



**Annex I to the amending Cover Regulation on Air operations**

**Amendments to Annex IV - Part-CAT (S, B)**

## Table of contents

|   |           |
|---|-----------|
| <b>Amendments to Annex IV (Part-CAT)</b> .....                                  | <b>5</b>  |
| <b>Subpart A – General requirements</b> .....                                   | <b>5</b>  |
| CAT.GEN.105 Touring motor gliders powered sailplanes and mixed balloons .....   | 5         |
| <b>Section 2 – Non-motor-powered aircraft</b> .....                             | <b>5</b>  |
| CAT.GEN.NMPA.100 Responsibilities of the commander .....                        | 5         |
| CAT.GEN.NMPA.105 Additional balloon crew member .....                           | 7         |
| CAT.GEN.NMPA.110 Authority of the commander .....                               | 7         |
| CAT.GEN.NMPA.115 Common language.....   | 7         |
| CAT.GEN.NMPA.120 Portable electronic devices.....                               | 7         |
| CAT.GEN.NMPA.125 Information on emergency and survival equipment carried.....   | 7         |
| CAT.GEN.NMPA.130 Alcohol and drugs .....  | 7         |
| CAT.GEN.NMPA.135 Endangering safety .....                                       | 7         |
| CAT.GEN.NMPA.140 Documents, manuals and information to be carried.....          | 8         |
| CAT.GEN.NMPA.145 Provision of documentation and records.....                    | 9         |
| CAT.GEN.NMPA.150 Transport of dangerous goods .....                             | 9         |
| CAT.GEN.NMPA.155 Immediate reaction to a safety problem .....                   | 9         |
| <b>Subpart B – Operating procedures</b> .....                                   | <b>10</b> |
| <b>Section 2 – Non motor-powered aircraft</b> .....                             | <b>10</b> |
| CAT.OP.NMPA.100 Use of aerodromes and operating sites.....                      | 10        |
| CAT.OP.NMPA.105 Noise abatement procedures - balloons and powered sailplanes .. | 10        |
| CAT.OP.NMPA.110 Fuel or ballast supply and planning - balloons.....             | 10        |
| CAT.OP.NMPA.115 Carriage of special categories of passengers (SCPs).....        | 10        |
| CAT.OP.NMPA.120 Passenger briefing .....  | 10        |
| CAT.OP.NMPA.125 Flight preparation .....  | 10        |
| CAT.OP.NMPA.130 Submission of the ATS flight plan .....                         | 11        |
| CAT.OP.NMPA.135 Securing of passenger and pilot compartments - balloons.....    | 11        |
| CAT.OP.NMPA.140 Smoking on board .....  | 11        |
| CAT.OP.NMPA.145 Meteorological conditions.....                                  | 11        |
| CAT.OP.NMPA.150 Ice and other contaminants – ground procedures.....             | 11        |
| CAT.OP.NMPA.155 Take-off conditions .....                                       | 11        |
| CAT.OP.NMPA.160 Simulated abnormal situations in flight.....                    | 12        |

