Annex III to Decision 2018/003/R

'AMC/GM to Part-CAT – Issue 2, Amendment 14'

The Annex to Decision 2014/015/R of 24 April 2014 is hereby amended as follows:

The text of the amendment is arranged to show deleted, new or amended text as shown below:

- 1. deleted text is marked with strike through;
- 2. new or amended text is highlighted in grey; and
- 3. an ellipsis (...) indicates that the remaining text is unchanged in front of or following the reflected amendment.

GM1 CAT.GEN.NMPA.100(d)(3) is deleted:

GM1 CAT.GEN.NMPA.100(d)(3) Responsibilities of the commander

PROTECTIVE CLOTHING — BALLOON OPERATIONS

Protective clothing includes:

- (a) long sleeves and trousers preferably made out of natural fibres;
- (b) stout footwear; and
- (c) gloves.

AMC1 CAT.GEN.NMPA.105(a) is deleted:

AMC1 CAT.GEN.NMPA.105(a) Additional balloon crew member

INSTRUCTIONS FOR THE ADDITIONAL CREW MEMBER

The additional crew member should have taken part in:

- (a) the following practical training inflations with subsequent flights, as applicable:
 - (1) three on any balloon;
 - (2) two on balloons with baskets of a capacity of at least seven passengers; and
 - (3) one on a balloon with a basket of a capacity of more than 19 passengers;
- (b) at least two landings under (a) with a ground speed of at least 5 kt; and
- (c) training in first-aid and in the use of the fire extinguisher at intervals of maximum 24 months.

AMC1 CAT.GEN.NMPA.105(b)(1) is deleted:

AMC1 CAT.GEN.NMPA.105(b)(1) Additional balloon crew member

ALCOHOL CONSUMPTION

The operator should issue instructions concerning the consumption of alcohol by crew members. The instructions should not be less restrictive than the following:

- (a) no alcohol should be consumed less than 8 hours prior to the specified reporting time for a flight duty period or the commencement of standby;
- (b) the blood alcohol level should not exceed the lower of the national requirements or 0.2 per thousand at the start of a flight duty period;
- (c) no alcohol should be consumed during the flight duty period or whilst on standby.

GM1 CAT.GEN.NMPA.105(b)(2) is deleted:

GM1 CAT.GEN.NMPA.105(b)(2) Additional balloon crew member

ELAPSED TIME BEFORE RETURNING TO FLYING DUTY

24 hours is a suitable minimum length of time to allow after normal blood donation or normal recreational (sport) diving before returning to flying duties. This should be considered by operators when determining a reasonable time period for the guidance of crew members.

PART-MED

Information on the effects of medication, drugs, other treatments and alcohol can be found in Annex IV (Part-MED) to Commission Regulation (EU) No 1178/2011.

GM1 CAT.GEN.NMPA.150(a)(1) is amended as follows:

GM1 CAT.GEN.NMPA.150(a)(1) Transport of dangerous goods

EXCEPTIONS, APPROVALS, EXEMPTIONS

- (a) The Technical Instructions (T.I.) provide for exceptions to the provisions for the transport of dangerous goods for those goods that are required on board in accordance with airworthiness rules and/or are used for operational purposes, e.g. portable electronic devices.
- (b) Furthermore, the T.I. allow to deviate from provisions on how to transport dangerous goods through approvals. However, such approvals are likely to be used only for operators holding a specific approval to dangerous goods as in Annex V (Part-SPA), Subpart G. Approvals under Part 1 of the T.I. may, therefore, not be relevant for commercial air transport (CAT) operations with sailplanes. and balloons.
- (c) The T.I. also provide for exemptions. An exemption would allow the transport of dangerous goods which would normally be forbidden. Exemptions may be granted by the State of the operator, the States of origin, transit, overflight and destination. Exemptions, as stated in the T.I., can be granted under the following conditions:
 - (1) the overall level of safety is at least equivalent to the level of safety provided for in the T.I.; and
 - (2) at least one of the following three criteria is fulfilled:
 - (i) in cases of extreme urgency; or
 - (ii) when other forms of transport are inappropriate; or

(iii) when full compliance with the T.I. is contrary to the public interest.

GM1 CAT.OP.NMPA.100 is deleted:

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

BALLOONS

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

AMC1 CAT.OP.NMPA.115 is deleted:

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

CARRIAGE OF CHILDREN AND PERSONS WITH REDUCED MOBILITY - BALLOONS

The operator may exclude children and/or persons with reduced mobility (PRM)s 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) shorter than the inner height of the basket wall.

