

(2) Onshore:

(i) 500 hours as pilot-in-command/commander of helicopters, or 500 hours as co-pilot in HHO of which 100 hours is as pilot-in-command under supervision;

(ii) 200 hours operating experience in helicopters gained in an operational environment similar to the intended operation; and

(iii) 50 hoist cycles, of which 20 cycles shall be at night if night operations are being conducted.

(c) *Operational training and experience*. Successful completion of training in accordance with the HHO procedures contained in the operations manual and relevant experience in the role and environment under which HHO are conducted.

(d) *Recency*. All pilots and HHO crew members conducting HHO shall have completed in the last 90 days:

(1) when operating by day: any combination of three day or night hoist cycles, each of which shall include a transition to and from the hover;

(2) when operating by night: three night hoist cycles, each of which shall include a transition to and from the hover.

(e) *Crew composition*. The minimum crew for day or night operations shall be as stated in the operations manual. The minimum crew will be dependent on the type of helicopter, the weather conditions, the type of task, and, in addition for offshore operations, the HHO site environment, the sea state and the movement of the vessel. In no case shall the minimum crew be less than one pilot and one HHO crew member.

(f) *Training and checking*

(1) Training and checking shall be conducted in accordance with a detailed syllabus approved by the competent authority and included in the operations manual.

(2) Crew members:

(i) Crew training programmes shall: improve knowledge of the HHO working environment and equipment; improve crew coordination; and include measures to minimise the risks associated with HHO normal and emergency procedures and static discharge.

(ii) The measures referred to in (f)(2)(i) shall be assessed during visual meteorological conditions (VMC) day proficiency checks, or VMC night proficiency checks when night HHO are undertaken by the operator.

SPA.HHO.135 HHO passenger briefing

Prior to any HHO flight, or series of flights, HHO passengers shall have been briefed and made aware of the dangers of static electricity discharge and other HHO considerations.

SPA.HHO.140 Information and documentation

(a) The operator shall ensure that, as part of its risk analysis and management process, risks associated with the HHO environment are minimised by specifying in the operations manual: selection, composition and training of crews; levels of equipment and dispatch criteria; and operating procedures and minima, such that normal and likely abnormal operations are described and adequately mitigated.

(b) Relevant extracts from the operations manual shall be available to the organisation for which the HHO is being provided.

SUBPART J

HELICOPTER EMERGENCY MEDICAL SERVICE OPERATIONS

SPA.HEMS.100 Helicopter emergency medical service (HEMS) operations

(a) Helicopters shall only be operated for the purpose of HEMS operations if the operator has been approved by the competent authority.

(b) To obtain such approval by the competent authority, the operator shall:

(1) operate in CAT and hold a CAT AOC in accordance with Annex III (Part-ORO);

(2) demonstrate to the competent authority compliance with the requirements contained in this Subpart.

SPA.HEMS.110 Equipment requirements for HEMS operations

The installation of all helicopter dedicated medical equipment and any subsequent modifications and, where appropriate, its operation shall be approved in accordance with Regulation (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.

SPA.HEMS.120 HEMS operating minima

(a) HEMS flights operated in performance class 1 and 2 shall comply with the weather minima in Table 1 for dispatch and en-route phase of the HEMS flight. In the event that during the en-route phase the weather conditions fall below the cloud base or visibility minima shown, helicopters certified for flights only under VMC shall abandon the flight or return to base. Helicopters equipped and certified for instrument meteorological conditions (IMC) operations may abandon the flight, return to base or convert in all respects to a flight conducted under instrument flight rules (IFR), provided the flight crew are suitably qualified.

Table 1
HEMS operating minima

2 PILOTS		1 PILOT	
DAY			
Ceiling	Visibility	Ceiling	Visibility
500 ft and above	As defined by the applicable airspace VFR minima	500 ft and above	As defined by the applicable airspace VFR minima
499-400 ft	1000 m (*)	499-400 ft	2 000 m
399-300 ft	2000 m	399-300 ft	3 000 m
NIGHT			
Cloud base	Visibility	Cloud base	Visibility
1 200 ft (**)	2 500 m	1 200 ft (**)	3 000 m

(*) During the en-route phase visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacles in time to avoid a collision.

(**) During the en-route phase, cloud base may be reduced to 1 000 ft for short periods.

(b) The weather minima for the dispatch and en-route phase of a HEMS flight operated in performance class 3 shall be a cloud ceiling of 600 ft and a visibility of 1 500 m. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is manoeuvred at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

SPA.HEMS.125 Performance requirements for HEMS operations

(a) Performance class 3 operations shall not be conducted over a hostile environment.

(b) Take-off and landing

(1) Helicopters conducting operations to/from a final approach and take-off area (FATO) at a hospital that is located in a congested hostile environment and that is used as a HEMS operating base shall be operated in accordance with performance class 1.

(2) Helicopters conducting operations to/from a FATO at a hospital that is located in a congested hostile environment and that is not a HEMS operating base shall be operated in accordance with performance class 1, except when the operator holds an approval in accordance with CAT.POL.H.225.

(3) Helicopters conducting operations to/from a HEMS operating site located in a hostile environment shall be operated in accordance with performance class 2 and be exempt from the approval required by CAT.POL.H.305(a), provided compliance is shown with CAT.POL.H.305(b)(2) and (b)(3).

(4) The HEMS operating site shall be big enough to provide adequate clearance from all obstructions. For night operations, the site shall be illuminated to enable the site and any obstructions to be identified.

SPA.HEMS.130 Crew requirements

(a) *Selection*. The operator shall establish criteria for the selection of flight crew members for the HEMS task, taking previous experience into account.

(b) *Experience*. The minimum experience level for the commander conducting HEMS flights shall not be less than:

(1) either:

(i) 1 000 hours as pilot-in-command/commander of aircraft of which 500 hours are as pilot-in-command/commander on helicopters; or

(ii) 1 000 hours as co-pilot in HEMS operations of which 500 hours are as pilot-in-command under supervision and 100 hours pilot-in-command/commander of helicopters;

(2) 500 hours' operating experience in helicopters, gained in an operational environment similar to the intended operation; and

(3) for pilots engaged in night operations, 20 hours of VMC at night as pilot-in-command/commander.

(c) *Operational training*. Successful completion of operational training in accordance with the HEMS procedures contained in the operations manual.

(d) *Recency*. All pilots conducting HEMS operations shall have completed a minimum of 30 minutes' flight by sole reference to instruments in a helicopter or in an FSTD within the last six months.

(e) *Crew composition*

(1) *Day flight*. The minimum crew by day shall be one pilot and one HEMS technical crew member.

(i) This may be reduced to one pilot only when:

(A) at a HEMS operating site the commander is required to fetch additional medical supplies. In such case the HEMS technical crew member may be left to give assistance to ill or injured persons while the commander undertakes this flight;

(B) after arriving at the HEMS operating site, the installation of the stretcher precludes the HEMS technical crew member from occupying the front seat; or

(C) the medical passenger requires the assistance of the HEMS technical crew member in flight.

(ii) In the cases described in (i), the operational minima shall be as defined by the applicable airspace requirements; the HEMS operating minima contained in Table 1 of SPA.HEMS.120 shall not be used.

(iii) Only in the case described in (i)(A) may the commander land at a HEMS operating site without the technical crew member assisting from the front seat.

(2) Night flight. The minimum crew by night shall be:

(i) two pilots; or

(ii) one pilot and one HEMS technical crew member in specific geographical areas defined by the operator in the operations manual taking into account the following:

(A) adequate ground reference;

(B) flight following system for the duration of the HEMS mission;

(C) reliability of weather reporting facilities;

(D) HEMS minimum equipment list;

(E) continuity of a crew concept;

(F) minimum crew qualification, initial and recurrent training;

(G) operating procedures, including crew coordination;

(H) weather minima; and

(I) additional considerations due to specific local conditions.

(f) Crew training and checking

(1) Training and checking shall be conducted in accordance with a detailed syllabus approved by the competent authority and included in the operations manual.

(2) Crew members

(i) Crew training programmes shall: improve knowledge of the HEMS working environment and equipment; improve crew coordination; and include measures to minimise the risks associated with en-route transit in low visibility conditions, selection of HEMS operating sites and approach and departure profiles.

(ii) The measures referred to in (f)(2)(i) shall be assessed during:

(A) VMC day proficiency checks, or VMC night proficiency checks when night HEMS operations are undertaken by the operator; and

(B) line checks.

SPA.HEMS.135 HEMS medical passenger and other personnel briefing

(a) *Medical passenger*. Prior to any HEMS flight, or series of flights, medical passengers shall have been briefed to ensure that they are familiar with the HEMS working environment and equipment, can operate on-board medical and emergency equipment and can take part in normal and emergency entry and exit procedures.

(b) *Ground emergency service personnel*. The operator shall take all reasonable measures to ensure that ground emergency service personnel are familiar with the HEMS

working environment and equipment and the risks associated with ground operations at a HEMS operating site.

(c) *Medical patient*. Notwithstanding CAT.OP.MPA.170, a briefing shall only be conducted if the medical condition makes this practicable.

SPA.HEMS.140 Information and documentation

(a) The operator shall ensure that, as part of its risk analysis and management process, risks associated with the HEMS environment are minimised by specifying in the operations manual: selection, composition and training of crews; levels of equipment and dispatch criteria; and operating procedures and minima, such that normal and likely abnormal operations are described and adequately mitigated.

(b) Relevant extracts from the operations manual shall be made available to the organisation for which the HEMS is being provided.

SPA.HEMS.145 HEMS operating base facilities

(a) If crew members are required to be on standby with a reaction time of less than 45 minutes, dedicated suitable accommodation shall be provided close to each operating base.

(b) At each operating base the pilots shall be provided with facilities for obtaining current and forecast weather information and shall be provided with satisfactory communications with the appropriate air traffic services (ATS) unit. Adequate facilities shall be available for the planning of all tasks.

SPA.HEMS.150 Fuel supply

(a) When the HEMS mission is conducted under VFR within a local and defined geographical area, standard fuel planning can be employed provided the operator establishes final reserve fuel to ensure that, on completion of the mission the fuel remaining is not less than an amount of fuel sufficient for:

(1) 30 minutes of flying time at normal cruising conditions; or

(2) when operating within an area providing continuous and suitable precautionary landing sites, 20 minutes of flying time at normal cruising speed.

SPA.HEMS.155 Refuelling with passengers embarking, on board or disembarking

When the commander considers refuelling with passengers on board to be necessary, it can be undertaken either rotors stopped or rotors turning provided the following requirements are met:

(a) door(s) on the refuelling side of the helicopter shall remain closed;

(b) door(s) on the non-refuelling side of the helicopter shall remain open, weather permitting;

(c) fire fighting facilities of the appropriate scale shall be positioned so as to be immediately available in the event of a fire; and

(d) sufficient personnel shall be immediately available to move patients clear of the helicopter in the event of a fire.

ANNEX VI

NON-COMMERCIAL AIR OPERATIONS WITH COMPLEX MOTOR-POWERED AIRCRAFT

[PART-NCC]

SUBPART A

GENERAL REQUIREMENTS

NCC.GEN.100 Competent authority

The competent authority shall be the authority designated by the Member State in which the operator has its principal place of business or is residing.

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

(2) when under the influence of psychoactive substances or alcohol or for other reasons as referred to in 7.g of Annex IV to Regulation (EC) No 216/2008.

(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.

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; and

(viii) flight crew members are properly rated and meet competency and recency requirements;

(5) not commencing a flight if any flight crew member is incapacitated from performing duties by any cause such as injury, sickness, fatigue or the effects of any psychoactive substance;

(6) not continuing a flight beyond the nearest weather-permissible aerodrome or operating site, when the capacity of any flight crew member to perform duties is significantly reduced from causes such as fatigue, sickness or lack of oxygen;

(7) deciding on acceptance of the aircraft with unserviceabilities in accordance with the configuration deviation list (CDL) or minimum equipment list (MEL), as applicable;

(8) recording utilisation data and all known or suspected defects in the aircraft at the termination of the flight, or series of flights, in the aircraft technical log or journey log for the aircraft; and

(9) ensuring that:

(i) are not disabled or switched off during flight; and

(ii) in the event of an accident or an incident that is subject to mandatory reporting:

(A) are not intentionally erased;

(B) are deactivated immediately after the flight is completed; and

(C) are reactivated only with the agreement of the investigating authority.

(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.

NCC.GEN.115 Common language

The operator shall ensure that all crew members can communicate with each other in a common language.

