Airworthiness Directive

AD No.: 2018-0178

Issued: 23 August 2018

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:
AIRBUS

Type/Model designation(s):
A350 aeroplanes

Effective Date: 06 September 2018

TCDS Number(s): EASA.A.151

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2017-0200 dated 10 October 2017.

ATA 29, 47 – Hydraulic System / Fuel Tank Inerting System – Engine Driven Pump Rapid Overheat – Master Minimum Equipment List Restriction / Software Update / Modification

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Manufacturer(s):
Airbus

Applicability:
Airbus A350-941 aeroplanes, all serial numbers.

Definitions:
For the purpose of this AD the following definitions apply:

The SB: Airbus Service Bulletin (SB) A350-29-P013.

Affected part: Engine-driven pump (EDP), having Part Number (P/N) 53098-04.

Groups: Group 1 aeroplanes are those that do not have Hydraulic Monitoring and Control Application (HMCA) software (SW) S4.2 installed. Group 2 aeroplanes have Airbus modification (mod) 112090 embodied in production and have HMCA SW S4.2 installed. Group 3 aeroplanes are those that, on the effective date of this AD, do not have EDP P/N 53098-06 installed in all 4

locations. Group 4 aeroplanes are post-mod 112192 and have EDP P/N 53098-06 installed in all 4 locations.

Reason:

In the Airbus A350 design, the hydraulic fluid cooling system is located in the fuel tanks. Recently, an overheat failure mode of the hydraulic EDP was found, which may cause a fast temperature rise of the hydraulic fluid.

This condition, if not detected and corrected, combined with an inoperative fuel tank inerting system, could lead to an uncontrolled overheat of the hydraulic fluid, possibly resulting in ignition of the fuel-air mixture in the affected fuel tank.

To address this potential unsafe condition, Airbus issued a Major Event Revision (MER) of the A350 Master Minimum Equipment List (MMEL) that incorporates restrictions to avoid an uncontrolled overheat of the hydraulic system. Consequently, EASA issued Emergency AD 2017-0154-E to require implementation of these dispatch restrictions.

After EASA AD 2017-0154-E was issued, following further investigation, Airbus issued another MER of the A350 MMEL that expanded the number of restricted MMEL items. At the same time, Airbus revised Flight Operation Transmission (FOT) 999.0068/17, to inform all operators accordingly. Consequently, EASA issued AD 2017-0180, retaining the requirements of EASA Emergency AD 2017-0154-E, which was superseded, and requiring implementation of the new Airbus A350 MMEL MER and, consequently, restrictions for aeroplane dispatch.

After EASA AD 2017-0180 was issued, Airbus developed HMCA SW S4.2, embodied in production through Airbus mod 112090, and introduced in service through Airbus SB A350-29-P012. Consequently, EASA issued AD 2017-0200, retaining the requirements of EASA AD 2017-0180, which was superseded, and requiring modification of the aeroplane by installing HMCA SW S4.2.

Since EASA AD 2017-0200 was issued, it was determined that the affected part need to be replaced with improved EDP. Consequently, Airbus issued the SB to provide instructions to replace the affected parts with improved EDP, having P/N 53098-06, which are embodied in production through Airbus mod 112192.

For the reasons described above, this AD retains the requirement of EASA AD 2017-0200, which is superseded, and requires replacement of each affected parts with improved EDP.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

MMEL Changes - Dispatch Restrictions:

(1) Before next flight after 24 August 2017 [the effective date of EASA AD 2017-0154-E], implement the MMEL changes in accordance with Airbus A350 MMEL MER dated 21 August 2017.

(2) Within 30 days after 22 September 2017 [the effective date of EASA AD 2017-0180], implement the MMEL changes in accordance with Airbus A350 MMEL MER dated 06 September 2017, inform all flight crews, and, thereafter, operate the aeroplane accordingly.

Modification:

(3) For Group 1 aeroplanes: Within 30 days after 17 October 2017 [the effective date of EASA AD 2017-0200], modify the aeroplane by installing HMCA SW S4.2 in accordance with the instructions of Airbus SB A350-29-P012.

(4) For Group 3 aeroplanes: Within 17 months after the effective date of this AD, replace each affected part with an improved EDP, having P/N 53098-06, in accordance with the instructions of the SB.

Parts Installation:

(5) Do not install on any aeroplane any HMCA software pre-mod SW 4.2, as required by paragraph (5.1) or (5.2) of this AD, as applicable.

(5.1) For Group 1 aeroplanes: After modification of the aeroplane as required by paragraph (3) of this AD.

(5.2) For Group 2, 3 and 4 aeroplanes: From 17 October 2017 [the effective date of EASA AD 2017-0200].

(6) Do not install on any aeroplane an affected part, as required by paragraph (6.1) or (6.2) of this AD, as applicable.

(6.1) For Group 3 aeroplanes: After modification of the aeroplane as required by paragraph (4) of this AD.

(6.2) For Group 4 aeroplanes: From the effective date of this AD.

MMEL Changes:

(7) After modification of an aeroplane as required by paragraphs (3) and (4) of this AD, the MMEL changes under reference V29ME1734973 and V29ME1732522 (or any later approved revision of the concerned MMEL items) can be implemented for that aeroplane. These MMEL changes remove some of the restrictions required by paragraphs (1) and (2) of this AD for that aeroplane.

Ref. Publications:

Airbus A350 MMEL MER dated 21 August 2017, EASA approval reference D17028232.

Airbus A350 MMEL MER dated 06 September 2017, EASA approval reference D17029962, which is available at AirbusWorld.

Airbus Flight Operation Transmission 999.0068/17 Revision 01, dated 06 September 2017.

Airbus A350 SB A350-29-P012 original issue, dated 06 October 2017.

Airbus A350 SB A350-29-P013 original issue, dated 12 March 2018.

Airbus A350 MMEL Major Change V29ME1734973 dated 30 January 2018, approved by EASA under reference 10064381.

Airbus A350 MMEL Minor Change V29ME1732522 dated 3 January 2018, approved by Airbus under Design Organisation Approval number EASA.21J.031.

The use of later approved revisions of the above-mentioned documents is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.

2. This AD was posted on 03 August 2018 as PAD 18-113 for consultation until 10 August 2018. The Comment Response Document can be found in the EASA Safety Publications Tool, in the compressed (zipped) file attached to the record for this AD.

3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.

4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the EU aviation safety reporting system.

5. For any question concerning the technical content of the requirements in this AD, please contact: continued-airworthiness.a350@airbus.com.