AMC2 CAT.OP.NMPA.120 is deleted:

AMC2 CAT.OP.NMPA.120 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) use of oxygen dispensing equipment, if applicable;
 - (3) other emergency equipment, where provided for individual passenger use;
 - (4) wearing of suitable clothing;
 - (5) smoking regulations and the use of portable electronic devices;

- (6) stowage of baggage;
- (7) importance to remain inside the basket at all times, particularly after landing;
- (8) landing positions to be assumed to minimise the effect of the impact upon an emergency landing; and
- (9) 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 should be demonstrated.
- (e) Before commencing the landing phase, passengers should be required to practise the correct landing position.

AMC1 CAT.OP.NMPA.155 is deleted:

AMC1 CAT.OP.NMPA.155 Take off conditions

FACILITIES AT THE TAKE-OFF SITE - BALLOONS

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

GM1 CAT.OP.NMPA.180 is deleted:

GM1 CAT.OP.NMPA.180 Operational limitations — hot-air balloons

AVOIDANCE OF NIGHT LANDING

The intent of the rule is to ensure that when the balloon takes off during night, sufficient fuel is on board for landing under VFR by day.

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.

In Subpart C ('Aircraft performance and operating limitations'), Section 5 ('Balloons') is deleted:

Section 5 — Balloons

GM1 CAT.POL.B.105 Weighing

GENERAL

(a) New balloons that have been weighed at the factory may be placed into operation without reweighing if the mass records have been adjusted for alterations or modifications to the balloon.

Balloons transferred from one EU operator to another EU operator do not have to be weighed prior to use by the receiving operator unless the mass cannot be accurately established by calculation.

- (b) The initial empty mass for a balloon is the balloon empty mass determined by a weighing performed by the manufacturer of the balloon before the initial entry into service.
- (c) The mass of a balloon should be revised whenever the cumulative changes to the empty mass due to modifications or repairs exceed \pm 10 % of the initial empty mass. This may be done by weighing the balloon or by calculation.

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 experience 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)(6) System for determining the mass

DOCUMENTATION

- (a) Mass documentation should contain the following:
 - (1) balloon registration and type;
 - (2) date and flight identification;
 - (3) name of the commander;
 - (4) name of the person who prepared the document;
 - (5) empty mass;
 - (6) mass of the fuel or ballast at take-off;
 - (7) load components including passengers, baggage and, if applicable, freight;
 - (8) take-off mass allowed by the AFM according to temperature and altitude; and
 - (10) limiting mass values.
- (b) The mass documentation should enable the commander to determine that the load is within the mass limits of the balloon.
- (c) The information above may be available in flight planning documents, or other documents readily available for use, or mass systems.

- (d) Any last minute change should be brought to the attention of the commander and entered in the documents containing the mass information. The operator should specify the maximum last minute change allowed in passenger numbers. New mass documentation should be prepared if this maximum number is exceeded.
- (e) Where mass documentation is generated by a computerised mass 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.

GM1 CAT.POL.B.110(a)(6) System for determining the mass

LIMITING MASS VALUES

The limiting mass values contained in the mass documentation are those stipulated in the AFM.

In Subpart D ('Instruments, data, equipment'), Section 4 ('Balloons') is deleted:

Section 4 — Balloons

GM1 CAT.IDE.B.100(b) Instruments and equipment — general

REQUIRED INSTRUMENTS AND EQUIPMENT THAT DO NOT NEED TO BE APPROVED IN ACCORDANCE WITH COMMISSION REGULATION (EU) No 748/2012

The functionality of non-installed instruments and equipment required by this Subpart and that do not need an equipment approval, as listed in CAT.IDE.B.100(b), should be checked against recognised industry standards appropriate to the intended purpose. The operator is responsible for ensuring the maintenance of these instruments and equipment.

GM1 CAT.IDE.B.100(c) Instruments and equipment — general

NOT REQUIRED INSTRUMENTS AND EQUIPMENT THAT DO NOT NEED TO BE APPROVED IN ACCORDANCE WITH COMMISSION REGULATION (EU) NO 748/2012, BUT ARE CARRIED ON A FLIGHT

- (a) The provision of this paragraph does not exempt any installed instrument or item of equipment from complying with Commission Regulation (EU) No 748/2012. In this case, the installation should be approved as required in Commission Regulation (EU) No 748/2012 and should comply with the applicable Certification Specifications.
- (b) The failure of additional non-installed instruments or equipment not required by this Part or by Commission Regulation (EU) No 748/2012 or any applicable airspace requirements should not adversely affect the airworthiness and/or the safe operation of the balloon. Examples may be portable electronic devices carried by crew members or passengers.

AMC1 CAT.IDE.B.110 Operating lights

ANTI-COLLISION LIGHTS

An acceptable means of compliance is the anti-collision light required for free manned balloons certified for VFR at night in accordance with CS 31HB/GB.