NCC.GEN.119 Taxiing of aircraft

The operator shall establish procedures for taxiing to ensure safe operation and to enhance runway safety.

NCC.GEN.120 Taxiing of aeroplanes

The operator shall ensure that an aeroplane is only taxied on the movement area of an aerodrome if the person at the controls:

(a) is an appropriately qualified pilot; or

(b) has been designated by the operator and:

(1) is trained to taxi the aeroplane;

(2) is trained to use the radio telephone, if radio communications are required;

(3) has received instruction in respect of aerodrome layout, routes, signs, marking, lights, air traffic control (ATC) signals and instructions, phraseology and procedures; and

(4) is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.

NCC.GEN.125 Rotor engagement - helicopters

A helicopter rotor shall only be turned under power for the purpose of flight with a qualified pilot at the controls.

NCC.GEN.130 Portable electronic devices

The operator shall not permit any person to use a portable electronic device (PED) on board an aircraft that could adversely affect the performance of the aircraft's systems and equipment.

NCC.GEN.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.

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 for a period of 60 days or until otherwise directed by the investigating authority.

(b) The operator shall conduct operational checks and evaluations of flight data recorder (FDR) recordings, cockpit voice recorder (CVR) recordings and data link recordings to ensure the continued serviceability of the recorders.

(c) The operator shall save the recordings for the period of operating time of the FDR as required by NCC.IDE.A.165 or NCC.IDE.H.165, except that, for the purpose of testing and maintaining the FDR, up to 1 hour of the oldest recorded material 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 FDR raw data into parameters expressed in engineering units.

(e) The operator shall make available any flight recorder recording that has been preserved, if so determined by the competent authority.

(f) Without prejudice to Regulation (EU) No 996/2010:

(1) CVR recordings shall only be used for purposes other than for the investigation of an accident or an incident subject to mandatory reporting, if all crew members and maintenance personnel concerned consent; and

(2) FDR recordings or data link recordings shall only be used for purposes other than for the investigation of an accident or an incident that is subject to mandatory reporting, if such records are:

(i) used by the operator for airworthiness or maintenance purposes only;

(ii) de-identified; or

(iii) disclosed under secure procedures.

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.

(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.

NCC.OP.105 Specification of isolated aerodromes - aeroplanes

For the selection of alternate aerodromes and the fuel policy, the operator shall consider an aerodrome as an isolated aerodrome if the flying time to the nearest adequate destination alternate aerodrome is more than:

(a) for aeroplanes with reciprocating engines, 60 minutes; or

(b) for aeroplanes with turbine engines, 90 minutes.

NCC.OP.110 Aerodrome operating minima - general

(a) For instrument flight rules (IFR) flights the operator shall establish aerodrome operating minima for each departure, destination and alternate aerodrome to be used. Such minima shall:

(1) not be lower than those established by the State in which the aerodrome is located, except when specifically approved by that State; and

(2) when undertaking low visibility operations, be approved by the competent authority in accordance with Annex V (Part SPA), Subpart E to Regulation (EU) No 965/2012.

(b) When establishing aerodrome operating minima, the operator shall take the following into account:

(1) the type, performance and handling characteristics of the aircraft;

(2) the composition, competence and experience of the flight crew;

(3) the dimensions and characteristics of the runways and final approach and take-off areas (FATOs) that may be selected for use;

(4) the adequacy and performance of the available visual and non-visual ground aids;

(5) the equipment available on the aircraft for the purpose of navigation and/or control of the flight path, during the take-off, the approach, the flare, the landing, the rollout and the missed approach;

(6) the obstacles in the approach, the missed approach and the climb-out areas necessary for the execution of contingency procedures;

(7) the obstacle clearance altitude/height for the instrument approach procedures;

(8) the means to determine and report meteorological conditions; and

(9) the flight technique to be used during the final approach.

(c) The minima for a specific type of approach and landing procedure shall only be used if all the following conditions are met:

(1) the ground equipment required for the intended procedure is operative;
(2) the aircraft systems required for the type of approach are operative;
(3) the required aircraft performance criteria are met; and
(4) the crew is qualified appropriately.

NCC.OP.111 Aerodrome operating minima - NPA, APV, CAT I operations

(a) The decision height (DH) to be used for a non-precision approach (NPA) flown with the continuous descent final approach (CDFA) technique, approach procedure with vertical guidance (APV) or category I (CAT I) operation shall not be lower than the highest of:
(1) the minimum height to which the approach aid can be used without the required visual reference;
(2) the obstacle clearance height (OCH) for the category of aircraft;
(3) the published approach procedure DH where applicable;
(4) the system minimum specified in Table 1; or
(5) the minimum DH specified in the AFM or equivalent document, if stated.

(b) The minimum descent height (MDH) for an NPA operation flown without the CDFA technique shall not be lower than the highest of:
(1) the OCH for the category of aircraft;
(2) the system minimum specified in Table 1; or
(3) the minimum MDH specified in the AFM, if stated.

Table 1
System minima

Facility	Lowest DH/MDH (ft)
Instrument landing system (ILS)	200
Global navigation satellite system (GNSS)/Satellite-based augmentation system (SBAS) (Lateral precision with vertical guidance approach (LPV))	200
GNSS (Lateral Navigation (LNAV))	250
GNSS/Baro-vertical navigation (VNAV) (LNAV/VNAV)	250
Localiser (LOC) with or without distance measuring equipment (DME)	250
Surveillance radar approach (SRA) (terminating at ½ NM)	250
SRA (terminating at 1 NM)	300
SRA (terminating at 2 NM or more)	350
VHF omnidirectional radio range (VOR)	300
VOR/DME	250
Non-directional beacon (NDB)	350
NDB/DME	300
VHF direction finder (VDF)	350

NCC.OP.112 Aerodrome operating minima - circling operations with aeroplanes

(a) The MDH for a circling 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 instrument approach procedure.

(b) The minimum visibility for a circling operation with aeroplanes shall be the highest of:

(1) the circling visibility for the aeroplane category, if published;

(2) the minimum visibility derived from Table 2; or

(3) the runway visual range/converted meteorological visibility (RVR/CMV) of the preceding instrument approach procedure.

Table 1

MDH and minimum visibility for circling vs. aeroplane category

	Aeroplane category			
	A	B	C	D
MDH (ft)	400	500	600	700
Minimum meteorological visibility (m)	1 500	1 600	2 400	3 600

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.

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.

NCC.OP.130 Fuel and oil supply - aeroplanes

(a) The pilot-in-command shall only commence a flight if the aeroplane carries sufficient fuel and oil for the following:

(1) for visual flight rules (VFR) flights:

(i) by day, to fly to the aerodrome of intended landing and thereafter to fly for at least 30 minutes at normal cruising altitude; or

(ii) by night, to fly to the aerodrome of intended landing and thereafter to fly for at least 45 minutes at normal cruising altitude;

(2) for IFR flights:

(i) when no destination alternate is required, to fly to the aerodrome of intended landing, and thereafter to fly for at least 45 minutes at normal cruising altitude; or

(ii) when a destination alternate is required, to fly to the aerodrome of intended landing, to an alternate aerodrome and thereafter to fly for at least 45 minutes at normal cruising altitude.

(b) In computing the fuel required including to provide for contingency, the following shall be taken into consideration:

(1) forecast meteorological conditions;

(2) anticipated ATC routings and traffic delays;

(3) procedures for loss of pressurisation or failure of one engine while en-route, where applicable; and

(4) any other condition that may delay the landing of the aeroplane or increase fuel and/or oil consumption.

(c) Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is re-planned.

NCC.OP.131 Fuel and oil supply - helicopters

(a) The pilot-in-command shall only commence a flight if the helicopter carries sufficient fuel and oil for the following:

(1) for VFR flights, to fly to the aerodrome/operating site of intended landing and thereafter to fly for at least 20 minutes at best-range-speed; and

(2) for IFR flights:

(i) when no alternate is required or no weather-permissible alternate aerodrome is available, to fly to the aerodrome/operating site of intended landing, and thereafter to fly for 30 minutes at holding speed at 450 m (1 500 ft) above the destination aerodrome/operating site under standard temperature conditions and approach and land; or

(ii) when an alternate is required, to fly to and execute an approach and a missed approach at the aerodrome/operating site of intended landing, and thereafter:

(A) to fly to the specified alternate; and

(B) to fly for 30 minutes at holding speed at 450 m (1 500 ft) above the alternate aerodrome/operating site under standard temperature conditions and approach and land.

(b) In computing the fuel required including to provide for contingency, the following shall be taken into consideration:

(1) forecast meteorological conditions;

(2) anticipated ATC routings and traffic delays;
(3) procedures for loss of pressurisation or failure of one engine while en-route, where applicable; and
(4) any other condition that may delay the landing of the aircraft or increase fuel and/or oil consumption.

(c) Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is re-planned.

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

(a) Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the 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.

(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 available current weather 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 weather conditions.

NCC.OP.150 Take-off alternate aerodromes - aeroplanes

(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 weather conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or it would not be possible to return to the aerodrome of departure for other reasons.

(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

(b) the place of intended landing is isolated 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.

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

(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; and

(3) a point of no return (PNR) is determined in case of an offshore destination.

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.

(b) For all other types of fuel, necessary precautions shall be taken and the aircraft shall be properly manned by qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

NCC.OP.160 Use of headset

(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.

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

(a) The pilot-in-command shall only commence or continue a VFR flight if the latest available meteorological information indicates that the weather conditions along the route and at the intended destination at the estimated time of use will be at or above the applicable VFR operating minima.

(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 weather conditions at the destination or at least one destination alternate aerodrome are at or above the applicable aerodrome operating minima.

(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.

(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.

NCC.OP.195 Take-off conditions

Before commencing take-off, the pilot-in-command shall be satisfied that:

(a) according to the information available, the weather at the aerodrome or operating site and the condition of the runway or FATO intended to be used would not prevent a safe take-off and departure; and

(b) applicable aerodrome operating minima will be complied with.

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).

(b) Notwithstanding (a), when training flights are conducted by an approved training organisation, such situations may be simulated with student pilots on-board.

NCC.OP.205 In-flight fuel management

(a) The operator shall establish a procedure to ensure that in-flight fuel checks and fuel management are performed.

(b) The pilot-in-command shall check at regular intervals that the amount of usable fuel remaining in flight is not less than the fuel required to proceed to a weather-permissible aerodrome or operating site and the planned reserve fuel as required by NCC.OP.130 or NCC.OP.131.

NCC.OP.210 Use of supplemental oxygen

The pilot-in-command shall ensure that he/she and flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen continuously whenever the cabin altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft.

NCC.OP.215 Ground proximity detection

When undue proximity to the ground is detected by a flight crew member or by a ground proximity warning system, the pilot flying shall take corrective action immediately in order to establish safe flight conditions.

NCC.OP.220 Airborne collision avoidance system (ACAS)

The operator shall establish operational procedures and training programs when ACAS is installed and serviceable. When ACAS II is used, such procedures and training shall be in accordance with Regulation (EU) No 1332/2011.

NCC.OP.225 Approach and landing conditions

Before commencing an approach to land, the pilot-in-command shall be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the runway or FATO intended to be used would not prevent a safe approach, landing or missed approach.

NCC.OP.230 Commencement and continuation of approach

(a) The pilot-in-command may commence an instrument approach regardless of the reported runway visual range/visibility (RVR/VIS).

(b) If the reported RVR/VIS is less than the applicable minimum the approach shall not be continued:

(1) below 1 000 ft above the aerodrome; or

(2) into the final approach segment in the case where the decision altitude/height (DA/H) or minimum descent altitude/height (MDA/H) is more than 1 000 ft above the aerodrome.

(c) Where the RVR is not available, RVR values may be derived by converting the reported visibility.

(d) If, after passing 1 000 ft above the aerodrome, the reported RVR/VIS falls below the applicable minimum, the approach may be continued to DA/H or MDA/H.

(e) The approach may be continued below DA/H or MDA/H and the landing may be completed provided that the visual reference adequate for the type of approach operation and for the intended runway is established at the DA/H or MDA/H and is maintained.

(f) The touchdown zone RVR shall always be controlling.

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.

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

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.

(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;

(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.

(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.

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 V1 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.

(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 NCC.POL.130.

NCC.POL.130 En-route - one engine inoperative - aeroplanes

The pilot-in-command shall ensure that in the event of an engine becoming inoperative at any point along the route, a multi-engined aeroplane shall be able to continue the flight to an adequate aerodrome or operating site without flying below the minimum obstacle clearance altitude at any point.

