European Aviation Safety Agency *27 Oct 2011*

Comment Response Document (CRD) to Notice of Proposed Amendment (NPA) 2009-02b

for a draft Agency Opinion on a Commission Regulation establishing the Implementing Rules for air operations of Community operators

and

a draft Decision of the Executive Director of the European Aviation Safety Agency on Acceptable Means of Compliance and Guidance Material related to the Implementing Rules for air operations of Community operators

'Part-CAT for sailplanes and balloons'

CRD b.3 — Resulting text of Part-CAT

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Part-CAT - IR

'Part-CAT' to Regulation (EC) No xx/xxxx is amended as follows:

1) A new Subpart A Section 2 is introduced as follows:

'Subpart A – General requirements

Section 2 - Non motor-powered aircraft

CAT.GEN.NMPA.100 Touring motor glider and powered sailplanes

(a) A touring motor glider shall be operated following the requirements for:

(1) aeroplanes when it is power-driven by its engine; and

(2) sailplanes when operated without using its engine.

(b) A touring motor glider shall be equipped in compliance with the requirements applicable to aeroplanes.

(c) Powered sailplanes shall be operated and equipped in compliance with the requirements applicable to sailplanes.

CAT.GEN.NMPA.105 Responsibilities of the commander

(a) The commander shall:

(1) be responsible for the safety of all passengers on board, as soon as he/she arrives on board of the aircraft, until he/she 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 he/she has delegated the responsibility to another qualified person during the filling phase until he/she arrives as specified in the operations manual;

(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 operation and the safety of the aircraft and of persons and/or property carried therein in accordance with Annex IV, 7.c. of 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) in the case of sailplanes, ensure that all passengers are briefed on the location of the emergency canopy release and the use of the parachute if applicable;

(7) in the case of balloons, ensure that all passengers are briefed on 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) ensure that the pre-flight inspection has been carried out in accordance with the aircraft flight manual; and

(10) be satisfied that relevant emergency equipment remains easily accessible for immediate use.

(b) The commander 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) The commander of a balloon shall in addition to (a) and (b):

(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.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 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 of 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

(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 below:

(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, 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);

(6) the operations specifications relevant to the aircraft type, issued in conjunction with the air operator certificate, 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 Part-M, if applicable;

(11) details of the filed air traffic service (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 minimum equipment list (MEL), if applicable;

(16) appropriate notice to airmen (NOTAM)/aeronautical information service (AIS) briefing documentation;

(17) appropriate meteorological information;

(18) passenger manifests, if applicable;

(19) mass and in the case of sailplanes mass and balance documentation;

(20) the operational flight plan, if applicable;

(21) notification of special categories of passenger, if applicable; and

(22) any other documentation which may be pertinent to the flight or is required by the States concerned with the flight.

(b) Notwithstanding paragraph (a) for operations under visual flight rules (VFR) day:

(1) taking off and landing at the same aerodrome/operating site; or

(2) remaining within a distance or area specified in the operations manual,

the following documents and information may be:

(i) carried in the retrieve vehicle, for flights with balloons; or

(ii) retained at the aerodrome/operating site, for flights with sailplanes:

(A) noise certificate

(B) aircraft radio licence

(C) journey log, or equivalent

(D) aircraft technical log

(E) NOTAM/AIS briefing documentation

(F) meteorological information

(G) passenger manifests

(H) notification of special categories of passenger

(I) mass and balance documentation.

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 the competent authority, provide to that person the documentation required to be carried on board.

CAT.GEN.NMPA.150 Transport of dangerous goods

(a) Unless otherwise determined by this Part, 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.

(b) Dangerous goods shall only be transported by the operator approved in accordance with SPA.DG, 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 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:

(1) any dangerous goods accidents or incidents; and

(2) the finding of undeclared or misdeclared dangerous goods discovered in cargo or passengers' baggage.

(f) The operator shall ensure that passengers are provided with information about dangerous goods as required by the Technical Instructions.

CAT.GEN.NMPA.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.

2) A new Subpart B Section 2 is introduced as follows:

'Subpart B - Operational procedures

Section 2 – Non motor-powered aircraft

CAT.OP.NMPA.100 Use of aerodromes and operating sites

The operator shall only use aerodromes or operating sites that are adequate for the type(s) of aircraft and operation(s) concerned.

CAT.OP.NMPA.105 Noise abatement procedures

(a) The operator shall ensure that take-off and landing procedures take 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.NMPA.110 Fuel or ballast supply and planning - balloons

(a) The operator shall ensure that the minimum fuel or ballast carried is sufficient for the intended flight duration plus a reserve of 30 minutes.

(b) Fuel, gas 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.

CAT.OP.NMPA.115 Carriage of special categories of passengers (SCPs)

(a) Persons requiring special conditions, assistance and/or devices when carried on a flight, shall only be carried under conditions that ensure the safety of the aircraft and its occupants according to procedures established by the operator. Special categories of passengers shall not be allocated, nor occupy, a place where their presence could:

(1) impede the flight crew in their duties;

(2) obstruct access to emergency equipment; or

(3) impede the emergency evacuation of the aircraft.

(b) The operator shall notify the commander in advance when any persons referred to in (a) are planned to be carried on board.

CAT.OP.NMPA.120 Stowage of baggage

The operator shall establish procedures to ensure that:

(a) only hand baggage that can be adequately and securely stowed for the take-off and landing is taken into the passenger compartment; and

(b) all baggage that might cause injury or damage on board shall be stowed so as to prevent its movement.

CAT.OP.NMPA.125 Passenger briefing

The operator shall ensure that passengers are given a briefing on emergency equipment and procedures before or, where appropriate, during the flight.

CAT.OP.NMPA.130 Flight preparation

The flight shall not be commenced unless the commander:

(a) is satisfied that by every reasonable means available the ground 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; and

(b) is 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.135 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.140 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, all equipment and baggage are properly secured and that emergency evacuation remains possible.

CAT.OP.NMPA.145 Smoking on board

No person shall be allowed to smoke on board a sailplane or balloon.

CAT.OP.NMPA.150 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 arrival will be at or above the applicable VFR operating minima.

CAT.OP.NMPA.155 Ice and other contaminants – ground procedures

The commander shall only commence a 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.

CAT.OP.NMPA.160 Take-off conditions

Before commencing take-off, the commander 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.

