

**CESSNA 680,
G-CJCC**

**During climb, after
departure from
London Luton Airport**

30 September 2010

Serious Incident

Investigation Synopsis

The crew experienced an uncommanded transfer of fuel from the right to the left fuel tank after following the checklist procedures for a left main electrical bus fault indication. The aircraft subsequently became left wing heavy and exceeded the lateral imbalance limits. It returned to Luton Airport where a flapless landing was completed without further incident. As a result of this incident, Special Bulletin S1/2010 was published on 8 October 2010, containing two Safety Recommendations. The investigation established that the isolation of the left main bus had caused a false fuel cross-feed command which resulted in the uncommanded fuel transfer. The aircraft manufacturer has published a temporary flight crew procedure to mitigate the effects of a recurrence and has also issued a service bulletin to incorporate a design solution.

Eight further Safety Recommendations are made in this bulletin, relating to aircraft certification processes and flight recorder documentation.

Safety Recommendation 2010-090

Safety Recommendation 2010-090

It is recommended that the Cessna Aircraft Company immediately informs all operators of Cessna Citation 680 Sovereign aircraft that uncontrolled fuel migration from the right to the left tank will occur during aircraft operation if the left main electrical bus is not powered.

Date Safety Recommendation made: 08 October 2010

LATEST RESPONSE

Response received: December 2010

In response to this Safety Recommendation, the Cessna Aircraft Company issued a briefing to Cessna Citation Sovereign operators on 14 October 2010. This briefing included the temporary mitigating action of pulling the appropriate FUEL BOOST circuit breaker to prevent fuel transfer should a similar condition occur. A temporary change to the Airplane Flight Manual and checklist was approved by the FAA on 15 October 2010 and this was subsequently e-mailed to the operator on 08 November 2010.

Safety Recommendation Status Closed

AAIB Assessment Adequate

RESPONSE HISTORY

N/A

(SRIS Reference: GB.SIA-2010-0090)

Safety Recommendation 2010-091

Safety Recommendation 2010-091

It is recommended that the Federal Aviation Administration (FAA) require the Cessna Aircraft Company to take suitable actions for the Cessna Citation 680 Sovereign, to prevent uncontrolled fuel migration from the right to the left tank during aircraft operation when the left main electrical bus is not powered.

Date Safety Recommendation made: 08 October 2010

LATEST RESPONSE

Response received: 26 June 2012

The FAA worked with the Cessna Aircraft Company to develop changes to address possible uncommanded fuel transfer when the left main electrical bus is not powered. The design changes incorporate two additional diodes to prevent a sneak ground path in either a left or right side electrical emergency when the respective main bus is not powered.

In October 2010, to address new production airplanes, they approved Cessna ECR 70612 '680 Fuel Crossfeed Improvement for Production'. All new aircraft deliveries since October 2010 have included the diode installation fix.

In December 2010, Cessna issued Mandatory Service Bulletin SB680-24-11 requiring installation of the diodes for all fielded aircraft. On March 22, 2012, the FAA issued Airworthiness Directive 2012-07-04 (enclosed) to mandate SB680-24-11.

The FAA believes they have effectively addressed FAA Safety Recommendation 10.273 and consider their actions complete.

Safety Recommendation Status Closed

AAIB Assessment Adequate

RESPONSE HISTORY

Response received: September 2011

To address FAA safety recommendation 10.273, the Cessna Aircraft Company implemented corrective action through a design change. Mandatory Service Bulletin SB680-24-11 was issued by Cessna Aircraft Company in December 2010. The FAA initiated an Airworthiness Directive to mandate this Service Bulletin for all fielded aircraft. The Notice of Proposed Rulemaking was published in the Federal Register on August 31, 2011. The comment period closes October 17, 2011.

A temporary (airplane flight manual) AFM change submitted by Cessna Aircraft Company revises operating procedures to prevent uncommanded fuel transfer following loss of power on one of the main electrical busses. The temporary AFM change may be removed and discarded by the operator only after incorporation of the service bulletin SB68-24-11.

With regard to the FAA safety recommendation 11.165, we are working with Cessna Aircraft Company to address the aircraft configuration checklists. We expect to provide an update on our progress by February 28, 2012.

AAIB Assessment – Partially Adequate Open

Response received: 28 January 2011

We worked with Cessna Aircraft to develop changes to address possible uncommanded fuel transfer when the left main electrical bus is not powered. The approved design changes incorporate two additional diodes to prevent a sneak ground path in either a left or right electrical emergency when the respective main bus is not powered.