|   |   |           |
|---|---|-----------|
| CAT.OP.NMPA.165   | In-flight fuel and ballast management - balloons .....                                    | 12        |
| CAT.OP.NMPA.170   | Use of supplemental oxygen .....  | 12        |
| CAT.OP.NMPA.175   | Approach and landing conditions .....   | 12        |
| CAT.OP.NMPA.180   | Operational limitations – hot-air balloons.....   | 12        |
| CAT.OP.NMPA.185   | Operational limitations – sailplanes .....  | 12        |
| <b>Subpart C - Aircraft performance and operating limitations .....</b> |   | <b>13</b> |
| <b>Section 4 – Sailplanes .....</b>                                     |   | <b>13</b> |
| CAT.POL.S.100   | Operating limitations.....  | 13        |
| CAT.POL.S.105   | Weighing .....  | 13        |
| CAT.POL.S.110   | Performance .....   | 13        |
| <b>Section 5 – Balloons.....</b>  |   | <b>14</b> |
| CAT.POL.B.100   | Operating limitations .....   | 14        |
| CAT.POL.B.105   | Weighing.....   | 14        |
| CAT.POL.B.110   | System for determining the mass.....  | 14        |
| CAT.POL.B.115   | Performance .....   | 14        |
| <b>Subpart D – Instrument, data, equipment .....</b>                    |   | <b>16</b> |
| <b>Section 3 – Sailplanes .....</b>                                     |   | <b>16</b> |
| CAT.IDE.S.100   | Instruments and equipment – general .....   | 16        |
| CAT.IDE.S.105   | Minimum equipment for flight.....   | 16        |
| CAT.IDE.S.110   | Operations under VFR – flight and navigational instruments .....                          | 16        |
| CAT.IDE.S.115   | Cloud flying – flight and navigational instruments.....                                   | 17        |
| CAT.IDE.S.120   | Seats and restraint systems.....  | 17        |
| CAT.IDE.S.125   | Supplemental oxygen .....   | 17        |
| CAT.IDE.S.130   | Flight over water .....   | 17        |
| CAT.IDE.S.135   | Survival equipment .....  | 18        |
| CAT.IDE.S.140   | Radio communication equipment .....   | 18        |
| CAT.IDE.S.145   | Navigation equipment .....  | 18        |
| CAT.IDE.S.150   | Transponder.....  | 18        |
| <b>Section 4 – Balloons.....</b>  |   | <b>19</b> |
| CAT.IDE.B.100   | Instruments and equipment – general .....   | 19        |
| CAT.IDE.B.105   | Minimum equipment for flight .....  | 19        |
| CAT.IDE.B.110   | Operating lights .....  | 20        |
| CAT.IDE.B.115   | Operations under VFR – flight and navigational instruments and associated equipment ..... | 20        |

|               |                                     |    |
|---------------|-------------------------------------|----|
| CAT.IDE.B.120 | Restraint systems .....             | 20 |
| CAT.IDE.B.125 | First-aid kit.....                  | 20 |
| CAT.IDE.B.130 | Supplemental oxygen.....            | 20 |
| CAT.IDE.B.135 | Hand fire extinguishers.....        | 21 |
| CAT.IDE.B.140 | Flight over water.....              | 21 |
| CAT.IDE.B.145 | Survival equipment.....             | 21 |
| CAT.IDE.B.150 | Miscellaneous equipment .....       | 21 |
| CAT.IDE.B.155 | Radio communication equipment ..... | 21 |
| CAT.IDE.B.160 | Transponder .....                   | 22 |

## **Amendments to Annex IV (Part-CAT)**

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

### **Subpart A – General requirements**

1) A new provision is added to Subpart A – General requirements:

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

- (a) Powered sailplanes, excluding touring motor gliders, shall be operated and equipped in compliance with the requirements applicable to sailplanes.
- (b) Touring motor gliders (TMGs) shall be operated following the requirements for:
  - (1) aeroplanes when they are power-driven by an engine; and
  - (2) sailplanes when operated without using an engine.
- (c) TMGs shall be equipped in compliance with the requirements applicable to aeroplanes, unless otherwise specified in CAT.IDE.A.
- (d) Mixed balloons shall be operated in accordance with the requirements for hot-air balloons.

2) A new Section 2 is inserted into Subpart A – General requirements as follows:

### **Section 2 – Non-motor-powered aircraft**

#### **CAT.GEN.NMPA.100 Responsibilities of the commander**

- (a) The commander shall:
  - (1) be responsible for the safety of all crew members and passengers on board, as soon as the commander arrives on board of the aircraft, until the commander leaves the aircraft at the end of the flight;
  - (2) be responsible for the operation and safety of the aircraft:
    - (i) for balloons, from the moment the inflating of the envelope is started until the envelope is deflated, unless the commander has delegated the responsibility to another qualified person during the filling phase until the commander arrives as specified in the operations manual (OM);
    - (ii) for sailplanes, from the moment the launch procedure is started until the sailplane comes to a rest at the end of the flight;
  - (3) have authority to give all commands and take any appropriate actions for the purpose of securing the safety of the aircraft and of persons and/or property