CAT.OP.NMPA.165 Simulated abnormal situations in flight

The operator 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.170 In-flight fuel or ballast management

The operator shall establish a procedure to ensure that in-flight fuel or ballast checks are carried out on each flight at regular intervals.

CAT.OP.NMPA.175 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 altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the altitude exceeds 13 000 ft.

CAT.OP.NMPA.180 Approach and landing conditions

Before commencing an approach to land, the commander shall be satisfied that, according to the information available, the weather at the intended operating site and the condition of the surface intended to be used would not prevent a safe approach and landing.

CAT.OP.NMPA.185 Operational limitations – hot-air balloons

A hot-air balloon may take-off during night, provided sufficient fuel or ballast is carried for a landing during day.

3) A new Subpart C Section 3 is introduced as follows:

'Subpart C - Aircraft performance and operating limitations

Section 3 – Sailplanes

CAT.POL.S.100 Operating limitations - general

(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 of the sailplane has been established by actual weighing prior to initial entry into service, that the accumulated effects of modifications and repairs on the mass are accounted for and properly documented and that such information is available to the flight crew.

(b) The operator shall ensure that the sailplane is reweighed if the effect of modifications on the mass is not accurately known.

(c) The weighing shall be accomplished by the manufacturer of the sailplane or by an approved maintenance organisation.

CAT.POL.S.110 Performance – general

(a) A sailplane shall only be operated if its 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/operating sites used, taking into account the charting accuracy of any charts/maps used.

(b) A powered sailplane shall not be operated over the congested areas of cities, towns or settlements or over an open-air assembly of persons if, in the event of an engine failure, a landing cannot be made without causing undue hazard to persons or property on the ground.

4) A new Subpart C Section 4 is introduced as follows:

'Section 4 – Balloons

CAT.POL.B.100 Operating limitations - general

(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, that the accumulated effects of modifications and repairs on the mass are accounted for and properly documented and that such information is available to the flight crew.

(b) The operator shall ensure that the balloon is reweighed if the effect of modifications on the mass is not accurately known.

(c) The weighing shall be accomplished by the manufacturer of the balloon or by an approved maintenance organisation.

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:

(1) mass of the balloon;

(2) mass of the traffic load;

(3) mass of the fuel or ballast load;

(4) loading of the balloon under the supervision of qualified personnel;

(5) take-off mass and landing mass; and

(6) preparation and disposition of all documentation.

(b) The mass computation based on electronic calculations shall be replicable by the flight crew.

(c) The mass documentation shall be prepared prior to each flight.

CAT.POL.B.115 Performance – general

(a) A balloon shall only be operated only if its 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/operating sites used, taking into account the charting accuracy of any charts/maps used.

(b) A balloon shall not be operated over the congested areas of cities, towns or settlements or over an open-air assembly of persons if, in the event of a failure of the heating system or the engine, a landing cannot be made without causing undue hazard to persons or property on the ground.

5) A new Subpart D Section 3 is introduced as follows:

'Subpart D - Instruments, data and equipment

Section 3 - Sailplanes

CAT.IDE.S.100 Instruments and equipment – general

(a) Instruments and equipment required by this Part shall be approved in accordance with the applicable airworthiness requirements if they are:

(1) used by the flight crew to control the flight path, to comply with CAT.IDE.S.145 and CAT.IDE.S.150; or

(2) installed in the sailplane.

(b) The following items, when required by this Part, do not need an equipment approval:

(1) independent portable light,

(2) accurate time piece,

(3) survival and signalling equipment,

(c) Instruments and equipment not required by this Part that do not fall under the requirements of (a) as well as any other equipment that is not required by other Parts, 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 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.

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, 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 the commander 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 shore; 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) 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.‘

6) A new Subpart D Section 4 is introduced as follows:

'Section 4 - Balloons

CAT.IDE.B.100 Instruments and equipment – general

(a) Instruments and equipment required by this Part shall be approved in accordance with the applicable airworthiness requirements if they are:

(1) used by the flight crew to determine the flight path, to comply with CAT.IDE.B.155; or

(2) installed in the balloon.

(b) The following items, when required by this Part, do not need an equipment approval:

(1) independent portable light,

(2) accurate time piece,

(3) first-aid kit, and

(4) survival and signalling equipment,

(c) Instruments and equipment not required by this Part that do not fall under the requirements of (a) as well as any other equipment that is not required by other Parts, 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) position 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;

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,

(3) pressure altitude, if applicable, and

(4) except for gas balloons, the pressure of each supply line.

CAT.IDE.B.120 Restraint systems

Balloons 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 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.

CAT.IDE.B.135 Hand fire extinguishers

(a) Hot-air balloons shall be equipped with at least one hand fire extinguisher.

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, 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 the commander 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

Hot-air balloons and mixed balloons shall be equipped with:

(a) an alternative source of ignition;

(b) a means of indicating excessive envelope temperature;

(c) a means of measuring and indicating fuel quantity;

(d) protective gloves for each crew member;

(e) a hook knife;

(f) a fire blanket or fire resistant cover; and

(g) a drop line of at least 25 metres (m) in length.

CAT.IDE.B.155 Radio communication equipment

(a) 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.`

Part-CAT – AMC/GM

Part-CAT to draft ED Decision of the Executive Director of the European Aviation Safety Agency on Acceptable Means of Compliance and Guidance Material related to the Implementing Rules for air operations of Community operators ('AMC and GM to Part-CAT') is amended as follows:

1) A new Subpart A Section 2 is introduced as follows:

Subpart A – General Requirements

Section 2 – Non motor-powered aircraft

GM1-CAT.GEN.NMPA.105(c)(3) Responsibilities of the commander

PROTECTIVE CLOTHING

Protective clothing includes:

(a) long sleeves and trousers made out of natural fibres or mixed fibres;

(b) stout footwear; and

(c) gloves.

GM1-CAT.GEN.NMPA.120 Portable electronic devices

GENERAL

(a) Interference can result in:

(1) malfunctioning of multiple systems;

(2) false warnings of unsafe conditions;

(3) increased work load for the flight crew and the possibility of invoking emergency drills;

(4) reduced crew confidence in protection systems which may then be ignored during a genuine warning;

(5) distraction of the flight crew from their normal duties;

(6) noise in the flight crew headphones; and/or

(7) hidden failures of safety systems with loss of protection.