To address new production aircraft, Cessna ECR 70612 680 Fuel Crossfeed Improvement for Production was approved in October of 2010. ECR 70612 is applicable to serials 680-0290 and 680-0297 and on. All new aircraft deliveries since October 2010 have included the diode installation fix.

To address aircraft in the field, ECR 70611 680 Fuel Crossfeed Improvement for Field - Service Bulletin was approved December 2010 and is applicable to serials 680-0001 thru 6800289 and 680-0291 thru 680-0296. Cessna issued Mandatory Service Bulletin SB690-24-11 in December 2011 requiring installation of the diodes for all fielded aircraft and the FAA will initiate an Airworthiness Directive to mandate Service Bulletin SB680-24-11 for all fielded. We expect to provide a follow-on response by October 2011.

AAIB Assessment – Open

(SRIS Reference: GB.SIA-2010-0091)

Safety Recommendation 2011-023

Safety Recommendation 2011-023

It is recommended that the Federal Aviation Administration (FAA) reviews the certification process for the Cessna Citation 680 Sovereign with the Cessna Aircraft Company to ensure that adherence to approved checklist procedures does not result in an unsafe aircraft configuration.

Date Safety Recommendation made: 04 August 2011

LATEST RESPONSE

Response received: 07 June 2012

We worked with Cessna Aircraft Company to re-examine the Airplane Flight Manual (AFM) and the procedure in question. We concluded that the process for development and certification of the AFM and checklist procedures is robust and results in a document that is effective and appropriate for operation of the aircraft.

Approved checklist procedures contained in the AFM are developed through an established process and coordinated with the Aircraft Certification Office during the certification phase of the program. The following provides a high-level summary of this process:

The process begins with a draft AFM from the time the prototype airplane first flies and procedures are evaluated throughout the development and certification program and continues while the airplane is in service. Each procedure is evaluated considering the expected operating envelope of the airplane. Different scenarios for entering procedures as well as different conditional paths contained within procedures are assessed. These evaluations take a variety of forms including on-airplane tests, simulator tests, and engineering evaluation. Failure conditions that can be simulated in flight are accomplished in flight. AFM procedures associated with failure conditions that cannot be accomplished in flight are assessed in a representative flight simulator, on a test bench, or by engineering evaluation. All of these evaluations are accomplished with consideration to the design of the airplane, and use the proposed AFM procedures. If necessary, the proposed procedures are revised and incorporated into the final AFM prior to its approval. The FAA is involved in the review of AFM and checklist procedures during the certification flight test program and reviews the proposed AFM prior to approval.

In the unlikely event that an airplane system does not function in the manner the design is intended, a procedure evaluated during the engineering assessment could have unintended consequences. Every effort is made to avoid such circumstances; however, should such a condition be discovered, our process provides for immediate action to develop and distribute any required changes to all operators of the affected aircraft. Cessna continually works with their operators and training partners as well as applying lessons learned on other programs to identify any procedural issues so that we can improve the accuracy and usability of our AFM procedures.

The incident involved with FAA Safety Recommendation 11.165 resulted in Cessna establishing more detailed failure mode testing to identify unintended operation associated with electrical bus failures. This ensures emergency and abnormal AFM procedures adequately address these failures. Current and future development programs will incorporate these new test requirements.

Safety Recommendation Status

Closed

AAIB Assessment

Adequate

RESPONSE HISTORY

Response received: September 2011

To address FAA safety recommendation 10.273, the Cessna Aircraft Company implemented corrective action through a design change. Mandatory Service Bulletin SB680-24-11 was issued by Cessna Aircraft Company in December 2010. The FAA initiated an Airworthiness Directive to mandate this service bulletin for all fielded aircraft. The Notice of Proposed Rulemaking was published in the Federal Register on August 31, 2011. The comment period closes October 17, 2011.

A temporary (airplane flight manual) AFM change submitted by Cessna Aircraft Company revises operating procedures to prevent uncommanded fuel transfer following loss of power on one of the main electrical busses. The temporary AFM change may be removed and discarded by the operator only after incorporation of the service bulletin SB680-24-11.

With regard to FAA safety recommendation 11.165, we are working with Cessna Aircraft Company to address the aircraft configuration checklists. We expect to provide an update on our progress by February 28, 2012.

