AMC/GM to Annex VII (Part-NCO) — Issue 2

Change information

The amendments are presented as follows:

Text to be deleted	~~Text to be deleted is shown with a line through it.~~
New text to be inserted	New text to be inserted is highlighted with grey shading.
New text to replace existing text	~~Text to be deleted is shown with a line through it~~ followed by the replacement text which is highlighted with grey shading.
Text unchanged	Text without a horizontal line through it or grey shading remains the same.
Remaining text is unchanged in front of or following the amendment	…

Table of contents

Amendments to AMC/GM to Annex VII (Part-NCO)

Subpart GEN — General requirements

1) AMC1 NCO.GEN.105(c) was added:

AMC1 NCO.GEN.105(c) Pilot-in-command responsibilities and authority

CHECKLISTS

(a) The pilot-in-command should use the latest checklists provided by the manufacturer.

(b) If checks conducted prior to take-off are suspended at any point, the pilot-in-command should re-start them from a safe point prior to the interruption.

2) AMC1 NCO.GEN.155 was amended as follows:

AMC1 NCO.GEN.155 Minimum equipment list

CONTENT AND APPROVAL OF THE MEL

(a) When an MEL is established, the operator should amend the MEL after any applicable change to the MMEL within the acceptable timescales. The following are applicable changes to the MMEL that require amendment of the MEL:

(1) a reduction of the rectification interval;

(2) change of an item, only when the change is applicable to the aircraft or type of operations and is more restrictive;

(3) reduced timescales for the implementation of safety-related amendments may be required by the Agency and/or the competent authority.

(b) An acceptable timescale for notifying the amended MEL to the competent authority is 90 days from the effective date ~~of applicability~~ specified in the approved change to the MMEL.

…

3) AMC2 NCO.GEN.155 was amended as follows:

AMC2 NCO.GEN.155 Minimum equipment list

FORMAT OF THE MEL

The MEL format, the presentation of MEL items and dispatch conditions should:

(a) reflect those of the MMEL;

(b) follow the ATA 100/2200 Specification numbering system for MEL items; and

(c) when different from (a) and (b), be clear and unambiguous.

4) GM1 NCO.GEN.155 was amended as follows:

GM1 NCO.GEN.155 Minimum equipment list

GENERAL

(a) The Minimum Equipment List (MEL) is a document that lists the equipment that may be temporarily inoperative, subject to certain conditions, at the commencement of flight. This document is prepared by the operator for their own particular aircraft, taking account of their aircraft configuration and all those individual variables that cannot be addressed at MMEL level, such as operating environment, route structure, geographic location, aerodromes where spare parts and maintenance capabilities are available, etc.

(b) The MMEL, as defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012, is developed in compliance with CS-MMEL or CS-GEN-MMEL. These certification specifications contain, among other, guidance intended to standardise the level of relief granted in MMELs, in particular for items that are subject to operational requirements. If an MMEL established as part of the operational suitability data is not available and items subject to operational requirements are listed in the available MMEL without specific relief or dispatch conditions but only with a reference to the operational requirements, the operator may refer to CS-MMEL or CS-GEN-MMEL guidance material, as applicable, to develop the relevant MEL content for such items.

5) A new GM2 NCO.GEN.155 was added as follows:

GM2 NCO.GEN.155 Minimum equipment list

SCOPE OF THE MEL

(a) Examples of special approvals in accordance with Part-SPA may be:

(1) RVSM

(2) LVO

(b) When an aircraft has installed equipment which is not required for the operations conducted, the operator may wish to delay rectification of such items for an indefinite period. Such cases are considered to be out of the scope of the MEL, therefore modification of the aircraft is appropriate and deactivation, inhibition or removal of the item should be accomplished by an appropriate approved modification procedure.

Subpart C — Aircraft performance and operating limitations

6) GM1 NCO.POL.105 was amended as follows:

GM1 NCO.POL.105 Weighing

GENERAL

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

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 and balance cannot be accurately established by calculation.

(b) For aircraft other than balloons, the mass and centre of gravity (CG) position should be revised whenever the cumulative changes to the dry operating mass exceed ± 0.5 % of the maximum landing mass or, for aeroplanes, the cumulative change in CG position exceeds 0.5 % of the mean aerodynamic chord. This may be done by weighing the aircraft or by calculation. If the AFM requires to record changes to mass and CG position below these thresholds, or to record changes in any case, and make them known to the pilot-in-command, mass and CG position should be revised accordingly and made known to the pilot-in-command.