(b) Recommendations:

(1) Aircraft operators should consider installing detectors in their aircraft, which together with suitable procedures can assist the cabin crew to detect unauthorised transmissions from commonly used types of cell phone.

(2) Aircraft operators should seek the assistance of airport operators for the display of safety notices at aircraft boarding points reminding passengers to switch off cell phones and other transmitting devices.

AMC1-CAT.GEN.NMPA.125 Information on emergency and survival equipment carried

CONTENT OF INFORMATION

The information should include, as applicable, the number, colour and type of life-rafts and pyrotechnics, details of emergency medical supplies, water supplies and the type and frequencies of the emergency portable radio equipment.

AMC1-CAT.GEN.NMPA.140 Documents, manuals and information to be carried

GENERAL

(a) The documents, manuals and information may be available in a form other than on printed paper. Accessibility, usability and reliability should be assured.

(b) In case of loss or theft of documents specified in CAT.GEN.NMPA.140, the operation may continue until the flight reaches the base or a place where a replacement document can be provided.

AMC1-CAT.GEN.NMPA.140(a)(1) Documents, manuals and information to be carried

AIRCRAFT FLIGHT MANUAL OR EQUIVALENT DOCUMENT(S)

'The aircraft flight manual, or equivalent document(s)' means: the flight manual for the aircraft, or other documents containing information required for the operation of the aircraft within the terms of its certificate of airworthiness, unless this data is available in the parts of the operations manual carried on board.

GM1-CAT.GEN.NMPA.140(a)(5) Documents, manuals and information to be carried

THE AIR OPERATOR CERTIFICATE

Certified true copies may be provided:

(a) directly by the competent authority for certification; or

(b) by persons holding privileges for certification of official documents in accordance with applicable Member State's legislation, e.g., public notaries, authorised officials in public services.

AMC1-CAT.GEN.NMPA.140(a)(9) Documents, manuals and information to be carried

JOURNEY LOG, OR EQUIVALENT, FOR THE AIRCRAFT

'Journey log, or equivalent' means that the required information may be recorded in documentation other than a log book, such as the operational flight plan or the aircraft technical log.

AMC1-CAT.GEN.NMPA.140(a)(12) Documents, manuals and information to be carried

CURRENT AND SUITABLE AERONAUTICAL CHARTS

(a) The aeronautical charts carried should contain data appropriate to the applicable air traffic regulations, rules of the air, flight altitudes, area/route and nature of the operation. Due consideration should be given to carriage of textual and graphic representations of:

  (1) aeronautical data including, as appropriate for the nature of the operation:

    (i) airspace structure;

    (ii) significant points, navigation aids (navaids) and air traffic services (ATS) routes;

    (iii) navigation and communication frequencies;

    (iv) prohibited, restricted and danger areas; and

    (v) sites of other relevant activities that may hazard the flight;

    and

  (2) topographical data, including terrain and obstacle data.

(b) A combination of different charts and textual data may be used to provide adequate and current data.

(c) The required aeronautical data should be appropriate for the current aeronautical information regulation and control (AIRAC) cycle.

(d) The required topographical data should be reasonably recent, having regard to the nature of the planned operation.

AMC1-CAT.GEN.NMPA.140(a)(13) Documents, manuals and information to be carried

PROCEDURES AND VISUAL SIGNALS FOR USE BY INTERCEPTING AND INTERCEPTED AIRCRAFT

The procedures and the visual signals for use by intercepting and intercepted aircraft should reflect those contained in ICAO Annex 2. This may be part of the operations manual.

GM1-CAT.GEN.NMPA.140(a)(14) Documents, manuals and information to be carried

SEARCH AND RESCUE INFORMATION

This information is usually found in the State’s aeronautical information publication.

GM1-CAT.GEN.NMPA.140(a)(22) Documents, manuals and information to be carried

DOCUMENTS WHICH MAY BE PERTINENT TO THE FLIGHT

Any other documents that may be pertinent to the flight or required by the States concerned with the flight may include, for example, forms to comply with reporting requirements.

STATES CONCERNED WITH THE FLIGHT

The States concerned are those of origin, transit, overflight and destination of the flight.

AMC1-CAT.GEN.NMPA.150 Transport of dangerous goods

DANGEROUS GOODS ACCIDENT AND INCIDENT REPORTING

(a) Any type of dangerous goods accident or incident, or the finding of undeclared or misdeclared dangerous goods should be reported, irrespective of whether the dangerous goods are contained in passengers' baggage or crew baggage.

(b) The first report should be dispatched within 72 hours of the event. It may be sent by any means, including e-mail, telephone or fax. This report should include the details that are known at that time, under the headings identified in paragraph (c). If necessary, a subsequent report should be made as soon as possible giving all the details that were not known at the time the first report was sent. If a report has been made verbally, written confirmation should be sent as soon as possible.

(c) The first and any subsequent report should be as precise as possible and contain such of the following data that are relevant:

(1) date of the incident or accident or the finding of undeclared or misdeclared dangerous goods;

(2) location, the flight number and flight date;

(3) description of the goods and the reference number of the air waybill, pouch, baggage tag, ticket, etc.;

(4) proper shipping name (including the technical name, if appropriate) and UN/ID number, when known;

(5) class or division and any subsidiary risk;

(6) Type of packaging, and the packaging specification marking on it;

(7) quantity;

(8) name and address of the shipper, passenger, etc.;

(9) any other relevant details;

(10) suspected cause of the incident or accident;

(11) action taken;

(12) any other reporting action taken; and

(13) name, title, address and telephone number of the person making the report.

(d) Copies of relevant documents and any photographs taken should be attached to the report.

(e) A dangerous goods accident or incident may also constitute an aircraft accident, serious incident or incident. The criteria for reporting both types of occurrence should be met.