- carried therein in accordance with 7.c. of Annex IV to Regulation (EC) No 216/2008;
- (4) have authority not to embark and to disembark any person that may represent a potential hazard to the safety of the aircraft or its occupants;
  - (5) not allow a person to be carried in the aircraft who appears to be under the influence of alcohol or drugs to the extent that the safety of the aircraft or its occupants is likely to be endangered;
  - (6) ensure that all passengers have received a safety briefing;
  - (7) ensure that all operational procedures and checklists are complied with in accordance with the operations manual;
  - (8) ensure that the pre-flight inspection has been carried out in accordance with the requirements of Annex I (Part-M) to Regulation (EC) No 2042/2003;
  - (9) be satisfied that relevant emergency equipment remains easily accessible for immediate use;
  - (10) comply with the relevant requirements of the operator's occurrence reporting schemes;
  - (11) comply with all flight and duty time limitations (FTL) and rest requirements applicable to his/her activities;
  - (12) when undertaking duties for more than one operator:
    - (i) maintain his/her individual records regarding flight and duty times and rest periods as referred to in applicable FTL requirements; and
    - (ii) provide each operator with the data needed to schedule activities in accordance with the applicable FTL requirements.
- (b) The commander shall not perform duties on an aircraft:
- (1) when under the influence of psychoactive substances or alcohol or when unfit due to injury, fatigue, medication, sickness or other similar causes;
  - (2) until a reasonable time period has elapsed after deep water diving or following blood donation;
  - (3) if applicable medical requirements are not fulfilled;
  - (4) if he/she is in any doubt of being able to accomplish his/her assigned duties; or
  - (5) if he/she knows or suspects that he/she is suffering from fatigue as referred to in 7.f. of Annex IV to Regulation (EC) No 216/2008 or feels otherwise unfit, to the extent that the flight may be endangered.
- (c) The commander shall, in an emergency situation that requires immediate decision and action, take any action the commander considers necessary under the circumstances in accordance with 7.d. of Annex IV to Regulation (EC) No 216/2008. In such cases he/she may deviate from rules, operational procedures and methods in the interest of safety.
- (d) The commander of a balloon shall:
- (1) be responsible for the pre-flight briefing of those persons assisting in the inflation and deflation of the envelope;
  - (2) ensure that no person is smoking on board or within the direct vicinity of the balloon; and

- (3) ensure that persons assisting in the inflation and deflation of the envelope wear appropriate protective clothing.

**CAT.GEN.NMPA.105 Additional balloon crew member**

- (a) When a balloon carries more than 19 passengers, at least one additional crew member appropriately experienced and trained shall be present on board to assist passengers in the event of an emergency.
- (b) The additional crew member shall not perform duties on a balloon:
  - (1) when under the influence of psychoactive substances or alcohol;
  - (2) when unfit due to injury, fatigue, medication, sickness or other similar causes; or
  - (3) until a reasonable time period has elapsed after deep water diving or following blood donation.

**CAT.GEN.NMPA.110 Authority of the commander**

The operator shall take all reasonable measures to ensure that all persons carried in the aircraft obey all lawful commands given by the commander for the purpose of securing the safety of the aircraft and of persons or property carried therein.

**CAT.GEN.NMPA.115 Common language**

The operator shall ensure that all crew members can communicate with each other in a common language.

**CAT.GEN.NMPA.120 Portable electronic devices**

The operator shall not permit any person to use a portable electronic device (PED) on board an aircraft that could adversely affect the performance of the aircraft's systems and equipment and shall take all reasonable measures to prevent such use.

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

The operator shall at all times have available for immediate communication to rescue coordination centres (RCCs) lists containing information on the emergency and survival equipment carried on board any of their aircraft.

**CAT.GEN.NMPA.130 Alcohol and drugs**

The operator shall take all reasonable measures to ensure that no person enters or is in an aircraft when under the influence of alcohol or drugs to the extent that the safety of the aircraft or its occupants is likely to be endangered.

**CAT.GEN.NMPA.135 Endangering safety**

The operator shall take all reasonable measures to ensure that no person recklessly or negligently acts or omits to act so as to:

- (a) endanger an aircraft or person therein or on the ground; or
- (b) cause or permit an aircraft to endanger any person or property.