NCC.POL.135 Landing - aeroplanes

The pilot-in-command shall ensure that at any aerodrome or operating site, after clearing all obstacles in the approach path by a safe margin, the aeroplane shall be able to land and stop, or a seaplane to come to a satisfactorily low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.

SUBPART D

INSTRUMENTS, DATA AND EQUIPMENT

SECTION 1

Aeroplanes

NCC.IDE.A.100 Instruments and equipment - general

(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.

(c) Instruments and equipment not required by this Subpart as well as any other equipment which is not required by other applicable Annexes, but is carried on a flight, shall comply with the following:

(1) the information provided by these instruments, equipment or accessories shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008 or NCC.IDE.A.245 and NCC.IDE.A.250; and

(2) the instruments and equipment shall not affect the airworthiness of the aeroplane, even in the case of failures or malfunction.

(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);

(b) the operator is approved by the competent authority to operate the aeroplane within the constraints of the master minimum equipment list (MMEL); or

(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;

(2) time in hours, minutes and seconds;

(3) pressure altitude;

(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:

(1) pressure altitude;

(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;

(3) pressure altitude;

(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;

(c) whenever two pilots are required for the operation, an additional separate means of displaying for the second pilot:

(1) pressure altitude;

(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

(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 that the attitude indicator is being operated by emergency power.

NCC.IDE.A.130 Additional equipment for single-pilot operations under IFR

Aeroplanes operated under IFR with a single pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

NCC.IDE.A.135 Terrain awareness warning system (TAWS)

Turbine-powered aeroplanes with a maximum certified take-off mass (MCTOM) of more than 5 700 kg or a maximum operational passenger seating configuration (MOPSC) of more than nine shall be equipped with a TAWS that meets the requirements for:

(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.

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.

(b) The CVR shall be capable of retaining data recorded during the preceding 2 hours in all other cases.

(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.

(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.

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.

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water.

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.

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water.

(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.

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.

(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.

NCC.IDE.A.185 Fasten seat belt and no smoking signs

Aeroplanes in which not all passenger seats are visible from the flight crew seat(s) shall be equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

NCC.IDE.A.190 First-aid kit

(a) Aeroplanes shall be equipped with first-aid kits in accordance with Table 1.

Table 1
Number of first-aid kits required

Number of passenger seats installed	Number of first-aid kits required
0-1	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.

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.

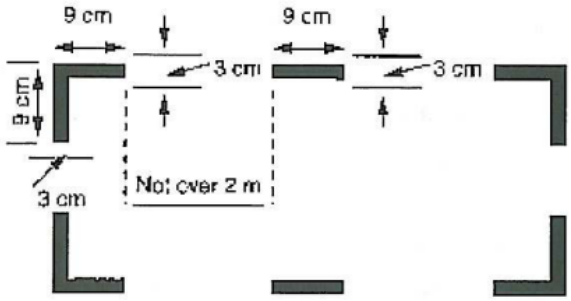
(b) In the case of aeroplanes with an MOPSC of more than 200, an additional crash axe or crowbar shall be installed in or near the rearmost galley area.

(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



NCC.IDE.A.215 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.

(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.

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.

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.

NCC.IDE.A.255 Transponder

Aeroplanes shall be equipped with a pressure altitude reporting secondary surveillance radar (SSR) transponder and any other SSR transponder capability required for the route being flown.

NCC.IDE.A.260 Electronic navigation data management

(a) The operator shall only use electronic navigation data products that support a navigation application meeting standards of integrity that are adequate for the intended use of the data.

(b) When the electronic navigation data products support a navigation application needed for an operation for which Annex V (Part-SPA) to Regulation (EU) No 965/2012 requires an approval, the operator shall demonstrate to the competent authority that the process applied and the delivered products meet standards of integrity that are adequate for the intended use of the data.

(c) The operator shall continuously monitor both the process and the products, either directly or by monitoring the compliance of third party providers.

(d) The operator shall ensure the timely distribution and insertion of current and unaltered electronic navigation data to all aeroplanes that require it.

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;

(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.

(c) Instruments and equipment not required by this Subpart as well as any other equipment which is not required by other applicable Annexes, but is carried on a flight, shall comply with the following:

(1) the information provided by these instruments, equipment or accessories shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008 or NCC.IDE.H.245 and NCC.IDE.H.250; and

(2) the instruments and equipment shall not affect the airworthiness of the helicopter, even in the case of failures or malfunction.

(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);

(b) the operator is approved by the competent authority to operate the helicopter within the constraints of the master minimum equipment list (MMEL); or

(c) the helicopter is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

NCC.IDE.H.115 Operating lights

Helicopters operated at night shall be equipped with:

(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;

(3) pressure altitude;

(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:

(1) pressure altitude;

(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;

(3) pressure altitude;

(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:

(1) pressure altitude;

(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.

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.

(f) If the CVR is not deployable, it shall have a device to assist in locating it under water.

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.

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water.

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;

(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.

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water.

(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.

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

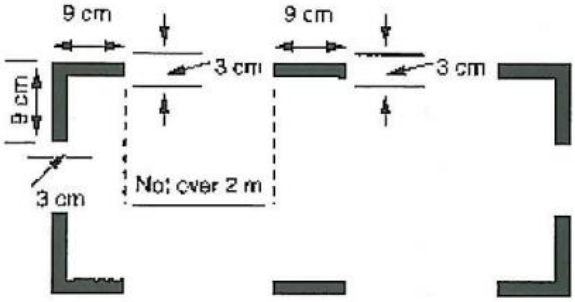
(2) in each passenger compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

(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.

Figure 1



NCC.IDE.H.215 Emergency locator transmitter (ELT)

(a) Helicopters shall be equipped with at least one automatic ELT.

(b) Helicopters operating on a flight over water in support of offshore operations in a hostile environment and 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, shall be equipped with an automatically deployable ELT (ELT(AD)).

(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.

NCC.IDE.H.226 Crew survival suits

Each crew member shall wear a survival suit when:

(a) operating on a flight over water in support of offshore operations, 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 and when:

(1) 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; or

(2) the estimated rescue time exceeds the estimated survival time;

or

(b) so determined by the pilot-in-command based on a risk assessment taking into account the following conditions:

(1) flights over water beyond autorotational distance or safe forced landing distance from land, where in the case of the critical engine failure, the helicopter is not able to sustain level flight; and

(2) 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.

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.

NCC.IDE.H.231 Additional requirements for helicopters conducting offshore operations in a hostile sea area

Helicopters operated in offshore operations in a hostile sea area, at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, shall comply with the following:

(a) When 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, or when the estimated rescue time exceeds the calculated survival time, or the flight is planned to be conducted at night, all persons on board are wearing a survival suit.

(b) All life-rafts carried in accordance with NCC.IDE.H.227 shall be installed so as to be usable in the sea conditions in which the helicopter's ditching, flotation and trim characteristics were evaluated in order to comply with the ditching requirements for certification.

(c) 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.

(d) All emergency exits, including crew emergency exits, and the means of opening them shall be conspicuously marked for the guidance of occupants using the exits in daylight or in the dark. Such markings shall be designed to remain visible if the helicopter is capsized and the cabin is submerged.

(e) All 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 occupants' egress in all sea conditions up to the maximum required to be evaluated for ditching and flotation.

(f) All doors, windows or other openings in the passenger compartment intended to be used for the purpose of underwater escape shall be equipped so as to be operable in an emergency.

(g) Life-jackets shall be worn at all times, unless the passenger or crew member is wearing an integrated survival suit that meets the combined requirement of the survival suit and life-jacket.

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.

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 airworthiness code or fitted with emergency flotation equipment when

operated on a flight over water in a hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed.

NCC.IDE.H.240 Headset

Whenever a radio communication and/or radio navigation system is required, helicopters shall be equipped with a headset with boom microphone or equivalent and a transmit button on the flight controls for each required pilot and/or crew member at his/her assigned station.

NCC.IDE.H.245 Radio communication equipment

(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.

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.

ANNEX VII

NON-COMMERCIAL AIR OPERATIONS WITH OTHER-THAN COMPLEX MOTOR-POWERED AIRCRAFT

[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.

(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 is established or residing.

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.

NCO.GEN.102 Touring motor gliders, powered sailplanes and mixed balloons

(a) Touring motor gliders shall be operated following the requirements for:

(1) aeroplanes when they are power-driven by an engine; and

(2) sailplanes when operated without using an engine.

(b) Touring motor gliders shall be equipped in compliance with the requirements applicable to aeroplanes unless otherwise specified in Subpart D.

(c) Powered sailplanes, excluding touring motor gliders, shall be operated and equipped in compliance with the requirements applicable to sailplanes.

(d) Mixed balloons shall be operated in accordance with the requirements for hot-air balloons.

NCO.GEN.103 Introductory flights

Introductory flights referred to in Article 6(5)(c) of this Regulation when conducted in accordance with this Annex, shall:

(a) start and end at the same aerodrome or operating site, except for balloons and sailplanes;

(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.

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;
(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 NCO.IDE.A.105, NCO.IDE.H.105, NCO.IDE.S.105 or NCO.IDE.B.105;
(iv) the mass of the aircraft and, except in the case of balloons, the centre of gravity location are such that the flight can be conducted within limits prescribed in the airworthiness documentation;
(v) all equipment, baggage and cargo are properly loaded and secured and an emergency evacuation remains possible; and
(vi) the aircraft operating limitations as specified in the aircraft flight manual (AFM) will not be exceeded at any time during the flight;
(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.

(f) During flight, the pilot-in-command shall:

(1) except for balloons, keep his/her safety belt fastened while at his/her station; and

(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.

NCO.GEN.106 Pilot-in-command responsibilities and authority - balloons

The pilot-in-command of a balloon shall in addition to NCO.GEN.105:

(a) be responsible for the pre-flight briefing of those persons assisting in the inflation and deflation of the envelope;

(b) ensure that no person is smoking on board or within the direct vicinity of the balloon; and

(c) ensure that persons assisting in the inflation and deflation of the envelope wear appropriate protective clothing.

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.

NCO.GEN.115 Taxiing of aeroplanes

An aeroplane shall only be taxied on the movement area of an aerodrome if the person at the controls:

(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.

NCO.GEN.120 Rotor engagement - helicopters

A helicopter rotor shall only be turned under power for the purpose of flight with a qualified pilot at the controls.

NCO.GEN.125 Portable electronic devices

The pilot-in-command shall not permit any person to use a portable electronic device (PED) on board an aircraft that could adversely affect the performance of the aircraft's systems and equipment.

NCO.GEN.130 Information on emergency and survival equipment carried

Except for aircraft taking-off and landing at the same aerodrome/operating site, the operator shall, at all times, have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board.

NCO.GEN.135 Documents, manuals and information to be carried

(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 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.

(c) Notwithstanding (a), on flights with balloons or sailplanes, excluding touring motor gliders (TMGs), the documents and information in (a)(2) to (a)(8) and (a)(11) to (a)(13) may be carried in the retrieve vehicle.

(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.

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.

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.

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 (19), 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.

NCO.OP.105 Specification of isolated aerodromes - aeroplanes

For the selection of alternate aerodromes and the fuel policy, the pilot-in-command shall consider an aerodrome as an isolated aerodrome if the flying time to the nearest adequate destination alternate aerodrome is more than:

(a) for aeroplanes with reciprocating engines, 60 minutes; or

(b) for aeroplanes with turbine engines, 90 minutes.

NCO.OP.110 Aerodrome operating minima - aeroplanes and helicopters

(a) For instrument flight rules (IFR) flights, the pilot-in-command shall select and use aerodrome operating minima for each departure, destination and alternate aerodrome. Such minima shall:

(1) not be lower than those established by the State in which the aerodrome is located, except when specifically approved by that State; and

(2) when undertaking low visibility operations, be approved by the competent authority in accordance with Annex V (Part-SPA), Subpart E to Regulation (EU) No 965/2012.

(b) When selecting the aerodrome operating minima, the pilot-in-command shall take the following into account:

(1) the type, performance and handling characteristics of the aircraft;

(2) his/her competence and experience;

(3) the dimensions and characteristics of the runways and final approach and take-off areas (FATOs) that may be selected for use;

(4) the adequacy and performance of the available visual and non-visual ground aids;

(5) the equipment available on the aircraft for the purpose of navigation and/or control of the flight path, during the take-off, the approach, the flare, the landing, the rollout and the missed approach;

(6) the obstacles in the approach, the missed approach and the climb-out areas necessary for the execution of contingency procedures;

(7) the obstacle clearance altitude/height for the instrument approach procedures;

(8) the means to determine and report meteorological conditions; and

(9) the flight technique to be used during the final approach.