(f) The following Dangerous Goods Reporting Form should be used, but other forms, including electronic transfer of data, may be used provided that at least the minimum information of this AMC is supplied:

DANGEROUS GOODS OCCURRENCE REPORT			DGOR No:
1. Operator:	2. Date of Occurrence:		3. Local time of occurrence:
4. Flight date:		5. Flight No:	
6. Departure aerodrome:		7. Destination aerodrome:	
8. Aircraft type:		9. Aircraft registration:	
10. Location of occurrence:		11. Origin of the goods:	
12. Description of the occurrence, including details of injury, damage, etc. (if necessary continue on the reverse of this form):			
13. Proper shipping name (including the technical name):			14. UN/ID No (when known):
15.Class/Division (when known):	16. Subsidiary risk(s):	17. Packing group:	18 Category (Class 7 only):
19. Type of packaging:	20.Packaging specification marking:	21. No of packages:	22. Quantity (or transport index, if applicable):
23. Reference No of Airway Bill:			
24. Reference No of courier pouch, baggage tag, or passenger ticket:			
25. Name and address of shipper, agent, passenger, etc.:			

26. Other relevant information (including suspected cause, any action taken):	
27. Name and title of person making report:	28. Telephone No:
29. Company:	30. Reporters ref:
31. Address:	32. Signature:
	33. Date:
Description of the occurrence (continuation)	

Notes for completion of the form:

1. Any type of dangerous goods occurrence must be reported, irrespective of whether the dangerous goods are contained in cargo, mail or baggage.

2. A dangerous goods accident is an occurrence associated with and related to the transport of dangerous goods which results in fatal or serious injury to a person or major property damage. For this purpose serious injury is an injury which is sustained by a person in an accident and which:

   a. requires hospitalisation for more than 48 hours, commencing within 7 day from the date the injury was received; or

   b. results in a fracture of any bones (except simple fractures of fingers, toes or nose); or

   c. involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or

   d. involves injury to any internal organ; or

   e. involves second or third degree burns, or any burns affecting more than 5 % of the body surface; or

   f. involves verified exposure to infectious substances or injurious radiation. A dangerous goods accident may also be an aircraft accident; in which case the normal procedure for reporting of air accidents must be followed.

3. A dangerous goods incident is an occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods, 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. Any occurrence relating to the transport of dangerous goods which seriously

jeopardises the aircraft or its occupants is also deemed to constitute a dangerous goods incident.

4. This form should also be used to report any occasion when undeclared or misdeclared dangerous goods are discovered in cargo, mail or unaccompanied baggage or when accompanied baggage contains dangerous goods which passengers or crew are not permitted to take on aircraft.

5. An initial report, which may be made by any means, must be dispatched within 72 hours of the occurrence, to the competent authority of the State (a) of the operator; and (b) in which the incident occurred, unless exceptional circumstances prevent this. This occurrence report form, duly completed, must be sent as soon as possible, even if all the information is not available.

6. Copies of all relevant documents and any photographs should be attached to this report.

7. Any further information, or any information not included in the initial report, must be sent as soon as possible to authorities identified in paragraph 5.

8. Providing it is safe to do so, all dangerous goods, packagings, documents, etc., relating to the occurrence must be retained until after the initial report has been sent to the authorities identified in paragraph 5 and they have indicated whether or not these should continue to be retained.

GM1-CAT.GEN.NMPA.150 Transport of dangerous goods

GENERAL

(a) The requirements to transport dangerous goods by air in accordance with the Technical Instructions is irrespective of whether:

(1) the flight is wholly or partly within or wholly outside the territory of a State; or

(2) an approval to carry dangerous goods in accordance with SPA.DG is held.

(b) The Technical Instructions provide that in certain circumstances dangerous goods, which are normally forbidden on an aircraft, may be carried. These circumstances include cases of extreme urgency or when other forms of transport are inappropriate or when full compliance with the prescribed requirements is contrary to the public interest. In these circumstances all the States concerned may grant exemptions from the provisions of the Technical Instructions provided that an overall level of safety which is at least equivalent to that provided by the Technical Instructions is achieved. Although exemptions are most likely to be granted for the carriage of dangerous goods which are not permitted in normal circumstances, they may also be granted in other circumstances, such as when the packaging to be used is not provided for by the appropriate packing method or the quantity in the packaging is greater than that permitted. The Technical Instructions also make provision for some dangerous goods to be carried when an approval has been granted only by the State of Origin and the State of the Operator, or in the case of non-commercial operations with other than complex motor-powered aircraft, the State of Registry.

(c) When an exemption is required, the States concerned are those of origin, transit, overflight and destination of the consignment and that of the operator. For the State of overflight, if none of the criteria for granting an exemption are relevant, an exemption may be granted based solely on whether it is believed that an equivalent level of safety in air transport has been achieved.

(d) The Technical Instructions provide that exemptions and approvals are granted by the "appropriate national authority", which is intended to be the authority responsible for the particular aspect against which the exemption or approval is being sought. The Instructions do not specify who should seek exemptions and, depending on the legislation of the particular State, this may mean the operator, the shipper or an agent. If an exemption or approval has been granted to other than the operator, the operator should ensure a copy has been obtained before the relevant flight. The operator should ensure all relevant conditions on an exemption or approval are met.

(e) The exemption or approval referred to in sub-paragraphs (b) to (d) is in addition to the approval required by SPA.DG.100.

2) A new Subpart B Section 2 is introduced as follows:

'Subpart B – Operational procedure

Section 2 – Non motor-powered aircraft

GM1-CAT.OP.NMPA.100 Use of aerodromes and operating sites

BALLOONS

An adequate site is a site that the commander considers to be satisfactory, taking account of the applicable performance requirements and site characteristics.

GM1-CAT.OP.NMPA.115 Carriage of special categories of passengers (SCPs) – balloons

GENERAL

The following persons are those who should be considered as special categories of passengers, requiring special conditions, assistance and/or devices when carried on a flight in a balloon:

(a) person with reduced mobility (PRM); this is understood to mean a person whose mobility is reduced due to physical incapacity (sensory or locomotory), an intellectual deficiency, age, illness or any other cause of disability; and

(b) children (whether accompanied or not) and infants.

AMC1- CAT.OP.NMPA.115 Carriage of special categories of passengers (SCPs) - balloons

CARRIAGE OF CHILDREN AND PERSONS WITH REDUCED MOBILITY – BALLOONS

The operator may exclude children and/or PRMs from transportation in a balloon, when:

(a) their presence may impede:

(1) the crew in their duties;

(2) access to emergency equipment; or

(3) the emergency evacuation of the balloon;

and/or

(b) those persons are:

(1) unable to take a proper brace position; or

(2) smaller than the height of the basket.