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

- (a) The following documents, manuals and information shall be carried on each flight, as originals or copies unless otherwise specified:
- (1) the aircraft flight manual (AFM), or equivalent document(s);
  - (2) the original certificate of registration;
  - (3) the original certificate of airworthiness (CofA);
  - (4) the noise certificate, if applicable;
  - (5) a copy of the air operator certificate (AOC);
  - (6) the operations specifications relevant to the aircraft type, issued with the AOC, if applicable;
  - (7) the aircraft radio licence, if applicable;
  - (8) the third party liability insurance certificate(s);
  - (9) the journey log, or equivalent, for the aircraft;
  - (10) the aircraft technical log, in accordance with Annex I (Part-M) to Regulation (EC) No 2042/2003, 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;
  - (15) appropriate notices to airmen (NOTAMs) and aeronautical information service (AIS) briefing documentation;
  - (16) appropriate meteorological information;
  - (17) passenger manifests, if applicable;
  - (18) for sailplanes, mass and balance documentation and for balloons, mass documentation;
  - (19) the operational flight plan, if applicable; and
  - (20) any other documentation that may be pertinent to the flight or is required by the States concerned with the flight.
- (b) Notwithstanding (a), the documents, manuals and information specified there may be carried in the retrieve vehicle or retained at the aerodrome or operating site on flights intending to:
- (1) take off and land at the same aerodrome or operating site; or
  - (2) remain within a local area specified in the operations manual.

**CAT.GEN.NMPA.145 Provision of documentation and records**

The commander shall, within a reasonable time of being requested to do so by a person authorised by an authority, provide to that person the documentation required to be carried on board.

**CAT.GEN.NMPA.150 Transport of dangerous goods**

- (a) The transport of dangerous goods shall not be permitted, except when:
  - (1) they are not subject to the Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Doc 9284-AN/905) in accordance with Part 1 of those Instructions; or
  - (2) they are carried by passengers or crew members, or are in baggage, in accordance with Part 8 of the Technical Instructions.
- (b) The operator shall establish procedures to ensure that all reasonable measures are taken to prevent dangerous goods from being carried on board inadvertently.
- (c) The operator shall provide personnel with the necessary information enabling them to carry out their responsibilities.

**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.

### **Subpart B – Operating procedures**

- 3) A new Section 2 is inserted into Subpart B – Operational procedures as follows:

#### **Section 2 – Non-motor-powered aircraft**

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

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

##### **CAT.OP.NMPA.105 Noise abatement procedures - balloons and powered sailplanes**

The commander shall take into account the effect of aircraft noise while ensuring that safety has priority over noise abatement.

##### **CAT.OP.NMPA.110 Fuel or ballast supply and planning - balloons**

- (a) The operator shall ensure that the fuel or ballast carried is sufficient for the intended flight duration plus a reserve of 30 minutes of flight.
- (b) Fuel or ballast supply calculations shall be based upon at least the following operating conditions under which the flight is to be conducted:
  - (1) data provided by the balloon manufacturer;
  - (2) anticipated masses;
  - (3) expected meteorological conditions; and
  - (4) air navigation services provider(s) procedures and restrictions.
- (c) The calculations shall be documented in an operational flight plan.

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

Persons requiring special conditions, assistance and/or devices when carried on a flight shall be considered as SCPs and be carried under conditions that ensure the safety of the aircraft and its occupants according to procedures established by the operator.

##### **CAT.OP.NMPA.120 Passenger briefing**

The operator shall ensure that passengers are given a safety briefing before or, where appropriate, during the flight.

##### **CAT.OP.NMPA.125 Flight preparation**

Before commencing the flight, the commander shall:

- (a) ascertain by every reasonable means available that the ground facilities including communication facilities and navigation aids available and directly required on such a

flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted; and

- (b) be familiar with all available meteorological information appropriate to the intended flight. Preparation for a flight away from the vicinity of the place of departure shall include:
  - (1) a study of available current weather reports and forecasts; and
  - (2) the planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of weather conditions.

#### **CAT.OP.NMPA.130 Submission of the ATS flight plan**

- (a) If an ATS flight plan is not submitted because it is not required by the rules of the air, adequate information shall be deposited in order to permit alerting services to be activated if required.
- (b) When operating from a site where it is impossible to submit an ATS flight plan, the ATS flight plan shall be transmitted as soon as possible after take-off by the commander or the operator.

#### **CAT.OP.NMPA.135 Securing of passenger and pilot compartments - balloons**

The commander shall ensure that before take-off and landing, and whenever deemed necessary in the interest of safety:

- (a) all equipment and baggage are properly secured; and
- (b) emergency evacuation remains possible.

#### **CAT.OP.NMPA.140 Smoking on board**

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

#### **CAT.OP.NMPA.145 Meteorological conditions**

The commander shall only commence or continue a VFR flight if the latest available meteorological information indicates that the weather conditions along the route and at the intended destination at the estimated time of use will be at or above the applicable VFR operating minima.

