



Airworthiness Directive

AD No.: 2015-0241R2

Issued: 13 January 2017

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: Revision 2: 13 January 2017
 Revision 1: 19 April 2016
 Original issue: 28 December 2015

TCDS Number(s): EASA.A.151

Foreign AD: Not applicable

Revision: This AD revises EASA AD 2015-0241R1 dated 19 April 2016.

ATA 27 – Flight Controls – Aileron Electro-Hydrostatic Actuator – Inspection / Replacement

Manufacturer(s):

Airbus

Applicability:

Airbus A350-941 aeroplanes, all serial numbers, except those on which Airbus modification (mod) 109426 or mod 109427 has been embodied in production.

Reason:

Several on-ground failures were reported on A350 aeroplanes of inboard aileron electro-hydrostatic actuator (EHA), identified by Part Number (P/N) CA67001-017. Concurrent with these failures, a Dispatch Message (DM) "F/CTL INR AILERON ELEC ACTUATOR" was displayed.

Further analysis and testing by Airbus determined that in such cases the switch from damping to active mode did not occur, preventing the activation of the EHA. This failure corresponds to a scenario called "spurious damping" and can be detected only when the EHA is activated.

As a consequence, the EHA will not be able to take over in case of adjacent servo control failure or yellow hydraulic failure.



This condition, if not detected and corrected, and combined with other failures, could result in loss of control of inboard aileron, possibly resulting in reduced control of the aeroplane.

Airbus issued Alert Operators Transmission (AOT) A27P007-15-00 to provide post-flight EHA activation instructions, and EASA issued AD 2015-0241 to require repetitive post-flight checks (activation) of each inboard aileron EHA and, in case of failure, replacement of the affected EHA with a serviceable one.

After that AD was issued, a new software standard Primary Flight Control Computer (PRIM) P6.2 was developed as an upgrade of PRIM P6.1 that would allow removal of the manual procedure described in Airbus AOT A27P007-15-00. PRIM P6.2 software is necessary to activate the Mode Select Valve of Inboard Aileron EHAs after each flight during taxi-in to avoid silting effect. New standard PRIM P6.2 was introduced by Airbus mod 109426 in production and is available for in-service aeroplanes through Airbus Service Bulletin (SB) A350-27-P008.

Consequently, EASA issued AD 2015-0241R1 to exclude post-mod 109426 aeroplanes from the Applicability, and to indicate that installation of standard PRIM P6.2 is a terminating action to the repetitive post-flight checks.

Since that AD was issued, Airbus developed a new inboard aileron EHA P/N CA67001-021 with a design change of the mode selector valve spool/bushing clearance to avoid the silting phenomenon (Airbus mod 109427).

For the reason described above, this AD is revised to exclude post-mod 109427 aeroplanes from the Applicability.

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

Required as indicated, unless accomplished previously:

Post-flight Aileron EHA Activation:

- (1) Within 14 days after 28 December 2015 [the effective date of the original issue of this AD], and, thereafter, during each flight day, but not exceeding 2 flight cycles, accomplish a post-flight activation procedure on each inboard aileron EHA P/N CA67001-017 or P/N CA67001-019, as applicable, in accordance with the instructions of Airbus AOT A27P007-15-00.

Corrective Action(s):

- (2) If, during any EHA activation as required by paragraph (1) of this AD, the message “F/CTL INR AILERON ELEC ACTUATOR” is triggered, before next flight, accomplish the troubleshooting procedure on the affected EHA in accordance with the instructions of Airbus AOT A27P007-15-00.
- (3) If, following troubleshooting as required by paragraph (2) of this AD, the failure remains, before next flight, replace the affected EHA with a serviceable one.



Terminating Action:

- (4) Replacement of an EHA on an aeroplane, as required by paragraph (3) of this AD, does not constitute terminating action for the repetitive actions as required by paragraph (1) of this AD for that aeroplane.
- (5) Modification of an aeroplane in accordance with the instructions of Airbus SB A350-27-P008 constitutes terminating action for the repetitive post-flight checks required by paragraph (1) of this AD for that aeroplane.

Ref. Publications:

Airbus AOT A27P007-15-00 dated 15 December 2015.

Airbus SB A350-27-P008 original issue dated 23 March 2016.

The use of later approved revisions of these 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. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. For any question concerning the technical content of the requirements in this AD, please contact continued-airworthiness.a350@airbus.com.