AMC1-CAT.OP.NMPA.125 Passenger briefing

SAILPLANES

The briefing should include the locations and use of seat belts and if applicable:

(a) emergency canopy opening;

(b) use of the parachute;

(c) passenger emergency briefing cards;

(d) oxygen dispensing equipment; and

(e) other emergency equipment provided for individual passenger use.

AMC2-CAT.OP.NMPA.125. Passenger briefing

BALLOONS

(a) Passengers should be given a verbal briefing and demonstration about safety matters in such a way that the information is easily retained and reproduced during the landing and in the case of an emergency situation.

(b) The briefing/demonstration should contain the following items:

(1) use of landing hand-holds;

(2) wearing of suitable clothing;

(3) smoking regulations and the use of electronic devices;

(4) stowage of baggage;

(5) importance to remain inside the basket at all times; particularly after landing;

(6) landing positions to be assumed to minimise the effect of the impact upon an emergency landing; and

(7) safe transport of the balloon on the ground after landing.

(c) Part or all of the verbal briefing may be provided additionally by a safety briefing card on which pictorial instructions indicate the correct landing position.

(d) Before take-off the correct landing position has to be demonstrated.

(e) Before commencing the landing phase, passengers should be required to practice the correct landing position.

AMC1-CAT.OP.NMPA.160 Take-off conditions

FACILITIES AT THE TAKE-OFF SITE - BALLOONS

At the balloon take-off site a means of measuring the wind direction and wind speed should be provided by the operator.

GM1-CAT.OP.NMPA.185 Operational limitations – hot-air balloons

NIGHT LANDING

The risk of collision with overhead lines is considerable and cannot be overstated. The risk is considerably increased during night flights in conditions of failing light and visibility when there is increasing pressure to land. A number of incidents have occurred in the late evening in just such conditions and may have been avoided had an earlier landing been planned. Night landings should therefore be avoided by taking appropriate measures including a larger quantity of fuel and/or additional safety equipment. ‘

3) A new Subpart C Section 3 is introduced as follows:

'Subpart C – Aircraft performance and operating limitations

Section 3 – Sailplanes

Reserved'

4) A new Subpart C Section 4 is introduced as follows:

'Section 4 – Balloons

AMC1-CAT.POL.B.110(a)(2) System for determining the mass

TRAFFIC LOAD

Traffic load should be determined by actual weighing or using standard masses for passengers, persons other than flight crew members and baggage.

AMC2-CAT.POL.B.110(a)(2) System for determining the mass

MASS VALUES FOR PASSENGERS AND BAGGAGE

(a) Passenger mass may be calculated on the basis of a statement by, or on behalf of, each passenger, adding to it a predetermined mass to account for hand baggage and clothing.

(b) The predetermined mass for hand baggage and clothing should be established by the operator on the basis of studies relevant to his particular operation. In any case, it should not be less than:

(1) 4 kg for clothing; and

(2) 3 kg for hand baggage.

The passengers' stated mass and the mass of passengers' clothing and hand baggage should be checked prior to boarding and adjusted, if necessary.

(c) When determining the actual mass by weighing, passengers' personal belongings and hand baggage should be included.

AMC1-CAT.POL.B.110(a)(8) and (b) System for determining the mass

DOCUMENTATION

(a) Mass documentation should contain the following:

(1) balloon registration and type;

(2) flight number and date;

(3) commander;

(4) person who prepared the information;

(5) dry operating mass and corresponding aircraft;

(6) mass of the fuel or ballast at take-off;

(7) mass of consumables other than fuel;

(8) load components including passengers and baggage;

(9) take-off mass and landing mass; and

(10) limiting mass values.

(b) The mass and balance documentation should enable the commander to determine that the load and its distribution are within the mass limits of the balloon.

(c) The information above may be available in flight planning documents or mass systems.

(d) Any last minute change should be brought to the attention of the commander and entered in the flight planning documents containing the mass and balance information and mass and balance systems. The operator should specify the maximum last minute change allowed in passenger numbers or hold load. New mass and balance documentation should be prepared if this maximum number is exceeded.

(e) Where mass and balance documentation is generated by a computerised mass and balance system, the operator should verify the integrity of the output data at intervals not exceeding 6 months.

(f) A copy of the final mass documentation should be made available to the commander for its acceptance.

AMC1-CAT.POL.B.115(b) Performance - general

BALLOON TAKE-OFF/LANDING IN CONGESTED AREAS

The balloon, when becalmed over a congested area, should land within that congested area such that third parties on the ground, passengers and crew are not endangered. ‘

5) A new Subpart D Section 3 is introduced as follows:

'Subpart D – Instruments, data and equipment

Section 3 - Sailplanes

GM1-CAT.IDE.S.100(a) Instruments and equipment – general

APPLICABLE AIRWORTHINESS REQUIREMENTS

The applicable airworthiness requirements for approval of instruments and equipment required by this Part are the following:

(a) Regulation (EC) 1702/2003 for:

(1) sailplanes registered in the EU; and

(2) sailplanes registered outside the EU but manufactured or designed by an EU organisation,

or

(b) airworthiness requirements of the State of Registry for sailplanes registered, designed and manufactured outside the EU.

GM1-CAT.IDE.S.100(a)&(b) Instruments and equipment – general

INSTRUMENTS AND EQUIPMENT THAT DO NOT NEED TO BE APPROVED

(a) The provision of this paragraph does not exempt the item of equipment from complying with the applicable airworthiness requirements if the instrument or equipment is installed in the sailplane. In this case, the installation should be approved as required in the applicable airworthiness requirements and should comply with the applicable airworthiness codes.

(b) The functionality of non-installed instruments and equipment required by this Part that does not need an equipment approval should be checked against recognised industry standards appropriate for the intended purpose. The operator is responsible for ensuring the maintenance of these instruments and equipment.

(c) The failure of additional non-installed instruments or equipment not required by this Part or by the applicable airworthiness requirements or any applicable airspace requirements should not adversely affect the airworthiness and/or the safe operation of the sailplane. Examples are instruments supplying additional flight information (e.g. GPS or anti-collision information systems).