#### **CAT.OP.NMPA.150 Ice and other contaminants – ground procedures**

The commander shall only commence take-off if the aircraft is clear of any deposit that might adversely affect the performance or controllability of the aircraft, except as permitted in accordance with the AFM.

#### **CAT.OP.NMPA.155 Take-off conditions**

Before commencing take-off, the commander shall be satisfied that according to the information available to him/her, the weather at the aerodrome or operating site would not prevent a safe take-off and departure.

**CAT.OP.NMPA.160 Simulated abnormal situations in flight**

The commander shall ensure that when carrying passengers abnormal or emergency situations that require the application of abnormal or emergency procedures are not simulated.

**CAT.OP.NMPA.165 In-flight fuel and ballast management - balloons**

The commander shall check at regular intervals that the amount of usable fuel and ballast remaining in flight is not less than the fuel and ballast needed to complete the intended flight and the reserve planned for landing.

**CAT.OP.NMPA.170 Use of supplemental oxygen**

The commander shall ensure that flight crew members engaged in performing duties essential to the safe operation of the aircraft in flight use supplemental oxygen continuously whenever the pressure altitude exceeds 10 000 ft for a period of more than 30 minutes and whenever the pressure altitude exceeds 13 000 ft.

**CAT.OP.NMPA.175 Approach and landing conditions**

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

**CAT.OP.NMPA.180 Operational limitations – hot-air balloons**

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

**CAT.OP.NMPA.185 Operational limitations – sailplanes**

A sailplane shall only be operated during day.

### **Subpart C - Aircraft performance and operating limitations**

4) A new Section 4 is inserted into Subpart C – Aircraft performance and operating limitations as follows:

#### **Section 4 – Sailplanes**

##### **CAT.POL.S.100 Operating limitations**

- (a) During any phase of operation, the loading, the mass and the centre of gravity (CG) position of the sailplane shall comply with any limitation specified in the AFM or the operations manual (OM) if more restrictive.
- (b) Placards, listings, instrument markings, or combinations thereof, containing those operating limitations prescribed by the AFM for visual presentation, shall be displayed in the sailplane.

##### **CAT.POL.S.105 Weighing**

- (a) The operator shall ensure that the mass and the CG of the sailplane have been established by actual weighing prior to initial entry into service. The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented. Such information shall be made available to the commander.
- (b) The sailplane shall be reweighed if the effect of modifications on the mass and balance is not accurately known.

##### **CAT.POL.S.110 Performance**

The commander shall only operate the sailplane if the performance is adequate to comply with the applicable rules of the air and any other restrictions applicable to the flight, the airspace or the aerodromes or operating sites used, taking into account the charting accuracy of any charts and maps used.

6) A new Section 5 is inserted into Subpart C – Aircraft performance and operating limitations as follows:

### **Section 5 – Balloons**

#### **CAT.POL.B.100 Operating limitations**

- (a) During any phase of operation, the loading and the mass of the balloon shall comply with any limitation specified in the AFM or the operations manual (OM) if more restrictive.
- (b) Placards, listings, instrument markings, or combinations thereof, containing those operating limitations prescribed by the AFM for visual presentation, shall be displayed in the balloon.

#### **CAT.POL.B.105 Weighing**

- (a) The operator shall ensure that the mass of the balloon has been established by actual weighing prior to initial entry into service. The accumulated effects of modifications and repairs on the mass shall be accounted for and properly documented. Such information shall be made available to the commander.
- (b) The balloon shall be reweighed if the effect of modifications on the mass is not accurately known.

#### **CAT.POL.B.110 System for determining the mass**

- (a) The operator of a balloon shall establish a system specifying how the following items are accurately determined for each flight so to enable the commander to verify that the limitations of the AFM are complied with:
  - (1) balloon empty mass;
  - (2) mass of the traffic load;
  - (3) mass of the fuel or ballast load;
  - (4) take-off mass;
  - (5) loading of the balloon performed under the supervision of the commander or qualified personnel;
  - (6) preparation and disposition of all documentation.
- (b) The mass computation based on electronic calculations shall be replicable by the commander.
- (c) The mass documentation shall be prepared prior to each flight and documented in an operational flight plan.

#### **CAT.POL.B.115 Performance**

The commander shall only operate the balloon if the performance is adequate to comply with the applicable rules of the air and any other restrictions applicable to the flight, the airspace

or the aerodromes or operating sites used, taking into account the charting accuracy of any charts and maps used.