(c) The minima for a specific type of approach and landing procedure shall only be used if:

(1) the ground equipment required for the intended procedure is operative;

(2) the aircraft systems required for the type of approach are operative;

(3) the required aircraft performance criteria are met; and

(4) the pilot is qualified appropriately.

NCO.OP.111 Aerodrome operating minima - NPA, APV, CAT I operations

(a) The decision height (DH) to be used for a non-precision approach (NPA) flown with the continuous descent final approach (CDFA) technique, approach procedure with vertical guidance (APV) or category I (CAT I) operation shall not be lower than the highest of:

(1) the minimum height to which the approach aid can be used without the required visual reference;

(2) the obstacle clearance height (OCH) for the category of aircraft;

(3) the published approach procedure DH where applicable;

(4) the system minimum specified in Table 1; or

(5) the minimum DH specified in the AFM or equivalent document, if stated.

(b) The minimum descent height (MDH) for an NPA operation flown without the CDFA technique shall not be lower than the highest of:

(1) the OCH for the category of aircraft;

(2) the system minimum specified in Table 1; or

(3) the minimum MDH specified in the AFM, if stated.

Table 1
System minima

Facility	Lowest DH/MDH (ft)
Instrument landing system (ILS)	200
Global navigation satellite system (GNSS)/Satellite-based augmentation system (SBAS) (Lateral precision with vertical guidance approach (LPV))	200
GNSS (Lateral Navigation (LNAV))	250
GNSS/Baro-vertical navigation (VNAV) (LNAV/VNAV)	250
Localiser (LOC) with or without distance measuring equipment (DME)	250
Surveillance radar approach (SRA) (terminating at ½ NM)	250
SRA (terminating at 1 NM)	300
SRA (terminating at 2 NM or more)	350
VHF omnidirectional radio range (VOR)	300
VOR/DME	250
Non-directional beacon (NDB)	350
NDB/DME	300
VHF direction finder (VDF)	350

NCO.OP.112 Aerodrome operating minima - circling operations with aeroplanes

(a) The MDH for a circling 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 instrument approach procedure.

(b) The minimum visibility for a circling operation with aeroplanes shall be the highest of:

(1) the circling visibility for the aeroplane category, if published;

(2) the minimum visibility derived from Table 2; or

(3) the runway visual range/converted meteorological visibility (RVR/CMV) of the preceding instrument approach procedure.

Table 1

MDH and minimum visibility for circling vs. aeroplane category

MDH (ft)	**Aeroplane category**			
	A	B	C	D
	400	500	600	700
Minimum meteorological visibility (m)	1 500	1 600	2 400	3 600

NCO.OP.113 Aerodrome operating minima - onshore circling operations with helicopters

The MDH for an onshore circling operation with helicopters shall not be lower than 250 ft and the meteorological visibility not less than 800 m.

NCO.OP.115 Departure and approach procedures - aeroplanes and helicopters

(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.

NCO.OP.120 Noise abatement procedures - aeroplanes, helicopters and powered sailplanes

The pilot-in-command shall take into account published noise abatement procedures to minimise the effect of aircraft noise while ensuring that safety has priority over noise abatement.

NCO.OP.121 Noise abatement procedures - balloons

The pilot-in-command shall take into account operating procedures to minimise the effect of heating-system noise while ensuring that safety has priority over noise abatement.

NCO.OP.125 Fuel and oil supply - aeroplanes

(a) The pilot-in-command shall only commence a flight if the aeroplane carries sufficient fuel and oil for the following:

(1) for visual flight rules (VFR) flights:

(i) by day, taking-off and landing at the same aerodrome/landing site and always remaining in sight of that aerodrome/landing site, to fly the intended route and thereafter for at least 10 minutes at normal cruising altitude;

(ii) by day, to fly to the aerodrome of intended landing and thereafter to fly for at least 30 minutes at normal cruising altitude; or

(iii) by night, to fly to the aerodrome of intended landing and thereafter to fly for at least 45 minutes at normal cruising altitude;

(2) for IFR flights:

(i) when no destination alternate is required, to fly to the aerodrome of intended landing and thereafter to fly for at least 45 minutes at normal cruising altitude; or

(ii) when a destination alternate is required, to fly to the aerodrome of intended landing, to an alternate aerodrome and thereafter to fly for at least 45 minutes at normal cruising altitude.

(b) In computing the fuel required including to provide for contingency, the following shall be taken into consideration:

(1) forecast meteorological conditions;

(2) anticipated ATC routings and traffic delays;

(3) procedures for loss of pressurisation or failure of one engine while en-route, where applicable; and

(4) any other condition that may delay the landing of the aeroplane or increase fuel and/or oil consumption.

(c) Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is re-planned.

NCO.OP.126 Fuel and oil supply - helicopters

(a) The pilot-in-command shall only commence a flight if the helicopter carries sufficient fuel and oil for the following:

(1) for VFR flights, to fly to the aerodrome/operating site of intended landing and thereafter to fly for at least 20 minutes at best-range-speed; and

(2) for IFR flights:

(i) when no alternate is required or no weather-permissible alternate aerodrome is available, to fly to the aerodrome/operating site of intended landing, and thereafter to fly for 30 minutes at holding speed at 450 m (1 500 ft) above the destination aerodrome/operating site under standard temperature conditions and approach and land; or

(ii) when an alternate is required, to fly to and execute an approach and a missed approach at the aerodrome/operating site of intended landing, and thereafter:

(A) to fly to the specified alternate; and

(B) to fly for 30 minutes at holding speed at 450 m (1 500 ft) above the alternate aerodrome/operating site under standard temperature conditions and approach and land.

(b) In computing the fuel required including to provide for contingency, the following shall be taken into consideration:

(1) forecast meteorological conditions;

(2) anticipated ATC routings and traffic delays;

(3) procedures for loss of pressurisation or failure of one engine while en-route, where applicable; and

(4) any other condition that may delay the landing of the aircraft or increase fuel and/or oil consumption.

(c) Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is re-planned.

NCO.OP.127 Fuel and ballast supply and planning - balloons

(a) The pilot-in-command shall only commence a flight if the reserve fuel, or ballast is sufficient for 30 minutes of flight.

(b) Fuel, or ballast supply calculations shall be based upon at least the following operating conditions under which the flight is to be conducted:

(1) data provided by the balloon manufacturer;

(2) anticipated masses;

(3) expected meteorological conditions; and

(4) air navigation services provider procedures and restrictions.

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

(a) Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the 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.

(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 available current weather 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 weather conditions.

NCO.OP.140 Destination alternate aerodromes - aeroplanes

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate aerodrome in the flight plan, unless:

(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

(b) the place of intended landing is isolated 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.

NCO.OP.141 Destination alternate aerodromes - helicopters

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate aerodrome in the flight plan, unless:

(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; and

(3) a point of no return (PNR) is determined in case of an offshore destination.

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.

(b) For all other types of fuel, the aircraft shall not be refuelled when passengers are embarking, on board or disembarking, unless it is attended by the pilot-in-command or other qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

NCO.OP.150 Carriage of passengers

Except for balloons, the pilot-in-command shall ensure that, prior to and during taxiing, take-off and landing, and whenever deemed necessary in the interest of safety, each passenger on board occupies a seat or berth and has his/her safety belt or restraint device properly secured.

NCO.OP.155 Smoking on board - aeroplanes and helicopters

The pilot-in-command shall not allow smoking on board:

(a) whenever considered necessary in the interest of safety; and

(b) during refuelling of the aircraft.

NCO.OP.156 Smoking on board - sailplanes and balloons

No person shall be allowed to smoke on board a sailplane or balloon.

NCO.OP.160 Meteorological conditions

(a) The pilot-in-command shall only commence or continue a VFR flight if the latest available meteorological information indicates that the weather conditions along the route and at the intended destination at the estimated time of use will be at or above the applicable VFR operating minima.

(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 weather conditions at the destination or at least one destination alternate aerodrome are at or above the applicable aerodrome operating minima.

(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.

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.

NCO.OP.175 Take-off conditions - aeroplanes and helicopters

Before commencing take-off, the pilot-in-command shall be satisfied that:

(a) according to the information available, the weather at the aerodrome or operating site and the condition of the runway or FATO intended to be used would not prevent a safe take-off and departure; and

(b) applicable aerodrome operating minima will be complied with.

NCO.OP.176 Take-off conditions - balloons

Before commencing take-off, the pilot-in-command of a balloon shall be satisfied that, according to the information available, the weather at the operating site or aerodrome would not prevent a safe take-off and departure.

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).

(b) Notwithstanding (a), when training flights are conducted by an approved training organisation, such situations may be simulated with student pilots on-board.

NCO.OP.190 In-flight fuel management

The pilot-in-command shall check at regular intervals that the amount of usable fuel or, for balloons, ballast remaining in flight is not less than the fuel or ballast required to proceed to a weather-permissible aerodrome or operating site and the planned reserve fuel as required by NCO.OP.125, NCO.OP.126 or NCO.OP.127.

NCO.OP.190 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.

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.195 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.

NCO.OP.205 Approach and landing conditions - aeroplanes and helicopters

Before commencing an approach to land, the pilot-in-command shall be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the runway or FATO intended to be used would not prevent a safe approach, landing or missed approach.

NCO.OP.210 Commencement and continuation of approach - aeroplanes and helicopters

(a) The pilot-in-command may commence an instrument approach regardless of the reported runway visual range/visibility (RVR/VIS).

(b) If the reported RVR/VIS is less than the applicable minimum, the approach shall not be continued:

(1) below 1 000 ft above the aerodrome; or

(2) into the final approach segment in the case where the decision altitude/height (DA/H) or minimum descent altitude/height (MDA/H) is more than 1 000 ft above the aerodrome.

(c) Where the RVR is not available, RVR values may be derived by converting the reported visibility.

(d) If, after passing 1 000 ft above the aerodrome, the reported RVR/VIS falls below the applicable minimum, the approach may be continued to DA/H or MDA/H.

(e) The approach may be continued below DA/H or MDA/H and the landing may be completed provided that the visual reference adequate for the type of approach operation and for the intended runway is established at the DA/H or MDA/H and is maintained.

(f) The touchdown zone RVR shall always be controlling.

NCO.OP.215 Operational limitations - hot-air balloons

(a) A hot-air balloon shall not land during night, except in emergency.

(b) A hot-air balloon may take off during night, provided sufficient fuel is carried for a landing during day.

SUBPART C

AIRCRAFT PERFORMANCE AND OPERATING LIMITATIONS

NCO.POL.100 Operating limitations - all aircraft

(a) During any phase of operation, the loading, the mass and, except for balloons, the centre of gravity (CG) position of the aircraft shall comply with any limitation specified in the AFM, or equivalent document.

(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.

NCO.POL.105 Weighing

(a) The operator shall ensure that the mass and, except for balloons, the CG of the aircraft have been established by actual weighing prior to initial entry into service. The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented. Such information shall be made available to the pilot-in-command. The aircraft shall be reweighed if the effect of modifications on the mass and balance is not accurately known.

(b) The weighing shall be accomplished:

(1) for aeroplanes and helicopters, by the manufacturer of the aircraft or by an approved maintenance organisation; and

(2) for sailplanes and balloons, by the manufacturer of the aircraft or in accordance with Commission Regulation (EC) No 2042/2003, as applicable.

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;

(2) used to comply with NCO.IDE.A.190;

(3) used to comply with NCO.IDE.A.195; 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) first-aid kit;

(5) survival and signalling equipment;

(6) sea anchor and equipment for mooring; and

(7) child restraint device.

(c) Instruments and equipment not required by this Subpart as well as any other equipment that is not required by other applicable Annexes, but is carried on a flight, shall comply with the following:

(1) the information provided by these instruments or equipment shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008 or NCO.IDE.A.190 and NCO.IDE.A.195; and

(2) the instruments and equipment shall not affect the airworthiness of the aeroplane, even in the case of failures or malfunction.

(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 light

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.

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;

(3) pressure altitude;

(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.

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;

(3) pressure altitude;

(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;
(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; and
(4) a seat belt with upper torso restraint system on each flight crew seat, having a single point release.

NCO.IDE.A.145 First-aid kit

(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.

NCO.IDE.A.155 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 compartment will be above 13 000 ft.