AMC1-CAT.IDE.S.110 & CAT.IDE.S.115 Operations under VFR & cloud flying – flight and navigational instruments

INTEGRATED INSTRUMENTS

(a) Individual equipment requirements may be met by combinations of instruments or by integrated flight systems or by a combination of parameters on electronic displays. The information so available to each required pilot should not be less than that required in the applicable operational requirements, and the equivalent safety of the installation should be approved during type certification of the sailplane for the intended type of operation.

(b) The means of measuring and indicating turn and slip, and sailplane attitude may be met by combinations of instruments, provided that the safeguards against total failure, inherent in the three separate instruments, are retained.

AMC1-CAT.IDE.S.110(a)(1) & CAT.IDE.S.115(a) Operations under VFR & cloud flying – flight and navigational instruments

MEANS OF MEASURING AND DISPLAYING MAGNETIC DIRECTION

The means of measuring and displaying magnetic direction should be a magnetic compass or equivalent.

AMC1-CAT.IDE.S.110(a)(2) & CAT.IDE.S.115(b) Operations under VFR & cloud flying – flight and navigational instruments

MEANS OF MEASURING AND DISPLAYING THE TIME

A means of measuring and displaying the time in hours, minutes and seconds may be a wrist watch capable of the same functions.

AMC1-CAT.IDE.S.110(a)(3) & CAT.IDE.S.115(c) Operations under VFR & cloud flying – flight and navigational instruments

CALIBRATION OF THE MEANS FOR MEASURING AND DISPLAYING PRESSURE ALTITUDE

(a) The instrument measuring and displaying pressure altitude should be of a sensitive type calibrated in feet (ft), with a sub-scale setting, calibrated in hectopascals/millibars, adjustable for any barometric pressure likely to be set during flight.

(b) Calibration in metres (m) is also acceptable.

AMC1-CAT.IDE.S.110(a)(4) & CAT.IDE.S.115(d) Operations under VFR & cloud flying – flight and navigational instruments

CALIBRATION OF THE INSTRUMENT INDICATING AIRSPEED

(a) The instrument indicating airspeed should be calibrated in knots (kt).

(b) Calibration in kilometres (km) per hour or in miles per hours (mph) is also acceptable.

AMC1-CAT.IDE.S.120 Seats and restraint systems

UPPER TORSO RESTRAINT SYSTEM

(a) A seat belt with upper torso restraint system should have four anchorage points and should include shoulder straps (two anchorage points) and a seat belt (two anchorage points), which may be used independently.

(b) A restraint system having five anchorage points is deemed to be compliant to the requirement for seat belt with upper torso restraint system with four anchorage points.

AMC1-CAT.IDE.S.130 Flight over water

MEANS OF ILLUMINATION FOR LIFE-JACKETS

Each life-jacket or equivalent individual flotation device should be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

RISK ASSESSMENT

(a) When conducting the risk assessment, the commander should base his/her decision, as far as is practicable, on the Implementing Rules and AMCs applicable to the operation of the sailplane.

(b) The commander should, for determining the risk, take the following operating environment and conditions into account:

(1) sea state;

(2) sea and air temperatures;

(3) the distance from land suitable for making an emergency landing; and

(4) the availability of search and rescue facilities.

GM1-CAT.IDE.S.130(a) Flight over water

SEAT CUSHIONS

Seat cushions are not considered to be flotation devices.

AMC1-CAT.IDE.S.130(b) Flight over water

ELT BATTERIES

Batteries used in the ELTs should be replaced (or recharged, if the battery is rechargeable) when the equipment has been in use for more than 1 cumulative hour, and also when 50 % of their useful life (or for rechargeable, 50 % of their useful life of charge), as established by the equipment manufacturer has expired. The new expiry date for the replacement (or recharged) battery should be legibly marked on the outside of the equipment. The battery useful life (or useful life of charge) requirements of this paragraph do not apply to batteries (such as water-activated batteries) that are essentially unaffected during probable storage intervals.

AMC2-CAT.IDE.S.130(b) Flight over water

TYPES OF ELT AND GENERAL TECHNICAL SPECIFICATIONS

(a) The ELT required by this provision should be one of the following:

(1) Automatic fixed (ELT(AF)). An automatically activated ELT that is permanently attached to an aircraft and is designed to aid SAR teams in locating the crash site.

(2) Automatic portable (ELT(AP)). An automatically activated ELT that is rigidly attached to an aircraft before a crash, but is readily removable from the aircraft after a crash. It functions as an ELT during the crash sequence. If the ELT does not employ an integral antenna, the aircraft-mounted antenna may be disconnected and an auxiliary antenna (stored on the ELT case) attached to the ELT. The ELT can be tethered to a survivor or a life-raft. This type of ELT is intended to aid SAR teams in locating the crash site or survivor(s).

(3) Automatic deployable (ELT(AD)). An ELT that is rigidly attached to the aircraft before the crash and that is automatically ejected, deployed and activated by an impact, and, in some cases, also by hydrostatic sensors. Manual deployment is also provided. This type of ELT should float in water and is intended to aid SAR teams in locating the crash site.

(4) Survival ELT (ELT(S)). An ELT that is removable from an aircraft, stowed so as to facilitate its ready use in an emergency and manually activated by a survivor. An ELT(S) may be activated manually or automatically (e.g. by water activation). It should be designed to be tethered to a life-raft or a survivor.

(b) To minimise the possibility of damage in the event of crash impact, the automatic ELT should be rigidly fixed to the aircraft structure, as far aft as is practicable, with its antenna and connections arranged so as to maximise the probability of the signal being transmitted after a crash.

(c) Any ELT carried should operate in accordance with the relevant provisions of ICAO Annex 10, Volume III and should be registered with the national agency responsible for initiating search and rescue or other nominated agency.

AMC3-CAT.IDE.S.130(b) Flight over water

PLB TECHNICAL SPECIFICATIONS

A personal locator beacon (PLB) should have a built-in GNSS receiver with a cosmicheskaya sistyema poiska avariynich sudov - search and rescue satellite-aided tracking (COSPAS-SARSAT) type approval number. However, devices with a COSPAS-SARSAT number belonging to series 700 are excluded as this series of numbers identifies the special-use beacons not meeting all the technical requirements and all the tests specified by COSPAS-SARSAT.

GM1-CAT.IDE.S.130(b) Flight over water

TERMINOLOGY

(a) An ELT is a generic term describing equipment that broadcasts distinctive signals on designated frequencies and, depending on application, may be activated by impact or may be manually activated.

