

Commission Regulation (EU) 2015/2338 of 11 December 2015 amending  
Regulation (EU) No 965/2012 as regards requirements for flight  
recorders, underwater locating devices and aircraft tracking systems

COMMISSION REGULATION (EU) 2015/2338

of 11 December 2015

amending Regulation (EU) No 965/2012 as regards requirements for  
flight recorders, underwater locating devices and aircraft tracking systems

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC<sup>(1)</sup>, and in particular Article 8(5) thereof,

Whereas:

- (1) The operation of aircraft has to comply with the essential requirements set out in Annex IV to Regulation (EC) No 216/2008. In accordance with Regulation (EC) No 216/2008, the Commission should adopt the necessary implementing rules for establishing the conditions for the safe operation of aircraft.
- (2) The Cockpit Voice Recorder (CVR) aims at supporting the safety investigation performed by the safety investigation authority in the case an accident or an incident occurs. Relevant safeguards to protect CVR from disclosure in a situation where a safety investigation has been opened are set out in Regulation (EU) No 996/2010 of the European Parliament and of the Council<sup>(2)</sup>. With the introduction of safety management, it is recognised that CVR might be used outside the context of a safety investigation in order to maintain or improve safety. Therefore, Commission Regulation (EU) No 965/2012<sup>(3)</sup> should be amended in order to reinforce conditions that aim to effectively prevent the inappropriate use and disclosure of CVR recordings.
- (3) With the objective to improve the overall performance of flight recorders and to facilitate the recovery of an aircraft and its flight recorders after an accident over water, several safety improvements to the current requirement have been put forward by the International Civil Aviation Organisation (ICAO). Those safety improvements include the discontinuation of outdated recording technologies such as magnetic tape or magnetic wire, the extension of the minimum recording duration of the CVR as well as the extension of the transmission time of the flight recorder underwater locating device and the carriage of an underwater locating device with a very long detection range for aeroplanes performing long-range overwater flights. Therefore, Regulation (EU) No 965/2012 should be amended in order to reflect those safety improvements.

- (4) It is necessary to take into consideration the disappearance of flight MH370 on 8 March 2014 and the recommendations made by the multidisciplinary meeting of the ICAO on global tracking of 12 and 13 May 2014. The position of public transport aircraft should be known at all times, even in a remote location, in order to facilitate the location of the aircraft in case of an abnormal behaviour, an emergency or an accident. Whenever possible, the aircraft tracking means should be robust to loss of normal electrical power on board and should not offer any control to disable it during the flight. Therefore, Regulation (EU) No 965/2012 should be amended in order to include additional requirements related to means to track aircraft on a global basis, including over oceans and remote areas.
- (5) In accordance with the proposition of the Flight Recorder Panel (FLIRECP) of the ICAO, with respect to the carriage of CVRs with extended recording duration for large aeroplanes, provision should be made for the introduction of CVR with a recording duration of 25 hours on board aircraft, manufactured after 1 January 2021, with a maximum certificated take-off mass of over 27 000 kg.
- (6) The measures provided for in this Regulation address 13 safety recommendations from safety investigation authorities<sup>(4)</sup>, with a view to increasing safety by facilitating the recovery of information for the purposes of European civil aviation safety investigations and improving flight recorder performance and handling as well as the location of aircraft after an accident over water.
- (7) The measures provided for in this Regulation are based on the Opinion No 01/2014<sup>(5)</sup> issued by the European Aviation Safety Agency (EASA) in accordance with Articles 17(2)(b) and 19(1) of Regulation (EC) No 216/2008.
- (8) The measures provided for in this Regulation are in accordance with the opinion of the Committee established by Article 65 of Regulation (EC) No 216/2008,

HAS ADOPTED THIS REGULATION:

*Article 1*

Annex I (Definitions), Annex IV (Part-CAT), Annex VI (Part-NCC) and Annex VIII (Part-SPO) to Regulation (EU) No 965/2012 are amended in accordance with the Annex to this Regulation.

*Article 2*

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

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 11 December 2015.