NCO.IDE.A.160 Hand fire extinguishers

(a) Aeroplanes, except touring motor gliders (TMG) and ELA1 aeroplanes, shall be equipped with at least one hand fire extinguisher:

(1) in the flight crew compartment; and

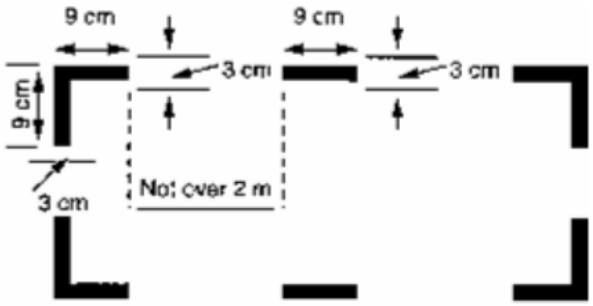
(2) in each passenger compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

(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



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:

(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:

(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.

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.

SECTION 2

Helicopters

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 helicopter.

(b) The following items, when required by 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; and

(6) child restraint device.

(c) Instruments and equipment not required by this Subpart, as well as any other equipment that is not required by other applicable Annexes, but is carried on a flight, shall comply with the following:

(1) the information provided by these instruments or equipment shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008 or NCO.IDE.H.190 and NCO.IDE.H.195; and

(2) the instruments and equipment shall not affect the airworthiness of the helicopter, even in the case of failures or malfunction.

(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.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 MEL, if established; or

(b) the helicopter is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

NCO.IDE.H.115 Operating lights

Helicopters operated at night shall be equipped with:

(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.

NCO.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;

(3) pressure altitude;

(4) indicated airspeed; and

(5) slip.

(b) Helicopters operated under VMC at night, or when the visibility is less than 1 500 m, or in conditions where the helicopter cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a), equipped with:

(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.

(c) Helicopters operated when the visibility is less than 1 500 m, or in conditions where the helicopter cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a) and (b), equipped with a means of preventing malfunction of the airspeed indicating system required in (a)(4) due to condensation or icing.

NCO.IDE.H.125 Operations under IFR - flight and navigational instruments and associated equipment

Helicopters operated under IFR shall be equipped with:

(a) a means of measuring and displaying the following:

(1) magnetic heading;

(2) time in hours, minutes and seconds;

(3) pressure altitude;

(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) 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

Helicopters operated by more than one flight crew member shall be equipped with a flight crew interphone system, including headsets and microphones for use by all flight crew members.

NCO.IDE.H.140 Seats, seat safety belts, restraint systems and child restraint devices

(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 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.

NCO.IDE.H.145 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.

NCO.IDE.H.155 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.

NCO.IDE.H.160 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 passenger compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

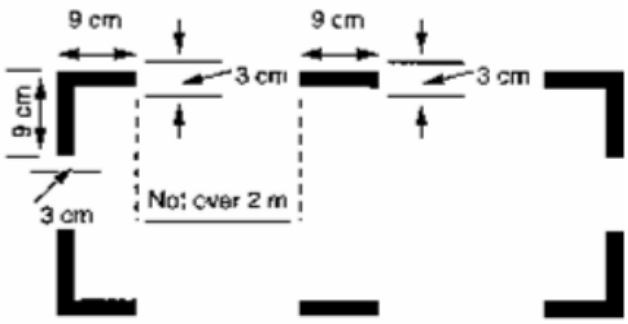
(b) The type and quantity of extinguishing agent for the required fire extinguishers shall be suitable for the type of fire likely to occur in the compartment where the extinguisher is

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

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



NCO.IDE.H.170 Emergency locator transmitter (ELT)

(a) Helicopters certified for a maximum 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 life-jacket when the helicopter is operated at a distance from land corresponding to more than 3 minutes flying time at normal cruising speed.

(b) Helicopters certified for a maximum passenger seating configuration of six or less shall be equipped with an ELT(S) or a personal locator beacon (PLB), carried by a crew member or a passenger.

(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) Helicopters shall be equipped with a life-jacket for each person on board or equivalent individual flotation device for each person on board younger than 24 months, which shall be worn or stowed in a position that is readily accessible from the seat or berth of the person for whose use it is provided, when:

(1) flying over water beyond autorotational distance from land where in case of the critical engine failure, the helicopter is not able to sustain level flight; or

(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 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 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.

NCO.IDE.H.180 Survival equipment

Helicopters, operated over areas in which search and rescue would be especially difficult, shall be equipped with such signalling devices and life-saving equipment, including means of sustaining life, as may be appropriate to the area overflown.

NCO.IDE.H.185 All helicopters on flights over water - ditching

Helicopters flying over water in a hostile environment beyond a distance of 50 NM from land shall be:

(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.

NCO.IDE.H.190 Radio communication equipment

(a) Where required by the airspace being flown helicopters shall be equipped with radio communication equipment capable of conducting two-way communication with those aeronautical stations and on those frequencies to meet airspace requirements.

(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 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.

(d) When a radio communication system is required, and in addition to the flight crew interphone system required in NCO.IDE.H.135, helicopters shall be equipped with a transmit button on the flight controls for each required pilot and/or crew member at his/her working station.

NCO.IDE.H.195 Navigation equipment

(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.

NCO.IDE.H.200 Transponder

Where required by the airspace being flown, helicopters shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

SECTION 3

Sailplanes

NCO.IDE.S.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 to comply with NCO.IDE.S.145;

(3) used to comply with NCO.IDE.S.150; or

(4) installed in the sailplane.

(b) The following items, when required by this Subpart, do not need an equipment approval:

(1) independent portable lights;

(2) an accurate time piece;

(3) survival and signalling equipment.

(c) Instruments and equipment not required by this Subpart as well as any other equipment that is not required by other Annexes, but is carried on a flight, shall comply with the following:

(1) the information provided by these instruments or, equipment shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008; and

(2) the instruments and equipment shall not affect the airworthiness of the sailplane, even in the case of failures or malfunction.

(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.S.105 Minimum equipment for flight

A flight shall not be commenced when any of the sailplane instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

(a) the sailplane is operated in accordance with the MEL, if established; or

(b) the sailplane is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

NCO.IDE.S.115 Operations under VFR - flight and navigational instruments

(a) Sailplanes operated under VFR by day shall be equipped with a means of measuring and displaying the following:

(1) in the case of powered sailplanes, magnetic heading;

(2) time in hours, minutes and seconds;

(3) pressure altitude; and

(4) indicated airspeed.

(b) Sailplanes operating in conditions where the sailplane cannot be maintained in a desired flight path without reference to one or more additional instruments, shall be, in addition to (a), equipped with a means of measuring and displaying the following:

(1) vertical speed;

(2) attitude or turn and slip; and

(3) magnetic heading.

NCO.IDE.S.120 Cloud flying - flight and navigational instruments

Sailplanes performing cloud flying shall be equipped with a means of measuring and displaying the following:

(a) magnetic heading;

(b) time in hours, minutes and seconds;

(c) pressure altitude;

(d) indicated airspeed;

(e) vertical speed; and

(f) attitude or turn and slip.

NCO.IDE.S.125 Seats and restraint systems

(a) Sailplanes shall be equipped with:

(1) a seat for each person on board; and

(2) a seat belt with upper torso restraint system for each seat according to the AFM.

(b) A seat belt with upper torso restraint system shall have a single point release.

NCO.IDE.S.130 Supplemental oxygen

Sailplanes operated at pressure altitudes above 10 000 ft shall be equipped with an oxygen storage and dispensing apparatus carrying enough breathing oxygen to supply:

(a) crew members for any period in excess of 30 minutes when the pressure altitude will be between 10 000 ft and 13 000 ft; and

(b) all crew members and passengers for any period that the pressure altitude will be above 13 000 ft.

NCO.IDE.S.135 Flight over water

The pilot-in-command of a sailplane operated over water shall determine the risks to survival of the occupants of the sailplane in the event of a ditching, based on which he/she shall determine the carriage of:

(a) a life-jacket, or equivalent individual floatation device, for each person on board, that shall be worn or stowed in a position that is readily accessible from the seat of the person for whose use it is provided;

(b) an emergency locator transmitter (ELT) or a personal locator beacon (PLB), carried by a crew member or a passenger, capable of transmitting simultaneously on 121,5 MHz and 406 MHz; and

(c) equipment for making distress signals, when operating a flight:

(1) over water beyond gliding distance from land; or

(2) where the take-off or approach path is so disposed over water that in the event of a mishap there would be a likelihood of ditching.

NCO.IDE.S.140 Survival equipment

Sailplanes operated over areas in which search and rescue would be especially difficult shall be equipped with such signalling devices and life-saving equipment as appropriate to the area overflown.

NCO.IDE.S.145 Radio communication equipment

(a) Where required by the airspace being flown sailplanes shall be equipped with radio communication equipment capable of conducting two-way communication with those aeronautical stations or 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.

NCO.IDE.S.150 Navigation equipment

Sailplanes shall be equipped with any navigation equipment necessary to proceed in accordance with:

(a) the ATS flight plan if applicable; and

(b) the applicable airspace requirements.

NCO.IDE.S.155 Transponder

When required by the airspace being flown, sailplanes shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

SECTION 4

Balloons

NCO.IDE.B.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 determine the flight path;

(2) used to comply with NCO.IDE.B.145; or

(3) installed in the balloon.

(b) The following items, when required by 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.

(c) Instruments and equipment not required by this Subpart as well as any other equipment that is not required by other Annexes, but is carried on a flight, shall comply with the following:

(1) the information provided by these instruments or equipment shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008; and

(2) the instruments and equipment shall not affect the airworthiness of the balloon, even in the case of failures or malfunction.

(d) Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is assigned.

(e) All required emergency equipment shall be easily accessible for immediate use.

NCO.IDE.B.105 Minimum equipment for flight

A flight shall not be commenced when any of the balloon instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

(a) the balloon is operated in accordance with the MEL, if established; or

(b) the balloon is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

NCO.IDE.B.110 Operating lights

Balloons operated at night shall be equipped with:

(a) anti-collision lights;

(b) a means to provide adequate illumination for all instruments and equipment essential to the safe operation of the balloon; and

(c) an independent portable light.

NCO.IDE.B.115 Operations under VFR — flight and navigational instruments and associated equipment

Balloons operated under VFR by day shall be equipped with the following:

(a) a means of displaying drift direction; and

(b) a means of measuring and displaying:

(1) time in hours, minutes and seconds;

(2) vertical speed, if required by the AFM; and

(3) pressure altitude, if required by the AFM, if required by airspace requirements or when altitude needs to be controlled for the use of oxygen.

NCO.IDE.B.120 First-aid kit

(a) Balloons 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.B.121 Supplemental oxygen

Balloons operated at pressure altitudes above 10 000 ft shall be equipped with an oxygen storage and dispensing apparatus carrying enough breathing oxygen to supply:

(a) crew members for any period in excess of 30 minutes when the pressure altitude will be between 10 000 ft and 13 000 ft; and

(b) all crew members and passengers for any period that the pressure altitude will be above 13 000 ft.

NCO.IDE.B.125 Hand fire extinguishers

Hot air -balloons shall be equipped with at least one hand fire extinguisher, if required by the applicable certification specifications.

NCO.IDE.B.130 Flight over water

The pilot-in-command of a balloon operated over water shall determine the risks to survival of the occupants of the balloon in the event of a ditching, based on which he/she shall determine the carriage of:

(a) 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 station of the person for whose use it is provided;

(b) when carrying more than 6 persons, an emergency locator transmitter (ELT) capable of transmitting simultaneously on 121,5 MHz and 406 MHz;

(c) when carrying up to 6 persons, an ELT or a personal locator beacon (PLB), carried by a crew member or a passenger, capable of transmitting simultaneously on 121,5 MHz and 406 MHz; and

(d) equipment for making the distress signals.

NCO.IDE.B.135 Survival equipment

Balloons operated over areas in which search and rescue would be especially difficult shall be equipped with such signalling devices and life-saving equipment as appropriate to the area overflown.

NCO.IDE.B.140 Miscellaneous equipment

(a) Balloons shall be equipped with protective gloves for each crew member.

(b) Hot-air balloons shall be equipped with:

(1) an alternative source of ignition;

(2) a means of measuring and indicating fuel quantity;

(3) a fire blanket or fire resistant cover; and

(4) a drop line of at least 25 metres (m) in length.

(c) Gas balloons shall be equipped with:

(1) a knife; and

(2) a drop line of at least 20 m in length made of natural fibre or electrostatic conductive material.