(b) A PLB is an emergency beacon other than an ELT that broadcasts distinctive signals on designated frequencies, is standalone, portable and is manually activated by the survivors.

AMC1-CAT.IDE.S.135 Survival Equipment

GENERAL

Sailplanes operated across land areas in which search and rescue would be especially difficult should be equipped with the following:

(a) signalling equipment to make the distress signals;

(b) at least one ELT(S) or a PLB; and

(c) additional survival equipment for the route to be flown taking account of the number of persons on board.

AMC2-CAT.IDE.S.135 Survival equipment

ADDITIONAL SURVIVAL EQUIPMENT

(a) The following additional survival equipment should be carried when required:

(1) 500 ml of water;

(2) one knife;

(3) first-aid equipment; and

(4) one set of air/ground codes.

(b) If any item of equipment contained in the above list is already carried on board the sailplane in accordance with another requirement, there is no need for this to be duplicated.

GM1-CAT.IDE.S.135 Survival equipment

SIGNALLING EQUIPMENT

The signalling equipment for making distress signals is described in ICAO Annex 2, Rules of the Air.

GM2-CAT.IDE.S.135 Survival equipment

AREAS IN WHICH SEARCH AND RESCUE WOULD BE ESPECIALLY DIFFICULT

The expression 'areas in which search and rescue would be especially difficult' should be interpreted, in this context, as meaning:

(a) areas so designated by the competent authority responsible for managing search and rescue; or

(b) areas that are largely uninhabited and where:

(1) the competent authority responsible for managing search and rescue has not published any information to confirm whether search and rescue would be or would not be especially difficult; and

(2) the competent authority referred to in (a) does not, as a matter of policy, designate areas as being especially difficult for search and rescue.

GM1-CAT.IDE.S.145 Navigation equipment

APPLICABLE AIRSPACE REQUIREMENTS

For sailplanes being operated under European air traffic control, the applicable airspace requirements include the Single European Sky legislation.

AMC1-CAT.IDE.S.150 Transponder

GENERAL

(a) The SSR transponders of sailplanes being operated under European air traffic control should comply with any applicable Single European Sky legislation.

(b) If the Single European Sky legislation is not applicable, the SSR transponders should be operated in accordance with the relevant provisions of Volume IV of ICAO Annex 10. ‘

6) A new Subpart D Section 4 is introduced as follows:

'Section 4 - Balloons

GM1-CAT.IDE.B.100(a) Instruments and equipment – general

APPLICABLE AIRWORTHINESS REQUIREMENTS

The applicable airworthiness requirements for approval of instruments and equipment required by this Part are the following:

(a) Regulation (EC) 1702/2003 for:

(1) balloons registered in the EU; and

(2) balloons registered outside the EU but manufactured or designed by an EU organisation,

or

(b) airworthiness requirements of the state of registry for balloons registered, designed and manufactured outside the EU.

GM1-CAT.IDE.B.100(a)&(b) Instruments and equipment – general

INSTRUMENTS AND EQUIPMENT THAT DO NOT NEED TO BE APPROVED

(a) The provision of this paragraph does not exempt the item of equipment from complying with the applicable airworthiness requirements if the instrument or equipment is installed in the balloon. In this case, the installation should be approved as required in the applicable airworthiness requirements and should comply with the applicable airworthiness codes.

(b) The functionality of non-installed instruments and equipment required by this Part that does not need an equipment approval should be checked against recognised industry standards appropriate for the intended purpose. The operator is responsible for ensuring the maintenance of these instruments and equipment.

(c) The failure of additional non-installed instruments or equipment not required by this Part or by the applicable airworthiness requirements or any applicable airspace requirements should not adversely affect the airworthiness and/or the safe operation of the balloon. Examples are instruments supplying additional flight information (e.g. GPS or anti-collision information systems)).

AMC1-CAT.IDE.B.110 Operating lights

BALLOON LIGHTS

(a) The position lights should be one steady aviation white position light, and one flashing aviation red position light, or flashing aviation white, with an effective flash frequency of at least 40, but not more than 100, cycles per minute.

(b) Both lights should have 360° horizontal coverage and should be visible for at least 3 km (1.6 NM) under clear atmospheric conditions.

(c) The steady white light should be located not more than 20 ft below the basket, trapeze, or other means for carrying occupants. The flashing red or white light should be located between 7 ft and 10 ft below the steady white light.

(d) There should be a means to retract and store the lights.

ILLUMINATION FOR INSTRUMENTS AND EQUIPMENT

A means to provide adequate illumination to instruments and equipment essential to the safe operation of the balloon may be an independent portable light.

AMC1-CAT.IDE.B.115(a) Operations under VFR – flight and navigational instruments

MEANS OF DISPLAYING DRIFT DIRECTION

The drift direction may be determined by using a map and reference to visual landmarks.

AMC1-CAT.IDE.B.115(b)(1) Operations under VFR – flight and navigational instruments

MEANS OF MEASURING AND DISPLAYING THE TIME

A means of measuring and displaying the time in hours, minutes and seconds may be a wrist watch capable of the same functions.

GM1-CAT.IDE.B.115(b)(3) Operations under VFR – flight and navigational instruments

MEANS OF MEASURING AND DISPLAYING PRESSURE ALTITUDE

A means of measuring and displaying pressure altitude is needed when required by ATC, or when altitude needs to be checked for flights where oxygen is used, or the limitations in the AFM require limiting altitude and/or rate of climb/descent.

AMC1-CAT.IDE.B.120 Restraint systems

GENERAL

A pilot restraint harness mounted to the basket is considered to meet the objective of CAT.IDE.B.120.

AMC1-CAT.IDE.B.125 First-aid kit

GENERAL

First-aid kits (FAKs) compliant with DIN 13164 or DIN 13157 are considered to meet the objective of CAT.IDE.B.125.

AMC2-CAT.IDE.B.125 First-aid kit

MAINTENANCE OF FIRST-AID KIT

To be kept up-to-date first-aid kits should be:

(a) inspected periodically to confirm, to the extent possible, that contents are maintained in the condition necessary for their intended use; and

(b) replenished at regular intervals, in accordance with instructions contained on their labels, or as circumstances warrant.