AAIB Assessment – Partially Adequate Open

(SRIS Reference: GB.SIA-2011-0023)

Safety Recommendation 2011-024

Safety Recommendation 2011-024

It is recommended that the Civil Aviation Authority ensure that UK operators of aircraft equipped with flight data recorders hold and maintain controlled documentation that satisfies the intent of Cap 731 and complies with the requirements of EU-OPS 1.160 (a) (4) (ii).

Date Safety Recommendation made: 04 August 2011

LATEST RESPONSE

Response received: 19 September 2011

The CAA accepts this recommendation. The CAA has enhanced its procedures to require UK operators of aircraft equipped with flight data recorders, for which the type certificate holder already provides documentation that satisfies the intent of CAP 731 and complies with the requirements of EU-OPS 1.160 (a)(4)(ii), to identify the data applicable to their aircraft types and either hold and maintain the documentation, or demonstrate the formal delegation of holding and maintaining that data to a third party (i.e the organisation responsible for replay or a group arrangement).

Once the actions of safety recommendations 2011-026 have been addressed, the CAA will also be able to require UK operators of the remaining aircraft types equipped with flight data recorders which are under the jurisdiction of EASA and FAA, to either hold and maintain controlled documentation that satisfies the intent of CAP 731 and complies with the requirements of EU-OPS 1.160(a)(4)(ii).

Safety Recommendation Status Closed

AAIB Assessment Adequate

RESPONSE HISTORY

N/A

(SRIS Reference: GB.SIA-2011-0024)

Safety Recommendation 2011-025

Safety Recommendation 2011-025

It is recommended that the Civil Aviation Authority include in their processes associated with the issuing of Air Operator Certificates a check to ensure that the operator's procedures comply with requirements of EU-OPS 1.160 (a) (4) (ii).

Date Safety Recommendation made: 04 August 2011

LATEST RESPONSE

Response received: 19 September 2011

The CAA accepts this recommendation. The CAA has revised its processes to check that the procedures an operator has in relation to the continued airworthiness of his aircraft include controlled documents enabling FDR data to be retrieved and converted into engineering units. In addition, on 17 August 2011 the CAA published Safety notice SN-2011/011 'Prevention of The Loss of Recordings from Cockpit Voice and Flight Data Recorders' and this includes information associated with the requirements of EU-OPS 1.160(a)(4)(ii)

Safety Recommendation Status Closed

AAIB Assessment Adequate

RESPONSE HISTORY

N/A

(SRIS Reference: GB.SIA-2011-0025)

Safety Recommendation 2011-026

Safety Recommendation 2011-026

It is recommended that the European Aviation Safety Agency ensures that design organisations under their jurisdiction responsible for approvals affecting Flight Data Recorder (FDR) installations, hold the documentation required for decoding the FDR data, and that the documentation is to a suitable standard and available to operators.

Date Safety Recommendation made: 04 August 2011

LATEST RESPONSE

Response received: 14 April 2013

EASA addressed, on 08 June 2012, a letter to holders of Design Organisation Approval (OOA) or Alternative Procedures to DO, which highlights that they are responsible for producing the documentation needed for the serviceability and the operation of the Flight Data Recorders (FDR) when part of their design activities, including the FDR decoding documentation.

The letter reminds those organisations that they must ensure that the FDR decoding documentation is provided in a suitable format as part of the aircraft delivery or modification, and that they must keep the most recent version of the FDR decoding documentation they produced.

Safety Recommendation Status Closed

AAIB Assessment Adequate

RESPONSE HISTORY

N/A

(SRIS Reference: GB.SIA-2011-0026)

Safety Recommendation 2011-027

Safety Recommendation 2011-027

It is recommended that the European Aviation Safety Agency review their certification requirements, guidance and procedures to ensure that controlled documentation, sufficient to satisfy operator flight data recorder documentation requirements, are explicitly part of the type certification and supplemental type certification processes where flight data recorder installations are involved.

Date Safety Recommendation made: 04 August 2011

LATEST RESPONSE

Response received: 19 August 2021

This safety recommendation has been taken into account within the framework of European Union Aviation Safety Agency (EASA) rulemaking task RMT.0249.

The second Notice of Proposed Amendment (NPA) of this rulemaking task (NPA 2019-12) entitled 'Installation and maintenance of recorders – certification aspects' was published for consultation on 13 November 2019.