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)(2) Operations under VFR — flight and navigational instruments

MEANS OF MEASURING AND DISPLAYING VERTICAL SPEED

The necessity of a vertical speed indicator depends on the balloon design. Some envelope shapes have a high drag and will, therefore, not develop a high ascent/descent speed. Such balloons usually do not require a vertical speed indicator. More slender envelope shapes such as special shape balloons may have a significantly lower drag. Their ascent/descent speed is usually limited to a certain value so that controllability of the balloon is maintained. To be able to stay within this limitation of the AFM, a vertical speed indicator is required for these balloons.

GM1 CAT.IDE.B.115(b)(3) Operations under VFR — flight and navigational instruments and associated equipment

MEANS OF MEASURING AND DISPLAYING PRESSURE ALTITUDE

A means of measuring and displaying pressure altitude is needed when required by ATC or by Commission Implementing Regulation (EU) No 923/2012¹, or when altitude needs to be checked for flights where oxygen is used, or the limitations in the AFM require to limit 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

CONTENT OF FIRST-AID KIT

- (a) First aid kits should be equipped with appropriate and sufficient medications and instrumentation. However, these kits should be amended by the operator according to the characteristics of the operation (scope of operation, flight duration, number and demographics of passengers, etc.).
- (b) The following should be included in the FAKs:
 - (1) bandages (assorted sizes),
 - (2) burns dressings (large and small),
 - (3) wound dressings (large and small),
 - (4) adhesive dressings (assorted sizes),

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

- (5) antiseptic wound cleaner,
- (6) safety scissors, and
- (7) disposable gloves.

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;
- (b) replenished at regular intervals, in accordance with instructions contained on their labels, or as circumstances warrant; and
- (c) replenished after use in-flight at the first opportunity where replacement items are available.

AMC1 CAT.IDE.B.135 Hand fire extinguishers

CERTIFICATION SPECIFICATION

The applicable Certification Specification for hot-air balloons should be CS-31HB or equivalent.

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

BATTERIES

- (a) All batteries used in ELTs or PLBs should be replaced (or recharged if the battery is rechargeable) when the equipment has been in use for more than 1 cumulative hour or in the following cases:
 - (1) Batteries specifically designed for use in ELTs and having an airworthiness release certificate (EASA Form 1 or equivalent) should be replaced (or recharged if the battery is rechargeable) before the end of their useful life in accordance with the maintenance instructions applicable to the ELT.

- (2) Standard batteries manufactured in accordance with an industry standard and not having an airworthiness release certificate (EASA Form 1 or equivalent), when used in ELTs should be replaced (or recharged if the battery is rechargeable) when 50 % of their useful life (or for rechargeable, 50 % of their useful life of charge), as established by the battery manufacturer, has expired.
- (3) All batteries used in PLBs should be replaced (or recharged, if the battery is rechargeable) when 50 % of their useful life (or for rechargeable, 50 % of their useful life of charge), as established by the battery manufacturer, has expired.
- (4) The battery useful life (or useful life of charge) criteria in (1),(2) and (3) do not apply to batteries (such as water-activated batteries) that are essentially unaffected during probable storage intervals.
- (b) The new expiry date for a replaced (or recharged) battery should be legibly marked on the outside of the equipment.

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 search and rescue (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 in the ELT case) attached to the ELT. The ELT can be tethered to a survivor or a -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, 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 communication systems 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) 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.
- (b) Any PLB carried should be registered with the national agency responsible for initiating search and rescue or other nominated agency.

AMC4 CAT.IDE.B.140(b) Flight over water

BRIEFING ON PLB USE

When a PLB is carried by a passenger, he/she should be briefed on its characteristics and use by the commander before the flight.

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

TERMINOLOGY

- (a) '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 authority responsible for managing search and rescue; or
- (b) areas that are largely uninhabited and where:
 - (1) the authority referred to in (a) has not published any information to confirm whether search and rescue would be or would not be especially difficult; and
 - (2) the authority referred to in (a) does not, as a matter of policy, designate areas as being especially difficult for search and rescue.

AMC1 CAT.IDE.B.150(b)(3) Miscellaneous equipment

FIRE BLANKET

A fire blanket should comply with EN 1869 or equivalent. The size should be at least 1.5 m x 2 m. Smaller sizes are not recommended as they cannot sufficiently cover the source of developing propane fire.

AMC1 CAT.IDE.B.150(c)(1) Miscellaneous equipment

KNIFE

The knife, hook knife or equivalent, should be capable of cutting any control line or handling rope that is accessible to the commander or a crew member from the basket.

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.