(c) 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.

(d) The mass of a balloon should be revised whenever the cumulative changes to the balloon empty mass due to modifications or repairs exceed ± 10 % of the initial empty mass. This may be done by weighing the balloon or by calculation.

Subpart D — Instruments, data and equipment

Section 1 — Aeroplanes

7) GM1 NCO.IDE.A.100(a) was amended as follows:

GM1 NCO.IDE.A.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 (EU) No 748/2012[1] for aeroplanes registered in the EU; and

~~(1) aeroplanes registered in the EU; and~~

~~(2) aeroplanes registered outside the EU but manufactured or designed by an EU organisation.~~

(b) Airworthiness requirements of the State of registry for aeroplanes registered~~, designed and manufactured~~ outside the EU.

8) A new GM1 NCO.IDE.A.100(b) was added as follows:

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

GM1 NCO.IDE.A.100(b) Instruments and equipment — general

REQUIRED INSTRUMENTS AND EQUIPMENT THAT DO NOT NEED TO BE APPROVED IN ACCORDANCE WITH THE APPLICABLE AIRWORTHINESS REQUIREMENTS

The functionality of non-installed instruments and equipment required by this Subpart and that do not need an equipment approval, as listed in NCO.IDE.A.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.

9) GM1 NCO.IDE.A.100(b)&(c) was amended as follows:

GM1 NCO.IDE.A.100~~(b)&~~(c) Instruments and equipment — general

NOT REQUIRED INSTRUMENTS AND EQUIPMENT THAT DO NOT NEED TO BE APPROVED IN ACCORDANCE WITH THE APPLICABLE AIRWORTHINESS REQUIREMENTS, BUT ARE CARRIED ON A FLIGHT

(a) The provision of this paragraph does not exempt any installed instrument or~~the~~ item of equipment from complying with the applicable airworthiness requirements ~~if the instrument or equipment is installed in the aeroplane~~. 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 pilot-in-command 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 aeroplane. Examples ~~are~~ may be the following:

(1) portable electronic flight bag (EFB)~~instruments supplying additional flight information (e.g. stand-alone global positioning system (GPS));~~

(2) portable electronic devices carried by crew members~~mission dedicated equipment (e.g. radios);~~ and

(3) non-installed passenger entertainment equipment.

10) AMC1 NCO.IDE.A.120(b)(3)&NCO.IDE.A.125(c) was re-numbered as follows:

AMC1 NCO.IDE.A.120~~(b)(3)~~(c)&NCO.IDE.A.125(c) Operations under IFR — flight and navigational instruments and associated equipment

11) AMC2 NCO.IDE.A.140 was amended as follows:

AMC2 NCO.IDE.A.140 Seats, seat safety belts, restraint systems and child restraint devices

UPPER TORSO RESTRAINT SYSTEM

The following systems are deemed to be compliant with the requirement for an upper torso restraint system:

(a) A ~~safety~~ seat belt with a diagonal shoulder strap.

(b) A restraint system having a seat belt and two shoulder straps that may be used independently;

(c) A restraint system having a seat belt, two shoulder straps ~~or~~ and additional ~~three~~ straps that may be used independently.

~~SAFETY~~SEAT BELT

A ~~safety~~seat belt with diagonal shoulder strap (three anchorage points) is deemed to be compliant with the requirement for a ~~safety~~seat belt~~s~~ (two anchorage points).

12) AMC2 NCO.IDE.A.170 was amended as follows:

AMC2 NCO.IDE.A.170 Emergency locator transmitter (ELT)

~~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.~~

(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.

13) AMC3 NCO.IDE.A.170 was amended as follows:

AMC3 NCO.IDE.A.170 Emergency locator transmitter (ELT)

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.

14) A new GM1 NCO.IDE.A.170 was added as follows:

GM1 NCO.IDE.A.170 Emergency locator transmitter (ELT)

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.

15) AMC1 NCO.IDE.A.175 was amended as follows:

AMC1 NCO.IDE.A.175 Flight over water

ACCESSIBILITY OF LIFE-JACKETS

The life-jacket, if not worn, should be accessible from the seat or berth of the person for whose use it is provided, with a safety belt or a restraint system fastened.