<https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2019-12>

This NPA proposed to amend the Acceptable Means of Compliance (AMC) 25.1459 (for large aeroplanes) and AMC 29.1459 (for large rotorcraft) to include Flight Data Recorder (FDR) decoding documentation in the list of items to be included in the FDR Instructions for Continued Airworthiness.

The objective is for FDR decoding documentation (document that presents the information necessary to retrieve the raw binary data of an FDR data file and convert it into engineering units and textual interpretations) to be prepared for every new FDR system installation and updated for every change to an FDR system installation, and that this documentation is made available to aircraft operators so that they can fulfil their responsibilities with regard to FDR decoding documentation and FDR serviceability (refer to CAT.GEN.MPA.195 of Commission Regulation (EU) 965/2012 on Air Operations).

<https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2020024r>

Executive Director (ED) Decision 2021/010/R on amendment 9 of Certification Specifications, Acceptable Means of Compliance and Guidance Material for Large Rotorcraft (CS-29) was published on 16 June 2021. This amendment contains these new provisions in a new section 4 of AMC 29.1459 dedicated to FDR instructions for continued airworthiness.

<https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2021010r>

EASA Status: Closed – Agreement

Safety Recommendation Status Closed

AAIB Assessment Adequate

Action Status**Planned Action Completed****RESPONSE HISTORY**

Response received: 03 March 2021

This safety recommendation has been taken into account within the framework of European Union Aviation Safety Agency (EASA) rulemaking task RMT.0249.

The second Notice of Proposed Amendment (NPA) of this rulemaking task (NPA 2019-12) entitled 'Installation and maintenance of recorders – certification aspects' was published for consultation on 13 November 2019. <https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2019-12>

This NPA proposed to amend the Acceptable Means of Compliance (AMC) 25.1459 (for large aeroplanes) and AMC 29.1459 (for large rotorcraft) to include Flight Data Recorder (FDR) decoding documentation in the list of items to be included in the FDR Instructions for Continued Airworthiness.

The objective is for FDR decoding documentation to be prepared for every new FDR system installation and updated for every change to an FDR system installation, and that this documentation should be made available to aircraft operators so that they can fulfil their responsibilities with regard to FDR decoding documentation and FDR serviceability.

Executive Director (ED) Decision 2020/024/R on amendment 26 of certification specification CS-25 was published on 22 December 2020. This amendment contains these new provisions in a new section 7 of AMC 25.1459 dedicated to FDR instructions for continued airworthiness. <https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2020024r>

An equivalent ED Decision is planned to be issued in 2021 to amend CS-29 in a similar way.
EASA Status: Open

AAIB Assessment – Partially Adequate Open

Response received: 30 January 2020

The EASA have taken into account the content of the safety recommendation in Rule Making Task (RMT) .0249 the second Notice of Proposed Amendment (NPA 2019-12) was issued for consultation on 13/11/19. The status of this recommendation will be reviewed when RMT .0249 has been finalised.

AAIB Assessment – Partially Adequate Open

Response received: 30 December 2019

This Safety recommendation has been taken into account within the framework of EASA rulemaking task RMT.0249.

The second Notice of Proposed Amendment (NPA) of this rulemaking task (NPA 2019-12) entitled 'Installation and maintenance of recorders – certification aspects' has been published for consultation on 13.11.2019.

<https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2019-12>

This NPS proposes to amend AMC 25.1459 (for large aeroplanes) and AMC 29.1459 (for large rotorcraft) to include FDR decoding documentation in the list of items to be included in the FDR Instructions for Continued Airworthiness.

The objective is for FDR decoding documentation to be prepared for every new FDR system installation and updated for every change to an FDR system installation, and that this documentation should be made available to aircraft operators so that they can fulfil their responsibilities with regard to FDR decoding documentation and FDR serviceability. Guidance should also be provided on the content and format of the FDR decoding documentation.

EASA status - Open

AAIB Assessment – Partially Adequate Open

Response received: 14 May 2018

This safety recommendation has been taken into account within the framework of EASA rulemaking task RMT.0249 entitled "Recorders installation and maintenance thereof - certification aspects".

The general objective of this rulemaking task is to improve the availability and quality of data recorded by flight recorders in order to better support safety investigation authorities in the investigation of accidents and incidents.

One of the specific objectives is to optimise the data recovery and analysis process by adding provisions to clearly establish the (Supplemental) Type Certificate applicant's obligation to provide the necessary information to convert Flight Data Recorder (FDR) raw data into engineering units as well as maintenance procedures.