AMC1-CAT.IDE.B.140 Flight over water

RISK ASSESSMENT

(a) When conducting the risk assessment, the commander should base his/her decision, as far as is practicable, on the Implementing Rules and AMCs applicable to the operation of the balloon.

(b) The commander should, for determining the risk, take the following operating environment and conditions into account:

(1) sea state;

(2) sea and air temperatures;

(3) the distance from land suitable for making an emergency landing; and

(4) the availability of search and rescue facilities.

AMC1-CAT.IDE.B.140(a) Flight over water

MEANS OF ILLUMINATION FOR LIFE-JACKETS

Each life-jacket or equivalent individual flotation device should be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

AMC1-CAT.IDE.B.140(b) Flight over water

ELT BATTERIES

Batteries used in the ELTs should be replaced (or recharged, if the battery is rechargeable) when the equipment has been in use for more than 1 cumulative hour, and also when 50 % of their useful life (or for rechargeable, 50 % of their useful life of charge), as established by the equipment manufacturer has expired. The new expiry date for the replacement (or recharged) battery should be legibly marked on the outside of the equipment. The battery useful life (or useful life of charge) requirements of this paragraph do not apply to batteries (such as water-activated batteries) that are essentially unaffected during probable storage intervals.

AMC2-CAT.IDE.B.140(b) Flight over water

TYPES OF ELT AND GENERAL TECHNICAL SPECIFICATIONS

(a) The ELT required by this provision should be one of the following:

(1) Automatic fixed (ELT(AF)). An automatically activated ELT that is permanently attached to an aircraft and is designed to aid SAR teams in locating the crash site.

(2) Automatic portable (ELT(AP)). An automatically activated ELT that is rigidly attached to an aircraft before a crash, but is readily removable from the aircraft after a crash. It functions as an ELT during the crash sequence. If the ELT does not employ an integral antenna, the aircraft-mounted antenna may be disconnected and an auxiliary antenna (stored on the ELT case) attached to the ELT. The ELT can be tethered to a survivor or a life-raft. This type of ELT is intended to aid SAR teams in locating the crash site or survivor(s).

(3) Automatic deployable (ELT(AD)). An ELT that is rigidly attached to the aircraft before the crash and which is automatically ejected, deployed and activated by an impact, and, in some cases, also by hydrostatic sensors. Manual deployment is also provided. This type of ELT should float in water and is intended to aid SAR teams in locating the crash site.

(4) Survival ELT (ELT(S)). An ELT that is removable from an aircraft, stowed so as to facilitate its ready use in an emergency and manually activated by a survivor. An ELT(S) may be activated manually or automatically (e.g. by water activation). It should be designed to be tethered to a life-raft or a survivor.

(b) To minimise the possibility of damage in the event of crash impact, the automatic ELT should be rigidly fixed to the aircraft structure, as far aft as is practicable, with its antenna and connections arranged so as to maximise the probability of the signal being transmitted after a crash.

(c) Any ELT carried should operate in accordance with the relevant provisions of ICAO Annex 10, Volume III and should be registered with the national agency responsible for initiating search and rescue or other nominated agency.

AMC3-CAT.IDE.B.140(b) Flight over water

PLB TECHNICAL SPECIFICATIONS

A personal locator beacon (PLB) should have a built-in GNSS receiver with a cosmicheskaya sistyema poiska avariynich sudov - search and rescue satellite-aided tracking (COSPAS-SARSAT) type approval number. However, devices with a COSPAS-SARSAT number belonging to series 700 are excluded as this series of numbers identifies the special-use beacons not meeting all the technical requirements and all the tests specified by COSPAS-SARSAT.

GM1-CAT.IDE.B.140(b) Flight over water

TERMINOLOGY

(a) An ELT is a generic term describing equipment that broadcasts distinctive signals on designated frequencies and, depending on application, may be activated by impact or may be manually activated.

(b) A PLB is an emergency beacon other than an ELT that broadcasts distinctive signals on designated frequencies, is standalone, portable and is manually activated by the survivors.

GM1-CAT.IDE.B.140(c) Flight over water

SIGNALLING EQUIPMENT

The signalling equipment for making distress signals is described in ICAO Annex 2, Rules of the Air.

AMC1-CAT.IDE.B.145 Survival equipment

GENERAL

Balloons operated across land areas in which search and rescue would be especially difficult should be equipped with the following:

(a) signalling equipment to make the distress signals;

(b) at least one ELT(S) or a PLB; and

(c) additional survival equipment for the route to be flown taking account of the number of persons on board.

AMC2-CAT.IDE.B.145 Survival equipment

ADDITIONAL SURVIVAL EQUIPMENT

(a) The following additional survival equipment should be carried when required:

(1) 500 ml of water for each four, or fraction of four, persons on board;

(2) one knife;

(3) first-aid equipment; and

(4) one set of air/ground codes.

(b) If any item of equipment contained in the above list is already carried on board the balloon in accordance with another requirement, there is no need for this to be duplicated.

GM1-CAT.IDE.B.145 Survival equipment

SIGNALLING EQUIPMENT

The signalling equipment for making distress signals is described in ICAO Annex 2, Rules of the Air.

GM2-CAT.IDE.B.145 Survival equipment

AREAS IN WHICH SEARCH AND RESCUE WOULD BE ESPECIALLY DIFFICULT

The expression 'areas in which search and rescue would be especially difficult' should be interpreted, in this context, as meaning:

(a) areas so designated by the competent authority responsible for managing search and rescue; or

(b) areas that are largely uninhabited and where:

(1) the competent authority responsible for managing search and rescue has not published any information to confirm whether search and rescue would be or would not be especially difficult; and

(2) the competent authority referred to in (a) does not, as a matter of policy, designate areas as being especially difficult for search and rescue.

GM1-CAT.IDE.B.155 Radio communication equipment

APPLICABLE AIRSPACE REQUIREMENTS

For balloons being operated under European air traffic control, the applicable airspace requirements include the Single European Sky legislation.

AMC1-CAT.IDE.B.160 Transponder

GENERAL

(a) The SSR transponders of balloons being operated under European air traffic control should comply with any applicable Single European Sky legislation.

(b) If the Single European Sky legislation is not applicable, the SSR transponders should operate in accordance with the relevant provisions of Volume IV of ICAO Annex 10.`