NCO.IDE.B.145 Radio communication equipment

(a) Where required by the airspace being flown, balloons shall be equipped with radio communication equipment capable of conducting two-way communication with those aeronautical stations or 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.

NCO.IDE.B.150 Transponder

When required by the airspace being flown, balloons shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

SUBPART E

SPECIFIC REQUIREMENTS

SECTION 1
General

NCO.SPEC.100 Scope

This subpart establishes specific requirements to be followed by a pilot-in-command conducting non-commercial specialised operations with other-than complex motor-powered aircraft.

NCO.SPEC.105 Checklist

(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

(f) ensure that task specialists and crew members use supplemental oxygen continuously whenever the cabin altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the cabin altitude exceeds 13 000 ft.

NCO.SPEC.115 Crew responsibilities

(a) The crew member shall be responsible for the proper execution of his/her duties. Crew duties shall be specified in the checklist.

(b) Except for balloons, during critical phases of 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.

(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

(2) when under the influence of psychoactive substances or alcohol or for other reasons as referred to in 7.g of Annex IV to Regulation (EC) No 216/2008.

(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.

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.

(b) Except for balloons, during critical phases of flight or whenever deemed necessary by the pilot-in-command in the interest of safety, the task specialist shall be restrained at his/her assigned station unless otherwise specified in the checklist.

(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.

NCO.SPEC.135 Fuel and oil supply - aeroplanes

NCO.OP.125(a)(1)(i) does not apply to sailplane-towing, flying display, aerobatic flights or competition flights.

NCO.SPEC.140 Fuel and oil supply - helicopters

Notwithstanding NCO.OP.126(a)(1), the pilot-in-command of a helicopter may only commence a VFR flight by day remaining within 25 NM of the aerodrome/operating site of departure with reserve fuel of not less than 10 minutes at best-range-speed.

NCO.SPEC.145 Simulated situations in flight

Unless a task specialist is on-board the aircraft for training, the pilot-in-command shall, when carrying task specialists, not simulate:

(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.

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

(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;

(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.

(b) The installation of all hoist and cargo hook equipment and any subsequent modifications shall have an airworthiness approval appropriate to the intended function.

SECTION 4
Parachute operations (PAR)

NCO.SPEC.PAR.100 Checklist

The checklist for PAR shall contain:

(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.

NCO.SPEC.PAR.120 Release of dangerous goods

Notwithstanding NCO.SPEC.160, 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 train devices, provided these are manufactured for this purpose.

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.

ANNEX VIII

SPECIALISED OPERATIONS

[PART-SPO]

SPO.GEN.005 Scope

(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.

(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):

(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.

(2) parachute dropping, sailplane towing or aerobatic flights performed either by a training organisation having its principal place of business in a Member State and approved in accordance with 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.

SUBPART A

GENERAL REQUIREMENTS

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 or is residing.

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.

SPO.GEN.102 Touring motor gliders, -powered sailplanes and mixed balloons

(a) Touring motor gliders shall be operated following the requirements for:

(1) aeroplanes when they are power-driven by an engine; and

(2) sailplanes when operated without using an engine.

(b) Touring motor gliders shall be equipped in compliance with the requirements applicable to aeroplanes unless otherwise specified in Subpart D.

(c) Powered sailplanes, excluding touring motor gliders, shall be operated and equipped in compliance with the requirements applicable to sailplanes.

(d) Mixed balloons shall be operated in accordance with the requirements for hot-air balloons.

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.

(b) Except for balloons, during critical phases of 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.

(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

(2) when under the influence of psychoactive substances or alcohol or for other reasons as referred to in 7.g. of Annex IV to Regulation (EC) No 216/2008.

(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.

(b) Except for balloons, during critical phases of flight or whenever deemed necessary by the pilot-in-command in the interest of safety, the task specialist shall be restrained at his/her assigned station unless otherwise specified in the SOP.

(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;

(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 SPO.IDE.A.105, SPO.IDE.H.105, SPO.IDE.S.105 or SPO.IDE.B.105;

(iv) the mass of the aircraft and, except in the case of balloons, the centre of gravity location are such that the flight can be conducted within limits prescribed in the airworthiness documentation;

(v) all equipment and baggage is properly loaded and secured; and

(vi) the aircraft operating limitations as specified in the aircraft flight manual (AFM) will not be exceeded at any time during the flight;

(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

(9) ensuring that, when installed, flight recorders:

(i) are not disabled or switched off during flight; and

(ii) in the event of an accident or an incident that is subject to mandatory reporting:

(A) are not intentionally erased;

(B) are deactivated immediately after the flight is completed; and

(C) are reactivated only with the agreement of the investigating authority.

(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.

(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.

SPO.GEN.108 Pilot-in-command responsibilities and authority - balloons

The pilot-in-command of a balloon shall, in addition to SPO.GEN.107:

(a) be responsible for the pre-flight briefing of those persons assisting in the inflation and deflation of the envelope;

(b) ensure that no person is smoking on board or within the direct vicinity of the balloon; and

(c) ensure that persons assisting in the inflation and deflation of the envelope wear appropriate protective clothing.

SPO.GEN.110 Compliance with laws, regulations and procedures

The pilot-in-command, crew members and task specialists shall comply with the laws, regulations and procedures of those States where operations are conducted.

SPO.GEN.115 Common language

The operator shall ensure that all crew members and task specialists are able to communicate with each other in a common language.

SPO.GEN.119 Taxiing of aircraft

The operator shall establish procedures for taxiing of aircraft in order to ensure safe operation and in order to enhance runway safety.

SPO.GEN.120 Taxiing of aeroplanes

The operator shall ensure that an aeroplane is only taxied on the movement area of an aerodrome if the person at the controls:

(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.

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;

(10) the aircraft technical log, in accordance with Annex I (Part-M) to Regulation (EC) No 2042/2003, if applicable;

(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;

(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.

(c) Notwithstanding (a), on flights with balloons or sailplanes, excluding touring motor gliders (TMGs), the documents and information in (a)(1) to (a)(10) and (a)(13) to (a)(19) may be carried in the retrieve vehicle.

(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.

SPO.GEN.145 Preservation, production and use of flight recorder recordings - operations with complex motor-powered aircraft

(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 for a period of 60 days or until otherwise directed by the investigating authority.

(b) The operator shall conduct operational checks and evaluations of flight data recorder (FDR) recordings, cockpit voice recorder (CVR) recordings and data link recordings to ensure the continued serviceability of the recorders.

(c) The operator shall save the recordings for the period of operating time of the FDR as required by SPO.IDE.A.145 or SPO.IDE.H.145, except that, for the purpose of testing and maintaining the FDR, up to 1 hour of the oldest recorded material 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 FDR raw data into parameters expressed in engineering units.

(e) The operator shall make available any flight recorder recording that has been preserved, if so determined by the competent authority.

(f) CVR recordings shall only be used for purposes other than for the investigation of an accident or an incident subject to mandatory reporting if all crew members and maintenance personnel concerned consent.

(g) FDR recordings or data link recordings shall only be used for purposes other than for the investigation of an accident or an incident that is subject to mandatory reporting if such records are:

(1) used by the operator for airworthiness or maintenance purposes only;

(2) de-identified; or

(3) disclosed under secure procedures.

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 this Regulation, 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.

(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.150 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.

SPO.OP.105 Specification of isolated aerodromes - aeroplanes

For the selection of alternate aerodromes and the fuel policy, the operator shall consider an aerodrome as an isolated aerodrome if the flying time to the nearest adequate destination alternate aerodrome is more than:

(a) for aeroplanes with reciprocating engines, 60 minutes; or

(b) for aeroplanes with turbine engines, 90 minutes.

SPO.OP.110 Aerodrome operating minima - aeroplanes and helicopters

(a) For instrument flight rules (IFR) flights, the operator or the pilot-in-command shall specify aerodrome operating minima for each departure, destination and alternate aerodrome to be used. Such minima shall:

(1) not be lower than those established by the State in which the aerodrome is located, except when specifically approved by that State; and

(2) when undertaking low visibility operations, be approved by the competent authority in accordance with Annex V (Part-SPA), Subpart E to Regulation (EU) No 965/2012.

(b) When specifying the aerodrome operating minima, the operator or the pilot-in-command shall take the following into account:

(1) the type, performance and handling characteristics of the aircraft;

(2) the competence and experience of the flight crew and, if applicable, its composition;

(3) the dimensions and characteristics of the runways and final approach and take-off areas (FATOs) that may be selected for use;

(4) the adequacy and performance of the available visual and non-visual ground aids;

(5) the equipment available on the aircraft for the purpose of navigation and/or control of the flight path, during the take-off, the approach, the flare, the landing, the rollout and the missed approach;

(6) the obstacles in the approach, the missed approach and the climb-out areas required for the execution of contingency procedures;

(7) the obstacle clearance altitude/height for the instrument approach procedures;

(8) the means to determine and report meteorological conditions; and

(9) the flight technique to be used during the final approach.

(c) The minima for a specific type of approach and landing procedure shall only be used if:

(1) the ground equipment required for the intended procedure is operative;

(2) the aircraft systems required for the type of approach are operative;

(3) the required aircraft performance criteria are met; and

(4) the flight crew is qualified appropriately.

SPO.OP.111 Aerodrome operating minima - NPA, APV, CAT I operations

(a) The decision height (DH) to be used for a non-precision approach (NPA) flown with the continuous descent final approach (CDFA) technique, approach procedure with vertical guidance (APV) or category I (CAT I) operation shall not be lower than the highest of:

(1) the minimum height to which the approach aid can be used without the required visual reference;

(2) the obstacle clearance height (OCH) for the category of aircraft;

(3) the published approach procedure DH where applicable;

(4) the system minimum specified in Table 1; or

(5) the minimum DH specified in the AFM or equivalent document, if stated.

(b) The minimum descent height (MDH) for an NPA operation flown without the CDFA technique shall not be lower than the highest of:

(1) the OCH for the category of aircraft;

(2) the system minimum specified in Table 1; or

(3) the minimum MDH specified in the AFM, if stated.

Table 1
System minima

Facility	Lowest DH/MDH (ft)
Instrument landing system (ILS)	200
Global navigation satellite system (GNSS)/ satellite-based augmentation system (SBAS) (lateral precision with vertical guidance approach (LPV))	200
GNSS (lateral navigation (LNAV))	250
GNSS/Baro-vertical navigation (VNAV) (LNAV/VNAV)	250
Localiser (LOC) with or without distance measuring equipment (DME)	250
Surveillance radar approach (SRA) (terminating at ½ NM)	250
SRA (terminating at 1 NM)	300
SRA (terminating at 2 NM or more)	350
VHF omnidirectional radio range (VOR)	300
VOR/DME	250
Non-directional beacon (NDB)	350
NDB-DME	300
VHF direction finder (VDF)	350

SPO.OP.112 Aerodrome operating minima - circling operations with aeroplanes

(a) The MDH for a circling 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 instrument approach procedure.

(b) The minimum visibility for a circling operation with aeroplanes shall be the highest of:

(1) the circling visibility for the aeroplane category, if published;

(2) the minimum visibility derived from Table 2; or

(3) the runway visual range/converted meteorological visibility (RVR/CMV) of the preceding instrument approach procedure.

Table 1

MDH and minimum visibility for circling vs. aeroplane category

	Aeroplane category			
	A	**B**	**C**	**D**
MDH (ft)	400	500	600	700
Minimal meteorological visibility (m)	1 500	1 600	2 400	3 600

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.

SPO.OP.120 Noise abatement procedures

The pilot-in-command shall take into account published noise abatement procedures to minimise the effect of aircraft noise while ensuring that safety has priority over noise abatement.

SPO.OP.121 Noise abatement procedures - balloons

The pilot-in-command shall make use of operating procedures, where established, to minimise the effect of heating-system noise while ensuring that safety has priority over noise abatement.

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.

SPO.OP.130 Fuel and oil supply - aeroplanes

(a) The pilot-in-command shall only commence a flight if the aeroplane carries sufficient fuel and oil for the following:

(1) for visual flight rules (VFR) flights:

(i) by day, to fly to the aerodrome of intended landing and thereafter to fly for at least 30 minutes at normal cruising altitude; or

(ii) by night, to fly to the aerodrome of intended landing and thereafter to fly for at least 45 minutes at normal cruising altitude;

(2) for IFR flights:

(i) when no destination alternate is required, to fly to the aerodrome of intended landing and thereafter to fly for at least 45 minutes at normal cruising altitude; or

(ii) when a destination alternate is required, to fly to the aerodrome of intended landing, to an alternate aerodrome and thereafter to fly for at least 45 minutes at normal cruising altitude.