This topic is identified in the Terms of Reference Issue 2 of RMT.0249, under item 1.5 'Provisions for ensuring serviceability of flight recorders':

<https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0249-md m051>

It will be addressed in the second Notice of Proposed Amendments (NPA) of RMT.0249, currently planned to be published in Q2/2019

AAIB Assessment – Adequate Closed

Response received: 12 February 2015

As a temporary measure, the Agency updated Safety Information Bulletin (SIB) 2009-28, Flight Data Recorder and Cockpit Voice Recorder Systems Serviceability (Revision 1, published on 08 January 2015). SIB 2009-28 Revision 1 recommends that 'the TC or STC Holder should provide the necessary information to convert FDR raw data into flight parameters expressed in engineering units.'

In addition, SIB 2009-28 Revision 1 recommends that National Aviation Authorities transmit to the Agency reports from aircraft operators of cases where a TC or STC holder fails to provide the information needed by an aircraft operator to comply with Commission Regulation (EU) No 965/2012. Annex IV to this Regulation requires in paragraph CAT.GEN.MPA.195 that the aircraft operator 'keeps and maintains up-to-date documentation that presents the necessary information to convert FDR raw data into parameters expressed in engineering units.'

Furthermore, this safety recommendation is considered within the framework of EASA rulemaking task RMT.0249 entitled "Recorders installation and maintenance thereof - certification aspects", whose Terms of Reference were published on 18 September 2014 on the EASA website.

The general objective of this rule making task is to improve the availability and quality of data recorded by flight recorders in order to better support safety investigation authorities in the investigation of accidents and incidents. One of the specific objectives is "optimise data recovery and analysis process by adding provisions to clearly establish the (Supplemental) Type Certificate applicant's obligation to provide the necessary information to convert FDR raw data into engineering units, as well as maintenance procedures".

AAIB Assessment – Adequate Closed

Response received: 16 December 2011

Part 21 (Annex to Commission Regulation (EC) 1702/2003) and CS-25 (Certification Specifications for Large Aeroplanes) require the type certificate (TC) (or supplemental type certificate (STC)) holder to provide instructions for continued airworthiness and this is considered applicable to flight data recorders (FDR).

Nevertheless the Agency accepts to review ways of improvement of the certification specifications to better indicate that the TC (or STC) holder has to provide the adequate documentation to the operator or owner of the aircraft, which should include:

- the necessary information to convert FDR raw data into engineering units, and
- FDR maintenance requirements.

This subject will be treated as part of rulemaking tasks RMT.0268 (former MDM.068) dealing with revision of FDR and cockpit voice recorder (CVR) certification specifications. This task is currently part of the Agency's Rulemaking Programme inventory.

AAIB Assessment – Partially Adequate Open

(SRIS Reference: GB.SIA-2011-0027)

Safety Recommendation 2011-028

Safety Recommendation 2011-028

It is recommended that the Federal Aviation Administration ensure that controlled documentation, sufficient to satisfy operator flight data recorded documentation requirements, is part of the type certification and supplemental type certification processes where flight data recorder installations are involved.

Date Safety Recommendation made: 04 August 2011

LATEST RESPONSE

Response received: 07 June 2012

To ensure controlled Flight Data Recorder (FDR) correlation documentation is provided at type certificate (TC) and supplemental type certification (STC), the FAA requires TC and STC applicants to comply with Title 14, Code of Federal Regulations (14 CFR) 25.1301 for demonstrating intended function. This section requires the installed FDR system be of a kind and design appropriate for its intended function. The intended function of the FDR is to meet the operating rules in 14 CFR 121.344, with 14 CFR 121.344(j) specifically requiring the specified controlled documentation. Therefore, the documentation required by 14 CFR 121.344(j) is required as part of the FDR system certification basis.

Additionally, FAA Advisory Circular 20-141B, Airworthiness and Operational Approval of Digital Flight Data Recorder Systems, dated August 17, 2010, paragraph 2-14 and Appendix 1, clarifies that FDR controlled documentation is required as part of the TC or STC holder's Instructions for Continued Airworthiness (ICA).