*For the Commission*

*The President*

Jean-Claude JUNCKER

## ANNEX

1. The following points are inserted in Annex I to Regulation (EU) No 965/2012:
  - (8a) “aircraft tracking” means a ground based process that maintains and updates, at standardised intervals, a record of the four dimensional position of individual aircraft in flight;
  - (8b) “aircraft tracking system” means a system that relies on aircraft tracking in order to identify abnormal flight behaviour and provide alert;
2. Annex IV to Regulation (EU) No 965/2012 is amended as follows:
  - (a) In CAT.GEN.MPA.105(a), item (10) is replaced by the following:
    - (10) ensure that:
      - (i) flight recorders are not disabled or switched off during flight;
      - (ii) in the event of an occurrence other than an accident or a serious incident that shall be reported according to ORO.GEN.160(a), flight recorders' recordings are not intentionally erased; and
      - (iii) in the event of an accident or a serious incident, or if preservation of recordings of flight recorders is directed by the investigating authority:
        - (A) flight recorders' recordings are not intentionally erased;
        - (B) flight recorders are deactivated immediately after the flight is completed; and
        - (C) precautionary measures to preserve the recordings of flight recorders are taken before leaving the flight crew compartment..
  - (b) CAT.GEN.MPA.195 is amended as follows:
    - (i) the title is replaced by the following:  
**CAT.GEN.MPA.195 Handling of flight recorder recordings: preservation, production, protection and use.**
    - (ii) point (a) is replaced by the following:
      - (a) Following an accident, a serious incident or an occurrence identified by the investigating authority, the operator of an aircraft shall preserve the original recorded data for a period of 60 days or until otherwise directed by the investigating authority..
    - (iii) point (f) is replaced by the following:
      - (f) Without prejudice to Regulation (EU) No 996/2010 of the European Parliament and of the Council<sup>(6)</sup>:
        - (1) Except for ensuring the CVR serviceability, CVR recordings shall not be disclosed or used unless:

- (i) a procedure related to the handling of CVR recordings and of their transcript is in place;
    - (ii) all crew members and maintenance personnel concerned have given their prior consent; and
    - (iii) they are used only for maintaining or improving safety.
  - (1a) When a CVR recording is inspected for ensuring the CVR serviceability, the operator shall ensure the privacy of the CVR recording and the CVR recording shall not be disclosed or used for other purposes than ensuring the CVR serviceability.
  - (2) FDR recordings or data link recordings shall only be used for purposes other than for the investigation of an accident or an incident which is subject to mandatory reporting, if such records are:
    - (i) used by the operator for airworthiness or maintenance purposes only; or
    - (ii) de-identified; or
    - (iii) disclosed under secure procedures..
- (c) The following point CAT.GEN.MPA.205 is inserted:  
**CAT.GEN.MPA.205 Aircraft tracking system — Aeroplanes**
  - (a) By 16 December 2018 at the latest, the operator shall establish and maintain, as part of the system for exercising operational control over the flights, an aircraft tracking system, which includes the flights eligible to (b) when performed with the following aeroplanes:
    - (1) aeroplanes with an MCTOM of more than 27 000 kg, with an MOPSC of more than 19, and first issued with an individual CofA before 16 December 2018, which are equipped with a capability to provide a position additional to the secondary surveillance radar transponder;
    - (2) all aeroplanes with an MCTOM of more than 27 000 kg, with an MOPSC of more than 19, and first issued with an individual CofA on or after 16 December 2018; and
    - (3) all aeroplanes with an MCTOM of more than 45 500 kg and first issued with an individual CofA on or after 16 December 2018.
  - (b) Flights shall be tracked by the operator from take-off to landing, except when the planned route and the planned diversion routes are fully included in airspace blocks where:

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- (1) ATS surveillance service is normally provided which is supported by ATC surveillance systems locating the aircraft at time intervals with adequate duration; and
  - (2) the operator has provided to competent air navigation service providers necessary contact information..
- (d) The following point CAT.GEN.MPA.210 is inserted:  
**CAT.GEN.MPA.210 Location of an aircraft in distress — Aeroplanes**
- The following aeroplanes shall be equipped with robust and automatic means to accurately determine, following an accident where the aeroplane is severely damaged, the location of the point of end of flight:
- (1) all aeroplanes with an MCTOM of more than 27 000 kg, with an MOPSC of more than 19 and first issued with an individual CofA on or after 1 January 2021; and
  - (2) all aeroplanes with an MCTOM of more than 45 500 kg and first issued with an individual CofA on or after 1 January 2021..
- (e) In CAT.IDE.A.185, points (b) to (h) are replaced by the following:
- (b) Until 31 December 2018, the CVR shall be capable of retaining the data recorded during at least:
    - (1) the preceding 2 hours in the case of aeroplanes referred to in (a)(1) when the individual CofA has been issued on or after 1 April 1998;
    - (2) the preceding 30 minutes for aeroplanes referred to in (a)(1) when the individual CofA has been issued before 1 April 1998; or
    - (3) the preceding 30 minutes, in the case of aeroplanes referred to in (a)(2).
  - (c) By 1 January 2019 at the latest, the CVR shall be capable of retaining the data recorded during at least:
    - (1) the preceding 25 hours for aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2021; or
    - (2) the preceding 2 hours in all other cases.
  - (d) By 1 January 2019 at the latest, the CVR shall record on means other than magnetic tape or magnetic wire.
  - (e) The CVR shall record with reference to a timescale:
    - (1) voice communications transmitted from or received in the flight crew compartment by radio;
    - (2) flight crew members' voice communications using the interphone system and the public address system, if installed;