…

16) AMC1 NCO.IDE.A.180 was amended as follows:

AMC1 NCO.IDE.A.180 Survival equipment

GENERAL

(a) Aeroplanes operated across land areas in which search and rescue would be especially difficult should be equipped with the following:

(1) signalling equipment to make the distress signals;

(2) at least one ELT(S) or a PLB, carried by the pilot-in-command or a passenger; and

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

(b) The additional survival equipment specified in (a)(3) ~~should~~ does not need to be carried when the aeroplane remains within a distance from an area where search and rescue is not especially difficult, that corresponds to:

(1) 120 minutes at one-engine-inoperative (OEI) cruising speed for aeroplanes capable of continuing the flight to an aerodrome with the critical engine(s) becoming inoperative at any point along the route or planned diversion routes; or

(2) 30 minutes at cruising speed for all other aeroplanes.

17) GM1 NCO.IDE.A.195 was amended and re-numbered as follows:

GM1 NCO.IDE.A.195~~0~~ ~~Navigation~~Radio communication equipment

APPLICABLE AIRSPACE REQUIREMENTS

…

Section 2 — Helicopters

18) GM1 NCO.IDE.H.100(a) was amended as follows:

GM1 NCO.IDE.H.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 (EU) No 748/2012[2] for helicopters registered in the EU; and

~~(1) helicopters registered in the EU; and~~

~~(2) helicopters registered outside the EU but manufactured or designed by an EU organisation.~~

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

(b) Airworthiness requirements of the State of registry for helicopters registered~~, designed and manufactured~~ outside the EU.

19) A new GM1 NCO.IDE.H.100(b) was added as follows:

GM1 NCO.IDE.H.100(b) Instruments and equipment — general

REQUIRED INSTRUMENTS AND EQUIPMENT THAT DO NOT NEED TO BE APPROVED IN ACCORDANCE WITH THE APPLICABLE AIRWORTHINESS REQUIREMENTS

The functionality of non-installed instruments and equipment required by this Subpart and that do not need an equipment approval, as listed in NCO.IDE.H.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.

20) GM1 NCO.IDE.H.100(b)&(c) was amended and re-numbered as follows:

GM1 NCO.IDE.H.100~~(b)&~~(c) Instruments and equipment — general

NOT REQUIRED INSTRUMENTS AND EQUIPMENT THAT DO NOT NEED TO BE APPROVED IN ACCORDANCE WITH THE APPLICABLE AIRWORTHINESS REQUIREMENTS, BUT ARE CARRIED ON A FLIGHT

(a) The provision of this paragraph does not exempt any installed instrument or~~the~~ item of equipment from complying with the applicable airworthiness requirements ~~if the instrument or equipment is installed in the helicopter~~. 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 pilot-in-command 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 helicopter. Examples ~~are~~ may be the following:

(1) portable electronic flight bag (EFB)~~instruments supplying additional flight information (e.g. stand-alone global positioning system (GPS));~~

(2) portable electronic devices carried by crew members~~mission dedicated equipment (e.g. radios);~~ and

(3) non-installed passenger entertainment equipment.

21) AMC1 NCO.IDE.H.120(a)(5) was amended as follows:

AMC1 NCO.IDE.H.120(a)(5) Operations under VFR — flight and navigational instruments and associated equipment

SLIP ~~INDICATION~~

The means of measuring and displaying slip may be a slip string for operations under VFR.

22) AMC2 NCO.IDE.H.140 was amended as follows:

AMC2 NCO.IDE.H.140 Seats, seat safety belts, restraint systems and child restraint devices

UPPER TORSO RESTRAINT SYSTEM

The following systems are deemed to be compliant with the requirement for an upper torso restraint system:

(a) A ~~safety~~ seat belt with a diagonal shoulder strap; ~~and~~

(b) A restraint system having a seat belt and two ~~or three~~shoulder straps that may be used independently;

(c) A restraint system having a seat belt, two shoulder straps and additional straps that may be used independently.

~~SAFETY~~SEAT BELT

A ~~safety~~seat belt with diagonal shoulder strap (three anchorage points) is deemed to be compliant with the requirement for a ~~safety~~seat belt~~s~~ (two anchorage points).

23) AMC2 NCO.IDE.H.170 was amended as follows:

AMC2 NCO.IDE.H.170 Emergency locator transmitter (ELT)

~~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.~~

(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.

24) AMC3 NCO.IDE.H.170 was amended as follows:

AMC3 NCO.IDE.H.170 Emergency locator transmitter (ELT)

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.

25) A new GM1 NCO.IDE.H.170 was added as follows:

GM1 NCO.IDE.H.170 Emergency locator transmitter (ELT)

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.