In addition to the FDR system certification requirements, the FAA improved oversight and inspection criteria for ensuring 14 CFR part 121 operators comply with the FDR system documentation requirements 14 CFR 121.344(j). On June 1, 2011, the FAA published a revision to the Flight Standards Information Management Systems, Air Transportation Oversight System, Data Collection Tool Master List, Element Performance Inspection and Safety Attribute Inspection criteria. Among the changes in this revision, the FAA requires its inspector to verify the operator maintains a document used to convert FDR recorded values to corresponding engineering units or discrete states. The FAA also established correlation between the values being recorded by the flight data recorder and the corresponding values being measured.

Engineering Report AES-680-177, initial release dated February 10, 2011, is referenced in Cessna's ICA and is available to its operators upon request. This report provides data stream format and correlation documentation of the Honeywell EPIC system ARIC 717 data bus to the L-3 Communications FA 2100 FDR. As a result of this incident and in accordance with the ICA, Cessna generated and issued the 680 Citation Sovereign FDR data stream and format document for the ensuing investigation.

The FAA believes the existence of appropriate FDR system regulations, FAA inspector oversight criteria, and guidance material ensuring controlled documentation as part of the TC and STC processes is sufficient.

Safety Recommendation Status Closed

AAIB Assessment Adequate

RESPONSE HISTORY

N/A

(SRIS Reference: GB.SIA-2011-0028)

Safety Recommendation 2011-029

Safety Recommendation 2011-029

It is recommended that the European Aviation Safety Agency provides guidance detailing the standards for the flight data recorder documentation required for the certification of systems or system changes associated with flight data recorders.

Date Safety Recommendation made: 04 August 2011

LATEST RESPONSE

Response received: 19 August 2021

This safety recommendation has been taken into account within the framework of European Union Aviation Safety Agency (EASA) rulemaking task RMT.0249.

The second Notice of Proposed Amendment (NPA) of this rulemaking task (NPA 2019-12) entitled 'Installation and maintenance of recorders – certification aspects' was published for consultation on 13. November 2019.

<https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2019-12>

This NPA proposed to amend Acceptable Means of Compliance (AMC) 25.1459 (for large aeroplanes) and AMC 29.1459 (for large rotorcraft) to include Flight Data Recorder (FDR) decoding documentation in the list of items to be included in the FDR Instructions for Continued Airworthiness.

The objective is for FDR decoding documentation (document that presents the information necessary to retrieve the raw binary data of an FDR data file and convert it into engineering units and textual interpretations) to be prepared for every new FDR system installation and updated for every change to an FDR system installation. The proposal also included guidance regarding the content and the format of the FDR decoding documentation.

Executive Director (ED) Decision 2020/024/R on amendment 26 of Certification Specifications and Acceptable Means of Compliance for Large Aeroplanes (CS-25) was published on 22 December 2020. This amendment contains these new provisions in a new section 7 of AMC 25.1459 dedicated to FDR instructions for continued airworthiness.

<https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2020024r>

Executive Director (ED) Decision 2021/010/R on amendment 9 of Certification Specifications, Acceptable Means of Compliance and Guidance Material for Large Rotorcraft (CS-29) was published on 16 June 2021. This amendment contains these new provisions in a new section 4 of AMC 29.1459 dedicated to FDR instructions for continued airworthiness.

<https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2021010r>

EASA Status: Closed – Agreement

Safety Recommendation Status **Closed**

AAIB Assessment

Adequate

Action Status

Planned Action Completed

RESPONSE HISTORY

Response received: 03 March 2021

This safety recommendation has been taken into account within the framework of European Union Aviation Safety Agency (EASA) rulemaking task RMT.0249.

The second Notice of Proposed Amendment (NPA) of this rulemaking task (NPA 2019-12) entitled 'Installation and maintenance of recorders – certification aspects' was published for consultation on 13. November 2019. <https://www.easa.europa.eu/document-library/notices-of-proposed/amendment/npa-2019-12>

This NPA proposed to amend Acceptable Means of Compliance (AMC) 25.1459 (for large aeroplanes) and AMC 29.1459 (for large rotorcraft) to include Flight Data Recorder (FDR) decoding documentation in the list of items to be included in the FDR Instructions for Continued Airworthiness.

The objective is for FDR decoding documentation to be prepared for every new FDR system installation and updated for every change to an FDR system installation, and that this documentation should be made available to aircraft operators so that they can fulfil their responsibilities with regard to FDR decoding documentation and FDR serviceability.

The proposal also included guidance regarding the content and the format of the FDR decoding documentation.