- (3) the aural environment of the flight crew compartment, including without interruption:
      - (i) for aeroplanes first issued with an individual CofA on or after 1 April 1998, the audio signals received from each boom and mask microphone in use;
      - (ii) for aeroplanes referred to in (a)(2) and first issued with an individual CofA before 1 April 1998, the audio signals received from each boom and mask microphone, where practicable;
    - (4) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.
  - (f) The CVR shall start to record prior to the aeroplane moving under its own power and shall continue to record until the termination of the flight when the aeroplane is no longer capable of moving under its own power. In addition, in the case of aeroplanes issued with an individual CofA on or after 1 April 1998, the CVR shall start automatically to record prior to the aeroplane moving under its own power and continue to record until the termination of the flight when the aeroplane is no longer capable of moving under its own power.
  - (g) In addition to (f), depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight, in the case of:
    - (1) aeroplanes referred to in (a)(1) and issued with an individual CofA on or after 1 April 1998; or
    - (2) aeroplanes referred to in (a)(2).
  - (h) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 16 June 2018 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter..
- (f) In CAT.IDE.A.190, point (e) is replaced by the following:
- (e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 16 June 2018 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter..
- (g) In CAT.IDE.A.195, point (d) is replaced by the following:
- (d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 16 June 2018 at the latest, this device

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shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter..

- (h) CAT.IDE.A.280 is amended as follows:
- (i) point (a) is replaced by the following:
- (a) with an MOPSC of more than 19 shall be equipped with at least:
- (1) two ELTs, one of which shall be automatic, or one ELT and one aircraft localisation means meeting the requirement of CAT.GEN.MPA.210, in the case of aeroplanes first issued with an individual CofA after 1 July 2008; or
- (2) one automatic ELT or two ELTs of any type or one aircraft localisation means meeting the requirement of CAT.GEN.MPA.210, in the case of aeroplanes first issued with an individual CofA on or before 1 July 2008..
- (ii) point (b) is replaced by the following:
- (b) Aeroplanes with an MOPSC of 19 or less shall be equipped with at least:
- (1) one automatic ELT or one aircraft localisation means meeting the requirement of CAT.GEN.MPA.210, in the case of aeroplanes first issued with an individual CofA after 1 July 2008; or
- (2) one ELT of any type or one aircraft localisation means meeting the requirement of CAT.GEN.MPA.210, in the case of aeroplanes first issued with an individual CofA on or before 1 July 2008..
- (i) In CAT.IDE.A.285, the following point is inserted:
- (f) By 1 January 2019 at the latest, aeroplanes with an MCTOM of more than 27 000 kg and with an MOPSC of more than 19 and all aeroplanes with an MCTOM of more than 45 500 kg shall be fitted with a securely attached underwater locating device that operates at a frequency of 8,8 kHz  $\pm$  1 kHz, unless:
- (1) the aeroplane is operated over routes on which it is at no point at a distance of more than 180 NM from the shore; or
- (2) the aeroplane is equipped with robust and automatic means to accurately determine, following an accident where the aeroplane is severely damaged, the location of the point of end of flight..
- (j) In CAT.IDE.H.185, points (c) to (f) are replaced by the following:
- (c) By 1 January 2019 at the latest, the CVR shall record on means other than magnetic tape or magnetic wire.
- (d) The CVR shall record with reference to a timescale:



- (1) voice communications transmitted from or received in the flight crew compartment by radio;
  - (2) flight crew members' voice communications using the interphone system and the public address system, if installed;
  - (3) the aural environment of the flight crew compartment, including without interruption:
    - (i) for helicopters first issued with an individual CofA on or after 1 August 1999, the audio signals received from each crew microphone;
    - (ii) for helicopters first issued with an individual CofA before 1 August 1999, the audio signals received from each crew microphone, where practicable;
  - (4) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker.
- (e) The CVR shall start to record prior to the helicopter moving under its own power and shall continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power.
- (f) In addition to (e), for helicopters referred to in (a)(2) issued with an individual CofA on or after 1 August 1999:
- (1) the CVR shall start automatically to record prior to the helicopter moving under its own power and continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power; and
  - (2) depending on the availability of electrical power, the CVR shall start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.
- (g) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter..
- (k) In CAT.IDE.H.190, point (e) is replaced by the following:
- (e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter..