26) AMC1 NCO.IDE.H.175 was amended as follows:

AMC1 NCO.IDE.H.175 Flight over water

ACCESSIBILITY OF LIFE-JACKETS

The life-jacket, if not worn, should be accessible from the seat or berth of the person for whose use it is provided, with a safety belt or a restraint system fastened.

…

27) A new AMC1 NCO.IDE.H.185 was added as follows:

AMC1 NCO.IDE.H.185 All helicopters on flights over water — ditching

EMERGENCY FLOTATION EQUIPMENT

The same considerations of AMC1 NCC.IDE.H.231 should apply in respect of emergency flotation equipment.

Section 3 — Sailplanes

28) GM1 NCO.IDE.S.100(a) was amended as follows:

GM1 NCO.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 (EU) No 748/2012[3] for sailplanes registered in the EU; and

~~(1) sailplanes registered in the EU; and~~

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

(b) Airworthiness requirements of the State of registry for sailplanes registered~~, designed and manufactured~~ outside the EU.

29) A new GM1 NCO.IDE.S.100(b) was added as follows:

GM1 NCO.IDE.S.100(b) Instruments and equipment — general

REQUIRED INSTRUMENTS AND EQUIPMENT THAT DO NOT NEED TO BE APPROVED IN ACCORDANCE WITH THE APPLICABLE AIRWORTHINESS REQUIREMENTS

The functionality of non-installed instruments and equipment required by this Subpart and that do not need an equipment approval, as listed in NCO.IDE.S.100(b), should be

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

checked against recognised industry standards appropriate to the intended purpose. The operator is responsible for ensuring the maintenance of these instruments and equipment.

30) GM1 NCO.IDE.S.100(b)&(c) was amended and re-numbered as follows:

GM1 NCO.IDE.S.100~~(b)~~&(c) Instruments and equipment — general

NOT REQUIRED INSTRUMENTS AND EQUIPMENT THAT DO NOT NEED TO BE APPROVED IN ACCORDANCE WITH THE APPLICABLE AIRWORTHINESS REQUIREMENTS, BUT ARE CARRIED ON A FLIGHT

(a) The provision of this paragraph does not exempt any installed instrument or~~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 pilot-in-command 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)~~may be portable electronic devices carried by crew members or passengers.

31) AMC1 NCO.IDE.S.115&NCO.IDE.S.120 was amended as follows:

AMC1 NCO.IDE.S.115&NCO.IDE.S.120 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 ~~and stabilised sailplane direction~~ may be met by combinations of instruments, provided that the safeguards against total failure, inherent in the three separate instruments, are retained.

32) AMC1 NCO.IDE.S.135(b) was amended as follows:

AMC1 NCO.IDE.S.135(b) Emergency locator transmitter (ELT)

~~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.~~

(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.

33) AMC3 NCO.IDE.S.135(b) was amended as follows:

AMC3 NCO.IDE.S.135(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.

34) A new GM1 NCO.IDE.S.135(b) was added as follows:

GM1 NCO.IDE.S.135(b) Emergency locator transmitter (ELT)

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.

35) GM2 NCO.IDE.S.140 was amended as follows:

GM2 NCO.IDE.S.140 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

…

Section 4 — Balloons

36) GM1 NCO.IDE.B.100(a) was amended as follows:

GM1 NCO.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 (EU) No 748/2012[4] for balloons registered in the EU; and

~~(1) balloons registered in the EU; and~~

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

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

(b) Airworthiness requirements of the State of registry for balloons registered~~, designed and manufactured~~ outside the EU.

37) A new GM1 NCO.IDE.B.100(b) was added as follows:

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

REQUIRED INSTRUMENTS AND EQUIPMENT THAT DO NOT NEED TO BE APPROVED IN ACCORDANCE WITH THE APPLICABLE AIRWORTHINESS REQUIREMENTS

The functionality of non-installed instruments and equipment required by this Subpart and that do not need an equipment approval, as listed in NCO.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.

38) GM1 NCO.IDE.B.100(b)&(c) was amended and re-numbered as follows:

GM1 NCO.IDE.S.100~~(b)~~&(c) Instruments and equipment — general

NOT REQUIRED INSTRUMENTS AND EQUIPMENT THAT DO NOT NEED TO BE APPROVED IN ACCORDANCE WITH THE APPLICABLE AIRWORTHINESS REQUIREMENTS, BUT ARE CARRIED ON A FLIGHT

(a) The provision of this paragraph does not exempt any installed instrument or~~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 pilot-in-command 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)~~may be portable electronic devices carried by crew members or passengers.