Executive Director (ED) Decision 2020/024/R on amendment 26 of CS-25 was published on 22 December 2020. This amendment contains these new provisions in a new section 7 of AMC 25.1459 dedicated to FDR instructions for continued airworthiness.

<https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2020024r>

An equivalent ED Decision is planned to be issued in 2021 to amend CS-29 in a similar way.

EASA Status: Open

AAIB Assessment – Partially Adequate Open

Response received: 18 December 2019

This Safety recommendation has been taken into account within the framework of EASA rulemaking task RMT.0249.

The second Notice of Proposed Amendment (NPA) of this rulemaking task (NPA 2019-12) entitled 'Installation and maintenance of recorders – certification aspects' has been published for consultation on 13.11.2019.

<https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2019-12>

This NPA proposes to amend AMC 25.1459 (for large aeroplanes) and AMC 29.1459 (for large rotorcraft) to include FDR decoding documentation in the list of items to be included in the FDR Instructions for Continued Airworthiness.

The objective is for FDR decoding documentation to be prepared for every new FDR system installation and updated for every change to an FDR system installation, and that this documentation should be made available to aircraft operators so that they can fulfil their responsibilities with regard to FDR decoding documentation and FDR serviceability. Guidance should also be provided on the content and format of the FDR decoding documentation.

EASA status - Open

AAIB Assessment – Adequate Open

Response received: 14 May 2018

This safety recommendation has been taken into account within the framework of EASA rulemaking task RMT.0249 entitled "Recorders installation and maintenance thereof - certification aspects".

The general objective of this rulemaking task is to improve the availability and quality of data recorded by flight recorders in order to better support safety investigation authorities in the investigation of accidents and incidents.

One of the specific objectives is to optimise the data recovery and analysis process by adding provisions to clearly establish the (Supplemental) Type Certificate applicant's obligation to provide the necessary information to convert Flight Data Recorder (FDR) raw data into engineering units as well as maintenance procedures.

This topic is identified in the Terms of Reference Issue 2 of RMT.0249, under item 1.5 'Provisions for ensuring serviceability of flight recorders':

<https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0249-mdm051>

It will be addressed in the second Notice of Proposed Amendment (NPA) of RMT.0249, currently planned to be published 02/2019. In this frame, the Agency will also review the existing FDR documentation standards and will provide guidance in the certification specifications.

AAIB Assessment – Adequate Closed

Response received: 12 February 2015

The Agency accepted to improve the certification specifications to better indicate that the TC (or STC) holder has to provide adequate FDR documentation to the operator or owner of the aircraft.

This subject is part of rulemaking task RMT.0249 entitled "Recorders installation and maintenance thereof - certification aspects", whose Terms of Reference were published on 18 September 2014 on the EASA Website.

In this framework, the Agency will also review the existing FDR documentation standards and will provide guidance in the Certification Specifications. A reference to this safety recommendation has been included in the Terms of Reference of RMT.0249.

AAIB Assessment – Adequate Closed

(SRIS Reference: GB.SIA-2011-0029)

Safety Recommendation 2011-030

Safety Recommendation 2011-030

It is recommended that Cessna Aircraft Company issue controlled documents, applicable to Cessna aircraft equipped with flight data recorders, that satisfy the EU-OPS 1.160 (a) (4) (ii) requirement, and make them available to all operators of the applicable aircraft. Furthermore, it is recommended that the documentation issued should follow the guidance given in Federal Aviation Administration document AC 20-141B and UK Civil Aviation Authority document CAP 731.

Date Safety Recommendation made: 04 August 2011

LATEST RESPONSE

Response received: 17 August 2011

Cessna has issued controlled documents AES-680-177 for the model 680 and AES-750-161 for the model 750 which fully define the Flight Data Recorder parameters. These documents support compliance with EU-OPS 1.160(a)(4)(ii) and will be provided, at no charge, to any operator requesting them. Going forward, Cessna will include complete parameter information with each FDRs Instructions for Continued Airworthiness (ICA) for each model. A full set of ICA documents is provided to every operator at the time of delivery and any updates to ICA are made available through our online source Cesview Ili. Guidance provided in FAA AC 20-141B and UK CAA CAP 731 will be used to aid in defining format and content.

Safety Recommendation Status Closed

AAIB Assessment Adequate

RESPONSE HISTORY

N/A

(SRIS Reference: GB.SIA-2011-0030)