- (l) In CAT.IDE.H.195, point (d) is replaced by the following:
  - (d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter.
- 3. Annex VI to Regulation (EU) No 965/2012 is amended as follows:
  - (a) In NCC.GEN.106(a), item (9) is replaced by the following:
    - (9) ensuring that:
      - (i) flight recorders are not disabled or switched off during flight;
      - (ii) in the event of an occurrence other than an accident or a serious incident that shall be reported according to ORO.GEN.160(a), flight recorders' recordings are not intentionally erased; and
      - (iii) in the event of an accident or a serious incident, or if preservation of recordings of flight recorders is directed by the investigating authority:
        - (A) flight recorders' recordings are not intentionally erased;
        - (B) flight recorders are deactivated immediately after the flight is completed; and
        - (C) precautionary measures to preserve the recordings of flight recorders are taken before leaving the flight crew compartment..
  - (b) NCC.GEN.145 is amended as follows:
    - (i) the title is replaced by the following:  
**NCC.GEN.145 Handling of flight recorder recordings: preservation, production, protection and use.**
    - (ii) point (a) is replaced by the following:
      - (a) Following an accident, a serious incident or an occurrence identified by the investigating authority, the operator of an aircraft shall preserve the original recorded data for a period of 60 days or until otherwise directed by the investigating authority..
    - (iii) Point (f) is replaced by the following:
      - (f) Without prejudice to Regulation (EU) No 996/2010:
        - (1) Except for ensuring the CVR serviceability, CVR recordings shall not be disclosed or used unless:
          - (i) a procedure related to the handling of CVR recordings and of their transcript is in place;

- (ii) all crew members and maintenance personnel concerned have given their prior consent; and
    - (iii) they are used only for maintaining or improving safety.
  - (1a) When a CVR recording is inspected for ensuring the CVR serviceability, the operator shall ensure the privacy of the CVR recording and the CVR recording shall not be disclosed or used for other purposes than ensuring the CVR serviceability.
  - (2) FDR recordings or data link recordings shall only be used for purposes other than for the investigation of an accident or an incident which is subject to mandatory reporting, if such records are:
    - (i) used by the operator for airworthiness or maintenance purposes only; or
    - (ii) de-identified; or
    - (iii) disclosed under secure procedures.
- (c) NCC.IDE.A.160 is amended as follows:
  - (i) point (b) is replaced by the following:
    - (b) The CVR shall be capable of retaining data recorded during at least:
      - (1) the preceding 25 hours for aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2021; or
      - (2) the preceding 2 hours in all other cases..
  - (ii) point (f) is replaced by the following:
    - (f) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter..
- (d) In NCC.IDE.A.165, point (e) is replaced by the following:
  - (e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter..
- (e) In NCC.IDE.A.215, point (a) is replaced by the following:
  - (a) Aeroplanes shall be equipped with:

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- (1) an ELT of any type or an aircraft localisation means meeting the requirement of Annex IV (Part CAT), CAT.GEN.MPA.210, to Regulation (EU) No 965/2012, when first issued with an individual CofA on or before 1 July 2008;
  - (2) an automatic ELT or an aircraft localisation means meeting the requirement of Annex IV (Part CAT), CAT.GEN.MPA.210, to Regulation (EU) No 965/2012, when first issued with an individual CofA after 1 July 2008.
- (f) In NCC.IDE.A.170, point (d) is replaced by the following:
    - (d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter..
  - (g) In NCC.IDE.H.160, point (f) is replaced by the following:
    - (f) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter..
  - (h) In NCC.IDE.H.165, point (e) is replaced by the following:
    - (e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter..
  - (i) In NCC.IDE.H.170, point (d) is replaced by the following:
    - (d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter..
4. Annex VIII to Regulation (EU) No 965/2012 is amended as follows:
- (a) In SPO.GEN.107(a), item (9) is replaced by the following:
    - (9) ensuring that:
      - (i) flight recorders are not disabled or switched off during flight;
      - (ii) in the event of an occurrence other than an accident or a serious incident that shall be reported according to ORO.GEN.160(a), flight recorders' recordings are not intentionally erased; and
      - (iii) in the event of an accident or a serious incident, or if preservation of recordings of flight recorders is directed by the investigating authority:

- (A) flight recorders' recordings are not intentionally erased;
  - (B) flight recorders are deactivated immediately after the flight is completed; and
  - (C) precautionary measures to preserve the recordings of flight recorders are taken before leaving the flight crew compartment..
- (b) SPO.GEN.145 is amended as follows:
- (i) the title is replaced by the following:  
**SPO.GEN.145 Handling of flight recorder recordings: preservation, production, protection and use — operations with complex motor-powered aircraft**
  - (ii) point (a) is replaced by the following:
    - (a) Following an accident, a serious incident or an occurrence identified by the investigating authority, the operator of an aircraft shall preserve the original recorded data for a period of 60 days or until otherwise directed by the investigating authority..
  - (iii) point (f) is replaced by the following:
    - (f) Without prejudice to Regulation (EU) No 996/2010 and except for ensuring the CVR serviceability, CVR recordings shall not be disclosed or used unless:
      - (i) a procedure related to the handling of CVR recordings and of their transcript is in place;
      - (ii) all crew members and maintenance personnel concerned have given their prior consent; and
      - (iii) they are used only for maintaining or improving safety.

When a CVR recording is inspected for ensuring the CVR serviceability, the operator shall ensure the privacy of the CVR recording and the CVR recording shall not be disclosed or used for other purposes than ensuring the CVR serviceability..
- (c) SPO.IDE.A.140 is amended as follows:
  - (i) point (b) is replaced by the following:
    - (b) The CVR shall be capable of retaining data recorded during at least:
      - (1) the preceding 25 hours for aeroplanes with an MCTOM of more than 27 000 kg and first issued with an individual CofA on or after 1 January 2021; or
      - (2) the preceding 2 hours in all other cases..
  - (ii) point (f) is replaced by the following:

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- (f) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter..
- (d) In SPO.IDE.A.145, point (e) is replaced by the following:
  - (e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter..
- (e) In SPO.IDE.A.150, point (d) is replaced by the following:
  - (d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter..
- (f) In SPO.IDE.A.190, point (a) is replaced by the following:
  - (a) Aeroplanes shall be equipped with:
    - (1) an ELT of any type or an aircraft localisation means meeting the requirement of Annex IV (Part CAT), CAT.GEN.MPA.210, to Regulation (EU) No 965/2012, when first issued with an individual CofA on or before 1 July 2008;
    - (2) an automatic ELT or an aircraft localisation means meeting the requirement of Annex IV (Part CAT), CAT.GEN.MPA.210, to Regulation (EU) No 965/2012, when first issued with an individual CofA after 1 July 2008; or
    - (3) a survival ELT (ELT(S)) or a personal locator beacon (PLB), carried by a crew member or a task specialist, when certified for a maximum seating configuration of six or less.
- (g) In SPO.IDE.H.140, point (f) is replaced by the following:
  - (f) If the CVR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the CVR is deployable, it shall have an automatic emergency locator transmitter..
- (h) In SPO.IDE.H.145, point (e) is replaced by the following:
  - (e) If the FDR is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the FDR is deployable, it shall have an automatic emergency locator transmitter..
- (i) In SPO.IDE.H.150, point (d) is replaced by the following:

- (d) If the recorder is not deployable, it shall have a device to assist in locating it under water. By 1 January 2020 at the latest, this device shall have a minimum underwater transmission time of 90 days. If the recorder is deployable, it shall have an automatic emergency locator transmitter..

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- (1) [OJ L 79, 13.3.2008, p. 1.](#)
- (2) Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC ([OJ L 295, 12.11.2010, p. 35](#)).
- (3) Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council ([OJ L 296, 25.10.2012, p. 1](#)).
- (4) EASA references of the 13 safety recommendations: CAND-1999-002 (McDonnell Douglas MD11, HB-IWF, 02/09/1998); GREC-2006-045 (B737 of Helios, 5B-DBY, 14/08/2005); NORW-2006-013 (ATR42, OY-JRJ 31/01/2005); NETH-2011-015 (Boeing 737, PH-BDP, 10/02/2010); UNKG-2012-013 (Boeing 767, G OOBK, 03/10/2010); FRAN-2012-025 (Airbus 340, F-GLZU, 22/07/2011); FINL-2012-003 (Airbus A330, OH-LTO, 11/12/2010); FRAN-2009-016, FRAN-2009-017, FRAN-2009-018, FRAN-2011-017 and FRAN-2011-018 (Airbus A330, F-GZCP, 01/06/2009); UNKG-2008-020 (ATR42, EI-SLD, 18/01/2007).
- (5) Opinion 01/2014 of 5 May 2014 of EASA as regards amending requirements for flight recorders and underwater locating devices.
- (6) Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC ([OJ L 295, 12.11.2010, p. 35](#)).