**Subpart D – Instrument, data, equipment**

7) A new Section 3 is inserted to Subpart D – Instruments, data and equipment as follows:

**Section 3 – Sailplanes****CAT.IDE.S.100 Instruments and equipment – general**

- (a) Instruments and equipment required by this Subpart shall be approved in accordance with Regulation (EC) No 1702/2003 if they are:
  - (1) used by the flight crew to control the flight path;
  - (2) used to comply with CAT.IDE.S.140;
  - (3) used to comply with CAT.IDE.S.145; or
  - (4) installed in the sailplane.
- (b) The following items, when required by this Subpart, do not need an equipment approval:
  - (1) independent portable light;
  - (2) accurate time piece; and
  - (3) survival and signalling equipment.
- (c) Instruments and equipment not required by this Subpart as well as any other equipment that is not required by other Annexes, but is carried on a flight, shall comply with the following:
  - (1) the information provided by these instruments or equipment shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008; and
  - (2) the instruments and equipment shall not affect the airworthiness of the sailplane, even in the case of failures or malfunction.
- (d) Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is seated.
- (e) All required emergency equipment shall be easily accessible for immediate use.

**CAT.IDE.S.105 Minimum equipment for flight**

A flight shall not be commenced when any of the sailplane instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless the sailplane is operated in accordance with the minimum equipment list (MEL).

**CAT.IDE.S.110 Operations under VFR – flight and navigational instruments**

- (a) Sailplanes operated under VFR by day shall be equipped with a means of measuring and displaying:

- (1) in the case of powered sailplanes, magnetic heading;
  - (2) time in hours, minutes and seconds;
  - (3) pressure altitude; and
  - (4) indicated airspeed.
- (b) Sailplanes operating in conditions where the sailplane cannot be maintained in a desired attitude without reference to one or more additional instruments, shall be, in addition to (a), equipped with a means of measuring and displaying:
- (1) vertical speed;
  - (2) attitude or turn and slip; and
  - (3) magnetic heading.

#### **CAT.IDE.S.115 Cloud flying – flight and navigational instruments**

Sailplanes performing cloud flying shall be equipped with a means of measuring and displaying:

- (a) magnetic heading;
- (b) time in hours, minutes and seconds;
- (c) pressure altitude;
- (d) indicated airspeed;
- (e) vertical speed; and
- (f) attitude or turn and slip.

#### **CAT.IDE.S.120 Seats and restraint systems**

- (a) Sailplanes shall be equipped with:
- (1) a seat for each person on board; and
  - (2) a seat belt with upper torso restraint system for each seat according to the AFM.
- (b) A seat belt with upper torso restraint system shall have a single point release.

#### **CAT.IDE.S.125 Supplemental oxygen**

Sailplanes operated at pressure altitudes above 10 000 ft shall be equipped with 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, that shall be worn or stowed in a position that is readily accessible from the seat of the person for whose use it is provided;
- (b) an emergency locator transmitter (ELT) or a personal locator beacon (PLB), carried by a crew member or a passenger, capable of transmitting simultaneously on 121.5 MHz and 406 MHz; and
- (c) equipment for making distress signals, when operating a flight:
  - (1) over water beyond gliding distance from the land; or
  - (2) where the take-off or approach path is so disposed over water that in the event of a mishap there would be a likelihood of ditching.

**CAT.IDE.S.135 Survival equipment**

Sailplanes operated over areas in which search and rescue would be especially difficult shall be equipped with such signalling devices and life-saving equipment as appropriate to the area overflown.

**CAT.IDE.S.140 Radio communication equipment**

- (a) When required by the airspace being flown, sailplanes shall be equipped with radio communication equipment capable of conducting two-way communication with those aeronautical stations or those frequencies to meet airspace requirements.
- (b) Radio communication equipment, if required by (a), shall provide for communication on the aeronautical emergency frequency 121.5 MHz.

**CAT.IDE.S.145 Navigation equipment**

Sailplanes shall be equipped with any navigation equipment necessary to proceed in accordance with:

- (a) the ATS flight plan if applicable; and
- (b) the applicable airspace requirements.

**CAT.IDE.S.150 Transponder**

When required by the airspace being flown, sailplanes shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.