(b) In computing the fuel required, including providing for contingency, the following shall be taken into consideration:

(1) forecast meteorological conditions;

(2) anticipated ATC routings and traffic delays;

(3) procedures for loss of pressurisation or failure of one engine while en-route, where applicable; and

(4) any other condition that may delay the landing of the aeroplane or increase fuel and/or oil consumption.

(c) Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is re-planned.

SPO.OP.131 Fuel and oil supply - helicopters

(a) The pilot-in-command shall only commence a flight if the helicopter carries sufficient fuel and oil for the following:

(1) for VFR flights:

(i) to fly to the aerodrome/operating site of intended landing and thereafter to fly for at least 20 minutes at best-range-speed; or

(ii) for VFR flights by day, a reserve fuel of 10 minutes at best-range-speed provided the he/she remains within 25 NM of the aerodrome/operating site of departure; and

(2) for IFR flights:

(i) when no alternate is required or no weather-permissible alternate aerodrome is available, to fly to the aerodrome/operating site of intended landing, and thereafter to fly for 30 minutes at normal cruising speed at 450 m (1 500 ft) above the destination aerodrome/operating site under standard temperature conditions and approach and land; or

(ii) when an alternate is required, to fly to and execute an approach and a missed approach at the aerodrome/operating site of intended landing, and thereafter:

(A) to fly to the specified alternate; and

(B) to fly for 30 minutes at normal holding speed at 450 m (1 500 ft) above the alternate aerodrome/operating site under standard temperature conditions and approach and land.

(b) In computing the fuel required, including providing for contingency, the following shall be taken into consideration:

(1) forecast meteorological conditions;

(2) anticipated ATC routings and traffic delays;

(3) failure of one engine while en-route, where applicable; and

(4) any other condition that may delay the landing of the aircraft or increase fuel and/or oil consumption.

(c) Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is re-planned.

SPO.OP.132 Fuel and ballast supply and planning - balloons

(a) The pilot-in-command shall only commence a flight if the reserve fuel or ballast is sufficient for 30 minutes of flight.

(b) Fuel or ballast supply calculations shall be based upon at least the following operating conditions under which the flight is to be conducted:

(1) data provided by the balloon manufacturer;

(2) anticipated masses;

(3) expected meteorological conditions; and

(4) air navigation services provider procedures and restrictions.

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

(a) Before commencing a flight, the pilot-in-command shall ascertain by every reasonable means available that the 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.

(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 available current weather 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 weather conditions.

SPO.OP.145 Take-off alternate aerodromes - complex motor-powered aeroplanes

(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 weather conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or it would not be possible to return to the aerodrome of departure for other reasons.

(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.

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

(b) the place of intended landing is isolated 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, 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; and

(ii) visibility of at least 5,5 km or of 4 km more than the minimum associated with the procedure.

SPO.OP.151 Destination alternate aerodromes - helicopters

For IFR flights, the pilot-in-command shall specify at least one weather-permissible destination alternate aerodrome in the flight plan, unless:

(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; and

(3) a point of no return (PNR) is determined in case of an offshore destination.

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.

(b) For all other types of fuel, necessary precautions shall be taken and the aircraft shall be properly manned by qualified personnel ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

SPO.OP.160 Use of headset

Except for balloons, each flight crew member required to be on duty in the flight crew compartment shall wear a headset with boom microphone, or equivalent, and use it as the primary device to communicate with ATS, other crew members and task specialists.

SPO.OP.165 Smoking

The pilot-in-command shall not allow smoking on board or during refuelling or defuelling of the aircraft.

SPO.OP.170 Meteorological conditions

(a) The pilot-in-command shall only commence or continue a VFR flight if the latest available meteorological information indicates that the weather conditions along the route and at the intended destination at the estimated time of use will be at or above the applicable VFR operating minima.

(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 weather conditions at the destination or at least one destination alternate aerodrome are at or above the applicable aerodrome operating minima.

(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.

SPO.OP.180 Take-off conditions - aeroplanes and helicopters

Before commencing take-off, the pilot-in-command shall be satisfied that:

(a) according to the information available, the weather at the aerodrome or operating site and the condition of the runway or FATO intended to be used would not prevent a safe take-off and departure; and

(b) applicable aerodrome operating minima will be complied with.

SPO.OP.181 Take-off conditions - balloons

Before commencing take-off, the pilot-in-command shall be satisfied that, according to the information available, the weather at the operating site or aerodrome will not prevent a safe take-off and departure.

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).

SPO.OP.190 In-flight fuel management

(a) The operator of a complex motor-powered aircraft shall ensure that in-flight fuel checks and fuel management are performed.

(b) The pilot-in-command shall check at regular intervals that the amount of usable fuel remaining in flight is not less than the fuel required to proceed to a weather-permissible aerodrome or operating site and the planned reserve fuel as required by SPO.OP.130 and SPO.OP.131.

SPO.OP.195 Use of supplemental oxygen

(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);

(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)

(a) The operator shall establish operational procedures and training programmes when ACAS is installed and serviceable. When ACAS II is used, such procedures and training shall be in accordance with Regulation (EU) No 1332/2011.

(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.

SPO.OP.210 Approach and landing conditions - aeroplanes and helicopters

Before commencing an approach to land, the pilot-in-command shall be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the runway or FATO intended to be used would not prevent a safe approach, landing or missed approach.

SPO.OP.215 Commencement and continuation of approach - aeroplanes and helicopters

(a) The pilot-in-command may commence an instrument approach regardless of the reported runway visual range/visibility (RVR/VIS).

(b) If the reported RVR/VIS is less than the applicable minimum, the approach shall not be continued:

(1) below 1 000 ft above the aerodrome; or

(2) into the final approach segment in the case where the decision altitude/height (DA/H) or minimum descent altitude/height (MDA/H) is more than 1 000 ft above the aerodrome,

(c) Where the RVR is not available, RVR values may be derived by converting the reported visibility.

(d) If, after passing 1 000 ft above the aerodrome, the reported RVR/VIS falls below the applicable minimum, the approach may be continued to DA/H or MDA/H.

(e) The approach may be continued below DA/H or MDA/H and the landing may be completed provided that the visual reference adequate for the type of approach operation and for the intended runway is established at the DA/H or MDA/H and is maintained.

(f) The touchdown zone RVR shall always be controlling.

SPO.OP.225 Operational limitations - hot-air balloons

(a) A hot-air balloon shall not land during night, except in emergency situations.

(b) A hot-air balloon may take-off during night, provided sufficient fuel is carried for a landing during day.

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.

SUBPART C

AIRCRAFT PERFORMANCE AND OPERATING LIMITATIONS

SPO.POL.100 Operating limitations - all aircraft

(a) During any phase of operation, the loading, the mass and, except for balloons, the centre of gravity (CG) position of the aircraft shall comply with any limitation specified in the appropriate manual.

(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.

SPO.POL.105 Mass and balance

(a) The operator shall ensure that the mass and, except for balloons, the CG of the aircraft have been established by actual weighing prior to initial entry into service. The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented. Such information shall be made available to the pilot-in-command. The aircraft shall be reweighed if the effect of modifications on the mass and balance is not accurately known.

(b) The weighing shall be accomplished:

(1) for aeroplanes and helicopters, by the manufacturer of the aircraft or by an approved maintenance organisation; and

(2) for sailplanes and balloons, by the manufacturer of the aircraft or in accordance with Regulation (EC) No 2042/2003 as applicable.

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 for each flight or series of flights:

(1) aircraft dry operating mass;

(2) mass of the traffic load;

(3) mass of the fuel load;

(4) aircraft load and load distribution;

(5) take-off mass, landing mass and zero fuel mass; and

(6) applicable aircraft 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 load by using the actual density or, if not known, the density calculated in accordance with a method specified in the operations manual.

(d) 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.

(e) The operator shall specify, in the operations manual, the principles and methods involved in the loading and in the mass and balance system that meet the requirements contained in (a) to (d). This system shall cover all types of intended operations.

SPO.POL.115 Mass and balance data and documentation - commercial operations with aeroplanes and helicopters and non-commercial operations with complex motor-powered aircraft

(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;

(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;

(9) take-off mass, landing mass and zero fuel mass;

(10) applicable aircraft CG positions; and

(11) the limiting mass and CG values.

(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 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.

(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.

(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.

(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, and

(7) sea anchor and equipment for mooring.

(c) Instruments and equipment not required by this Subpart as well as any other equipment that is not required by other applicable Annexes, but is carried on a flight, shall comply with the following:

(1) the information provided by these instruments, equipment or accessories shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008 or SPO.IDE.A.215 and SPO.IDE.A.220;

(2) the instruments and equipment shall not affect the airworthiness of the aeroplane, even in the case of failures or malfunction.

(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.

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:

(a) the aeroplane is operated in accordance with the minimum equipment list (MEL), if established;

(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); or

(c) the aeroplane is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

SPO.IDE.A.110 Spare electrical fuses

Aeroplanes shall be equipped with spare electrical fuses, of the ratings required for complete circuit protection, for replacement of those fuses that are allowed to be replaced in flight.

SPO.IDE.A.115 Operating lights

Aeroplanes operated at night shall be equipped with:

(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,

(3) pressure altitude,

(4) indicated airspeed,

(5) Mach number whenever speed limitations are expressed in terms of Mach number, and

(6) slip for complex motor-powered aeroplanes.

(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:

(1) pressure altitude,

(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,

(3) pressure altitude,

(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.

(c) whenever two pilots are required for the operation, an additional separate means of displaying for the second pilot:

(1) pressure altitude,

(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

(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 that the attitude indicator is being operated by emergency power.

SPO.IDE.A.126 Additional equipment for single-pilot operation under IFR

Complex motor-powered aeroplanes operated under IFR with a single pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

SPO.IDE.A.130 Terrain awareness warning system (TAWS)

Turbine-powered aeroplanes with a maximum certified take-off mass (MCTOM) of more than 5 700 kg or an MOPSC of more than nine shall be equipped with a TAWS that meets the requirements for:

(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.

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

(iii) for which a type certificate is first issued on or after 1 January 2016.

(b) The CVR shall be capable of retaining data recorded during at least:

(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 2021; or

(2) the preceding 2 hours in all other cases.

(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.

(f) If the CVR is not deployable, it shall have a device to assist in locating it under water.

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.

(d) The FDR shall start automatically to record the data prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is incapable of moving under its own power.

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water.

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;

(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.

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water.

(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;

(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;

(d) for complex motor-powered aeroplanes, a seat belt with upper torso restraint system, having a single point release and 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.

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.

(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

(a) Aeroplanes, except touring motor gliders (TMG) and 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.

(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.

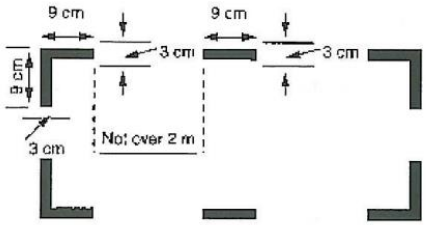
SPO.IDE.A.181 Crash axe and crowbar

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



SPO.IDE.A.190 Emergency locator transmitter (ELT)

(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; 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.

(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

(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.

(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.

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.

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.

(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, and

(6) sea anchor and equipment for mooring.

(c) Instruments and equipment not required by this Subpart as well as any other equipment that is not required by other applicable Annexes, but is carried on a flight, shall comply with the following:

(1) the information provided by these instruments, equipment or accessories shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008 or SPO.IDE.H.215 and SPO.IDE.H.220; and

(2) the instruments and equipment shall not affect the airworthiness of the helicopter, even in the case of failures or malfunction.

(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.

SPO.IDE.H.105 Minimum equipment for flight

A flight shall not be commenced when any of the helicopter's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

(a) the helicopter is operated in accordance with the minimum equipment list (MEL), if established;

(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); or

(c) the helicopter is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

SPO.IDE.H.115 Operating lights

Helicopters operated at night shall be equipped with:

(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 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,

(3) pressure altitude,

(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:

(1) pressure altitude,

(2) indicated airspeed,

(3) slip,

(4) attitude, if applicable,

(5) vertical speed, if applicable, and

(6) stabilised heading, if applicable.

SPO.IDE.H.125 Operations under IFR - flight and navigational instruments and associated equipment

Helicopters operated under IFR shall be equipped with:

(a) a means of measuring and displaying:

(1) magnetic heading,

(2) time in hours, minutes and seconds,

(3) pressure altitude,

(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:

(1) pressure altitude,

(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.