39) GM1 NCO.IDE.B.110 was amended as follows:

AMC1 NCO.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.

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.~~

…

40) GM1 NCO.IDE.B.115(b)(3) was added as follows:

GM1 NCO.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 Regulation (EU) 923/2012, 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.

41) The title of GM1 NCO.IDE.B.15 was amended as follows:

AMC1 NCO.IDE.B.125 Hand fire extinguishers

~~AIRWORTHINESS CODE~~CERTIFICATION SPECIFICATIONS

The applicable certification specification for hot-air balloons should be CS-31HB or equivalent.

42) AMC1 NCO.IDE.B.130(b) was amended as follows:

AMC1 NCO.IDE.B.130(b) Emergency locator transmitter (ELT)

~~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.~~

(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.

43) AMC3 NCO.IDE.B.130(b) was amended as follows:

AMC3 NCO.IDE.B.130(b) Emergency locator transmitter (ELT)

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.

44) A new GM1 NCO.IDE.B.130(b) was added as follows:

GM1 NCO.IDE.B.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.

45) GM1 NCO.IDE.B.135 was amended as follows:

GM1 NCO.IDE.B.130(d)~~5~~ Survival equipment

SIGNALLING EQUIPMENT

…

46) A new AMC1 NCO.IDE.B.140(c)(1) was added as follows:

AMC1 NCO.IDE.B.140(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 pilot-in-command or a crew member from the basket.

47) A new Subpart E was added as follows:

Subpart E — Specific requirements

Section 1 — General

AMC1 NCO.SPEC.100 Scope

CRITERIA

The pilot-in-command should consider the following criteria to determine whether an activity falls within the scope of specialised operations:

(a) the aircraft is flown close to the surface to fulfil the mission;

(b) abnormal manoeuvres are performed;

(c) special equipment is necessary to fulfil the mission and which affects the manoeuvrability of the aircraft;

(d) substances are released from the aircraft during the flight where these substances are either harmful or affect the manoeuvrability of the aircraft;

(e) external loads or goods are lifted or towed; or

(f) persons enter or leave the aircraft during flight.

GM1 NCO.SPEC.100 Scope

LIST OF SPECIALISED OPERATIONS

(a) Specialised operations include the following activities:

(1) helicopter external loads operations;

(2) helicopter survey operations;

(3) human external cargo operations;

(4) parachute operations and skydiving;

(5) agricultural flights;

(6) aerial photography flights;

(7) glider towing;

(8) aerial advertising flights;

(9) calibration flights;

(10) construction work flights, including stringing power line operations, clearing saw operations;

(11) oil spill work;

(12) avalanche mining operations;

(13) survey operations, including aerial mapping operations, pollution control activity;

(14) news media flights, television and movie flights;

(15) special events flights, including such as flying display, competition flights;

(16) aerobatic flights;

(17) animal herding and rescue flights and veterinary dropping flights;

(18) maritime funeral operations;

(19) scientific research flights (other than those under Annex II of Regulation 216/2008); and

(20) cloud seeding.

(b) For other operations, the pilot-in-command can apply the criteria specified in AMC1 NCO.SPEC.100 to determine whether an activity falls within the scope of specialised operations.

GM1 NCO.SPEC.105 Checklist

DEVELOPMENT OF CHECKLISTS

For developing the checklist, the pilot-in-command should duly take into account at least the following items:

(a) nature and complexity of the activity:

(1) the nature of the flight and the risk exposure, e.g. low height;

(2) the complexity of the activity taking into account the necessary pilot skills and level of experience, ground support, safety and individual protective equipment;

(3) the operational environment and geographical area, e.g. congested hostile environment, mountainous areas, sea areas, or desert areas;

(4) the result of the risk assessment and evaluation;

(b) aircraft and equipment:

(1) the category of aircraft to be used for the activity should be indicated, e.g. helicopter/aeroplane, single/multi-engined;

(2) all equipment required for the activity should be listed;

(c) crew members:

(1) crew composition;

(2) minimum crew experience and training provisions; and

(3) recency provisions;

(d) task specialists:

(1) description of the task specialists' function(s);

(2) minimum crew experience and training provisions; and

(3) recency provisions;

(4) briefing;

(e) aircraft performance:

this chapter should detail the specific performance requirements to be applied, in order to ensure an adequate power margin;

(f) normal procedures and emergency procedures:

(1) operating procedures for the flight crew, including the coordination with task specialists;

(2) ground procedures for the task specialists;

(g) ground equipment:

this chapter should detail the nature, number and location of ground equipment required for the activity;

(h) records:

it should be determined which records specific to these flight(s) are to be kept, such as task details, aircraft registration, pilot-in-command, flight times, weather and any remarks, including a record of occurrences affecting flight safety or the safety of persons or property on the ground.