8) A new Section 4 is inserted into Subpart D – Instruments, data and equipment as follows:

#### **Section 4 – Balloons**

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

- (a) Instruments and equipment required by this Subpart shall be approved in accordance with Regulation (EC) No 1702/2003 if they are:
  - (1) used by the flight crew to determine the flight path;
  - (2) used to comply with CAT.IDE.B.155; or
  - (3) installed in the balloon.
- (b) The following items, when required by this Subpart, do not need an equipment approval:
  - (1) independent portable light;
  - (2) accurate time piece;
  - (3) first-aid kit;
  - (4) survival and signalling equipment;
  - (5) alternative source of ignition;
  - (6) fire blanket or fire resistant cover;
  - (7) drop line; and
  - (8) knife.
- (c) Instruments and equipment not required by this Subpart as well as any other equipment that is not required by other Annexes, but is carried on a flight, shall comply with the following:
  - (1) the information provided by these instruments or equipment shall not be used by the flight crew to comply with Annex I to Regulation (EC) No 216/2008; and
  - (2) the instruments and equipment shall not affect the airworthiness of the balloon, even in the case of failures or malfunction.
- (d) Instruments and equipment shall be readily operable or accessible from the station where the flight crew member that needs to use it is assigned.
- (e) All required emergency equipment shall be easily accessible for immediate use.

##### **CAT.IDE.B.105 Minimum equipment for flight**

A flight shall not be commenced when any of the balloon instruments, items of equipment or functions, required for the intended flight, are inoperative, unless the balloon is operated in accordance with the minimum equipment list (MEL).

**CAT.IDE.B.110 Operating lights**

Balloons operated at night shall be equipped with:

- (a) position lights;
- (b) a means to provide adequate illumination for all instruments and equipment essential to the safe operation of the balloon; and
- (c) an independent portable light.

**CAT.IDE.B.115 Operations under VFR – flight and navigational instruments and associated equipment**

Balloons operated under VFR shall be equipped with:

- (a) a means of displaying drift direction; and
- (b) a means of measuring and displaying:
  - (1) time in hours, minutes and seconds;
  - (2) vertical speed, if required by the AFM;
  - (3) pressure altitude, if required by the AFM, if required by air space requirements or when altitude needs to be controlled for the use of oxygen; and
  - (4) except for gas balloons, the pressure of each burning gas supply line.

**CAT.IDE.B.120 Restraint systems**

Balloons with compartmented baskets 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**

Hot-air balloons shall be equipped with at least one hand fire extinguisher as required by the applicable airworthiness code.

**CAT.IDE.B.140 Flight over water**

The commander of a balloon operated over water shall determine the risks to survival of the occupants of the balloon in the event of a ditching, based on which he/she shall determine the carriage of:

- (a) a life-jacket for each person on board, or equivalent individual floatation device for each person on board younger than 24 months, that shall be worn or stowed in a position that is readily accessible from the station of the person for whose use it is provided;
- (b) an emergency locator transmitter (ELT) or a personal locator beacon (PLB), carried by a crew member or a passenger, capable of transmitting simultaneously on 121.5 MHz and 406 MHz; and
- (c) equipment for making distress signals.

**CAT.IDE.B.145 Survival equipment**

Balloons operated over areas in which search and rescue would be especially difficult shall be equipped with such signalling devices and life-saving equipment as appropriate to the area overflown.

**CAT.IDE.B.150 Miscellaneous equipment**

- (a) Balloons shall be equipped with protective gloves for each crew member.
- (b) Hot-air balloons shall be equipped with:
  - (1) an alternative source of ignition;
  - (2) a means of measuring and indicating fuel quantity;
  - (3) a fire blanket or fire resistant cover; and
  - (4) a drop line of at least 25 m in length.
- (c) Gas balloons shall be equipped with:
  - (1) a knife; and
  - (2) a drop line of at least 20 m in length made of natural fibre or electrostatic conductive material.

**CAT.IDE.B.155 Radio communication equipment**

- (a) When required by airspace requirements, balloons shall be equipped with radio communication equipment at the pilot's station, capable of conducting two-way communication with those aeronautical stations or those frequencies to meet airspace requirements.
- (b) Radio communication equipment, if required by (a), shall provide for communication on the aeronautical emergency frequency 121.5 MHz.

**CAT.IDE.B.160 Transponder**

When required by the airspace being flown, balloons shall be equipped with a secondary surveillance radar (SSR) transponder with all the required capabilities.