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.

(f) If the CVR is not deployable, it shall have a device to assist in locating it under water.

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.

(e) If the FDR is not deployable, it shall have a device to assist in locating it under water.

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;

(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.

(d) If the recorder is not deployable, it shall have a device to assist in locating it under water.

(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.

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

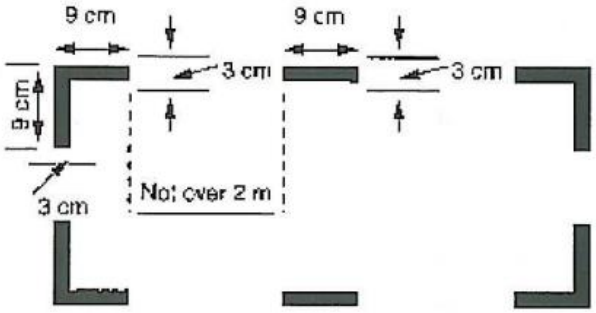
(2) in each cabin compartment that is separate from the flight crew compartment, except if the compartment is readily accessible to the flight crew.

(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



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.

(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.

(c) ELTs of any type and PLBs shall be capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

SPO.IDE.H.195 Flight over water - other-than complex motor-powered helicopters

(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:

(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.

SPO.IDE.H.198 Survival suits - complex motor-powered helicopters

Each person on board shall wear a survival suit when operating:

(a) on a flight over water in support of offshore operations, 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 and when:

(1) 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; or

(2) the estimated rescue time exceeds the estimated survival time; or

(b) so determined by the pilot-in-command based on a risk assessment taking into account the following conditions:

(1) flights over water beyond auto-rotational distance or safe forced landing distance from land, where in the case of the critical engine failure, the helicopter is not able to sustain level flight; and

(2) the weather report or forecasts available to the pilot-in-command indicate that the sea temperature will be less than plus 10 °C during the flight.

SPO.IDE.H.199 Life-rafts, survival ELTs and survival equipment on extended overwater flights - complex motor-powered helicopters

Helicopters operated:

(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.

SPO.IDE.H.201 Additional requirements for helicopters conducting offshore operations in a hostile sea area - complex motor-powered helicopters

Helicopters operated in offshore operations in a hostile sea area, at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, shall comply with the following:

(a) When 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, or when the estimated rescue time exceeds the calculated survival time, or the flight is planned to be conducted at night, all crew members and task specialists on board are wearing a survival suit.

(b) All life-rafts carried in accordance with SPO.IDE.H.199 shall be installed so as to be usable in the sea conditions in which the helicopter's ditching, flotation and trim characteristics were evaluated in order to comply with the ditching requirements for certification.

(c) 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.

(d) All emergency exits, including crew emergency exits, and the means of opening them shall be conspicuously marked for the guidance of occupants using the exits in daylight or in the dark. Such markings shall be designed to remain visible if the helicopter is capsized and the cabin is submerged.

(e) All 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 occupants' egress in all sea conditions up to the maximum required to be evaluated for ditching and flotation.

(f) All doors, windows or other openings in the cabin compartment intended to be used for the purpose of underwater escape shall be equipped so as to be operable in an emergency.

(g) Life-jackets shall be worn at all times, unless the task specialist or crew member for whose use the life jacket is provided is wearing an integrated survival suit that meets the combined requirement of the survival suit and life-jacket.

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

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:

(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.

(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.

SPO.IDE.H.255 Transponder

Where required by the airspace being flown, helicopters shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

SECTION 3

Sailplanes

SPO.IDE.S.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.S.145;

(3) used to comply with SPO.IDE.S.150; or

(4) installed in the sailplane.

(b) The following items, when required by this Subpart, do not need an equipment approval:

(1) independent portable light,

(2) accurate time piece, and

(3) survival and signalling equipment.

(c) Instruments and equipment not required by this Subpart as well as any other equipment that is not required by other applicable Annexes, but is carried on a flight, shall comply with the following:

(1) the information provided by these instruments, equipment or accessories shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008; and

(2) the instruments and equipment shall not affect the airworthiness of the sailplane, even in the case of failures or malfunction.

(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.

SPO.IDE.S.105 Minimum equipment for flight

A flight shall not be commenced when any of the sailplane instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

(a) the sailplane is operated in accordance with the MEL, if established; or

(b) the sailplane is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

SPO.IDE.S.115 Operations under VFR - flight and navigational instruments

(a) Sailplanes operated under VFR by day shall be equipped with a means of measuring and displaying the following:

(1) in the case of powered sailplanes, magnetic heading,

(2) time in hours, minutes and seconds,

(3) pressure altitude, and

(4) indicated airspeed.

(b) Sailplanes operating in conditions where the sailplane cannot be maintained in a desired attitude without reference to one or more additional instruments, shall be, in addition to (a), equipped with a means of measuring and displaying

(1) vertical speed,

(2) attitude or turn and slip, and

(3) magnetic heading.

SPO.IDE.S.120 Cloud flying - flight and navigational instruments

Sailplanes performing cloud flying shall be equipped with a means of measuring and displaying:

(a) magnetic heading,

(b) time in hours, minutes and seconds,

(c) pressure altitude,

(d) indicated airspeed,

(e) vertical speed, and

(f) attitude or turn and slip.

SPO.IDE.S.125 Seats and restraint systems

(a) Sailplanes shall be equipped with:

(1) a seat for each person on board; and

(2) a seat belt with upper torso restraint system for each seat according to the AFM.

(b) A seat belt with upper torso restraint system shall have a single point release.

SPO.IDE.S.130 Supplemental oxygen

Sailplanes operated at pressure altitudes above 10 000 ft shall be equipped with an oxygen storage and dispensing apparatus carrying enough breathing oxygen to supply:

(a) crew members for any period in excess of 30 minutes when the pressure altitude will be between 10 000 ft and 13 000 ft; and

(b) all crew members and task specialists for any period that the pressure altitude will be above 13 000 ft.

SPO.IDE.S.135 Flight over water

The pilot-in-command of a sailplane operated over water shall determine the risks to survival of the occupants of the sailplane in the event of a ditching, based on which he/she shall determine the carriage of:

(a) a life-jacket, or equivalent individual floatation device, for each person on board, that shall be worn or stowed in a position that is readily accessible from the seat of the person for whose use it is provided;

(b) an emergency locator transmitter (ELT) or a personal locator beacon (PLB), carried by a crew member or a task specialist, capable of transmitting simultaneously on 121,5 MHz and 406 MHz; and

(c) equipment for making distress signals, when operating a flight:

(1) over water beyond gliding distance from land; or

(2) where the take-off or approach path is so disposed over water that in the event of a mishap there would be a likelihood of ditching.

SPO.IDE.S.140 Survival equipment

Sailplanes operated over areas in which search and rescue would be especially difficult shall be equipped with such signalling devices and life-saving equipment as appropriate to the area overflown.

SPO.IDE.S.145 Radio communication equipment

(a) Where required by the airspace being flown sailplanes shall be equipped with radio communication equipment capable of conducting two-way communication with those aeronautical stations or 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.

SPO.IDE.S.150 Navigation equipment

Sailplanes shall be equipped with any navigation equipment necessary to proceed in accordance with:

(a) the ATS flight plan if applicable; and

(b) the applicable airspace requirements.

SPO.IDE.S.155 Transponder

When required by the airspace being flown, sailplanes shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

SECTION 4
Balloons

SPO.IDE.B.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 determine the flight path;

(2) used to comply with SPO.IDE.B.145; or

(3) installed in the balloon.

(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) first-aid kit, and

(4) survival and signalling equipment,

(c) Instruments and equipment not required by this Subpart as well as any other equipment that is not required by other applicable Annexes, but is carried on a flight, shall comply with the following:

(1) the information provided by these instruments, equipment or accessories shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008; and

(2) the instruments and equipment shall not affect the airworthiness of the balloon, even in the case of failures or malfunction.

(d) Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is assigned.

(e) All required emergency equipment shall be easily accessible for immediate use.

SPO.IDE.B.105 Minimum equipment for flight

A flight shall not be commenced when any of the balloon instruments, items of equipment or functions required for the intended flight are inoperative, unless:

(a) the balloon is operated in accordance with the MEL, if established; or

(b) the balloon is subject to a permit to fly issued in accordance with the applicable airworthiness requirements.

SPO.IDE.B.110 Operating lights

Balloons operated at night shall be equipped with:

(a) anti-collision lights;

(b) a means to provide adequate illumination for all instruments and equipment essential to the safe operation of the balloon;

(c) an independent portable light.

SPO.IDE.B.115 Operations under VFR - flight and navigational instruments and associated equipment

Balloons operated under VFR by day shall be equipped with the following:

(a) a means of displaying drift direction; and

(b) a means of measuring and displaying:

(1) time in hours, minutes and seconds;

(2) vertical speed, if required by the AFM; and

(3) pressure altitude, if required by the AFM, if required by airspace requirements or when altitude needs to be controlled for the use of oxygen.

SPO.IDE.B.120 First-aid kit

(a) Balloons 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.B.121 Supplemental oxygen

Balloons operated at pressure altitudes above 10 000 ft shall be equipped with an oxygen storage and dispensing apparatus carrying enough breathing oxygen to supply:

(a) crew members for any period in excess of 30 minutes when the pressure altitude will be between 10 000 ft and 13 000 ft; and

(b) all crew members and task specialists for any period that the pressure altitude will be above 13 000 ft.

SPO.IDE.B.125 Hand fire extinguishers

Hot air balloons shall be equipped with at least one hand fire extinguisher if required by the applicable certification specifications.

SPO.IDE.B.130 Flight over water

The pilot-in-command of a balloon operated over water shall determine the risks to survival of the occupants of the balloon in the event of a ditching, based on which he/she shall determine the carriage of:

(a) a life-jacket for each person on board, that shall be worn or stowed in a position that is readily accessible from the station of the person for whose use it is provided;

(b) an emergency locator transmitter (ELT) or a personal locator beacon (PLB), carried by a crew member or a task specialist, capable of transmitting simultaneously on 121,5 MHz and 406 MHz; and

(c) equipment for making the distress signals.

SPO.IDE.B.135 Survival equipment

Balloons operated over areas in which search and rescue would be especially difficult shall be equipped with such signalling devices and life-saving equipment as appropriate to the area overflown.

SPO.IDE.B.140 Miscellaneous equipment

(a) Balloons shall be equipped with protective gloves for each crew member.

(b) Hot-air balloons shall be equipped with:

(1) an alternative source of ignition;

(2) a means of measuring and indicating fuel quantity;

(3) a fire blanket or fire resistant cover; and

(4) a drop line of at least 25 metres (m) in length.

(c) Gas balloons shall be equipped with:

(1) a knife; and

(2) a drop line of at least 20 m in length made of natural fibre or electrostatic conductive material.

SPO.IDE.B.145 Radio communication equipment

(a) Where required by the airspace being flown balloons shall be equipped with radio communication equipment capable of conducting two-way communication with those aeronautical stations or 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.

SPO.IDE.B.150 Transponder

When required by the airspace being flown, balloons shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

SUBPART E

SPECIFIC REQUIREMENTS

SECTION 1
Helicopter external sling load operations (HESLO)

SPO.SPEC.HESLO.100 Standard operating procedures

The standard operating procedures for HESLO shall specify:

(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) responsibilities and duties of crew members and task specialists;

(d) performance criteria necessary to be met to conduct HESLO operations;

(e) normal, abnormal and emergency procedures.

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)

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;

(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 HEC operations;

(f) normal, abnormal and emergency procedures.

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.

(b) The installation of all hoist and cargo hook equipment and any subsequent modifications shall have an airworthiness approval appropriate to the intended function.

SECTION 3
Parachute operations (PAR)

SPO.SPEC.PAR.100 Standard operating procedures

The standard operating procedures for PAR shall specify:

(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.

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.

SPO.SPEC.PAR.120 Flight over water

When carrying more than 6 persons, the pilot-in-command of a balloon operated over water shall determine the risks to survival of the occupants of the balloon in the event of a ditching, based on which he/she shall determine the carriage of an emergency locator transmitter (ELT) capable of transmitting simultaneously on 121,5 MHz and 406 MHz.

SPO.SPEC.PAR.125 Releasing of dangerous goods

Notwithstanding SPO.GEN.155, parachutists may exit the aircraft for the purpose of parachute display over congested areas of cities, towns or settlements or over an open-air assembly of persons whilst carrying smoke train devices, provided these are manufactured for this purpose.

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;

(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.