GM2 NCO.SPEC.105 Checklists

TEMPLATE FORMS

The following templates are examples, which could be used for developing checklist.

(a) Template Form A — Risk assessment (RA)

Date: RA of Responsible:
Purpose:
Type of operation and brief description:
Participants, working group:
Preconditions, assumptions and simplifications:
Data used:
Description of the analysis method:
External context:
• Regulatory requirements • Approvals • Environmental conditions (visibility, wind, turbulence, contrast, light, elevation, etc.; unless evident from the checklists) • Stakeholders and their potential interest
Internal context:
• Type(s) of aircraft • Personnel and qualifications • Combination/similarity with other operations/SOPs • Other RA used/considered/plugged in
Existing barriers and emergency preparedness:
Monitoring and follow up:
Description of the risk:
Risk evaluation:
Conclusions:

(b) Template Form B — Hazard identification (HI)

Date: HI of Responsible:

Phase of operation	Haz ref	Hazard/accidental event	Cause/ threat	Current Treatment Measures (TM)	Further treatment required	TM ref	Comment

Haz ref: A unique number for hazards, e.g., for use in a database

TM ref: A unique number for the treatment method

(c) Template Form C — Mitigating measures

Date:…….. RA of Responsible:……

Phase of operation	Haz ref	Hazard/ accidental event	Current Treatment Measures (TM)/controls	TM ref	L	C	Further treatment required

Haz ref: A unique number for hazards, e.g., for use in a database

TM ref: A unique number for the treatment method

L: Likelihood (probability)

C: Consequence

(d) Template register A — Risk register

Ref	Operation/ Procedure	Ref	Generic hazard	Ref	Accidental event	Treatment/ control	L	C	Monitoring

L: Likelihood (probability)

C: Consequence

AMC1 NCO.SPEC.125 Safety briefing

TASK SPECIALISTS

(a) Safety briefings should ensure that task specialists are familiar with all aspects of the operation, including their responsibilities.

(b) Such briefings should include, as appropriate:

(1) behaviour on the ground and in-flight, including emergency procedures;

(2) procedures for boarding and disembarking;

(3) procedures for loading and unloading the aircraft;

(4) use of doors in normal and emergency operations;

(5) use of communication equipment and hand signals;

(6) precautions in case of a landing on sloping ground; and

(7) in addition to the items listed from (b)(1) to (b)(6) before take-off:

(i) location of emergency exits;

(ii) restrictions regarding smoking;

(iii) restrictions regarding the use of portable electronic equipment; and

(iv) stowage of tools and hand baggage.

(c) Briefings may be given as a verbal presentation or by issuing the appropriate procedures and instructions in written form. Before commencement of the flight, their understanding should be confirmed.

GM1 NCO.SPEC.175(c) Performance and operating criteria — helicopters

GENERAL

(a) Even when the surface allows a hover in ground effect (HIGE), the likelihood of, for example, dust or blowing snow may necessitate hover out of ground effect (HOGE) performance.

(b) Wind conditions on some sites, particularly downdraft in mountainous areas, may require a reduction in the helicopter mass in order to ensure that an out of ground effect hover can be achieved at the operational site in the conditions prevailing.

Section 2 — Helicopter external sling load operations (HESLO)

GM1 NCO.SPEC.HESLO.100 Checklist

REFERENCES

The following references to the AMC and GM of Annex VIII (Part-SPO) provide further guidance for the development of checklists.

(a) AMC1 SPO.SPEC.HESLO.100 provides a generic framework for the development of standard operating procedures (SOP) for HESLO operations. This AMC can be regarded as a good practice example for developing the checklist for HESLO operations.

(b) GM1 SPO.SPEC.HESLO.100 provides guidance for initial pilot training for HESLO types 1, 2, 3, 4 and 5.

Section 3 — Human external cargo operations (HEC)

GM1 NCO.SPEC.HEC.100 Checklist

REFERENCES

AMC1 SPO.SPEC.HEC.100 of Annex VIII (Part-SPO) provides a generic framework for the development of SOP for HEC operations. This AMC can be regarded as a good practice example for developing the checklist for HEC operations.