



Notification of a Proposal to Revise an Airworthiness Directive

PAD No.: 21-046

Issued: 23 March 2021

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Design Approval Holder's Name:

AIRBUS

Type/Model designation(s):

A350 aeroplanes

Effective Date: [TBD - standard: 7 days after issue of revised AD]

TCDS Number(s): EASA.A.151

Foreign AD: Not applicable

Revision: This PAD proposes to revise EASA AD 2021-0053 dated 25 February 2021, which superseded EASA AD 2020-0163R2 dated 10 September 2020.

ATA 27 – Flight Controls – Slat Transmission Shafts / Slat Power Control Unit Torque Sensing Units – Inspection

Manufacturer(s):

Airbus

Applicability:

Airbus A350-941 and A350-1041 aeroplanes, all manufacturer serial numbers.

Definitions:

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

The AOT: Airbus Alert Operators Transmission (AOT) A27P016-20 Revision 01.

Affected part: Slat power control units (PCU), having Part Number (P/N) 4785A0000-04 or P/N 4785A0000-05.

Serviceable part: An affected part that has not exceeded the limits as specified in paragraph (2) of this AD; or an affected part on which, before next flight after installation, a health check is accomplished in accordance with the instructions of the AOT .



Groups: Group 1 aeroplanes are those that have an affected part installed. Group 2 aeroplanes are those that do not have an affected part installed.

Airbus date of manufacture: The date of transfer of title (ownership) of the aeroplane upon delivery by Airbus to the first operator.

Reason:

An occurrence was reported of a slat system jam on an A350 aeroplane during landing phase. Investigation results revealed a double slat transmission shaft disconnection. The sequence of events was attributed to temporary jamming of the left-hand (LH) slat gear rotary actuator (SGRA) at track 12, combined with a malfunction of the slat system control and monitoring loop due to lack of response from the slat PCU torque sensing unit (TSU), caused by excessive wear in the ball guide mechanism of the slat PCU TSU.

This condition, if not detected and corrected, could lead to a double shaft disconnection / rupture, potentially causing one or more slat surfaces to be no longer connected to either the slat wing tip brake or the slat PCU, possibly resulting in reduced control of the aeroplane.

To initially address this potential unsafe condition, Airbus issued AOT A27P015-20 to provide inspection instructions on a limited number of aircraft. Consequently, EASA published AD 2020-0163 (later revised) to require a one-time health check of the slat PCU TSU, a detailed inspection (DET) of the LH and right-hand (RH) slat transmission systems, water drainage and vent plug cleaning of the LH and RH track 12 SGRA and, depending on findings, accomplishment of applicable corrective action(s).

Since EASA AD 2020-0163R2 was issued, Airbus issued the AOT, as defined in this AD, to introduce repetitive TSU health checks to monitor the TSU wear on all affected aeroplanes.

For the reasons described above, EASA issued AD 2021-0053, partially retaining the requirements of EASA AD 2020-0163R2, which was superseded, to require accomplishment of the actions specified in the AOT. The water drainage and vent plug cleaning of the LH and RH track 12 SGRA as previously required by EASA AD 2020-0163R2 is no longer required by that AD.

This PAD proposes to revise EASA AD 2021-0053 by amending Note 2 and Table 1, and introducing a definition of 'serviceable part', clarifying the actions that have to be accomplished on affected parts. Paragraphs (1), (2) and (7) have been amended accordingly, clarifying the intent of the AD.

The revised AD is still considered an interim action and further AD action may follow.

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

Required as indicated, unless accomplished previously:

Inspection:

- (1) For Group 1 aeroplanes: Within the compliance times specified in Table 1 of this AD, accomplish a DET of LH and RH slat transmission systems in accordance with the instructions of the AOT.



Health Check:

- (2) For Group 1 aeroplanes: Within the compliance times specified in Table 1 of this AD, but not exceeding the compliance time for the repeat health check as determined in accordance with the instructions of AOT A27P015-20, or AOT A27P016-20 initial issue or Revision 01, if accomplished before the effective date of this AD, accomplish a health check of the LH and RH slat PCU TSU in accordance with the instructions of the AOT.

Note 1: The actions as required by paragraphs (1) and (2) of this AD do not need to be accomplished concurrently.

Table 1 – DET and PCU TSU Health Check Thresholds (see Note 2 of this AD)

Flight Cycles (FC) Accumulated	Compliance Time
500 FC or more	Within 6 months or 350 FC, whichever occurs first after 11 March 2021 [the effective date of the original issue of this AD]
Less than 500 FC	Within 6 months or 350 FC, whichever occurs first after the affected part accumulates 500 FC

Note 2: Unless indicated otherwise, the FC specified in Table 1 of this AD are those accumulated by an affected part on 11 March 2021 [the effective date of the original issue of this AD], since installation of new TSU. If the FC accumulated by an affected part are unknown, and if it can be demonstrated that the part has not been replaced on the aeroplane, the FC of the part can be considered identical to those accumulated by the aeroplane since Airbus date of manufacture. If an affected part has been replaced, the certificate of release accompanying the replacement part will clarify if and when the last TSU health check was accomplished on that part, determining the time to comply with paragraph (2) of this AD, and allowing calculation of the interval of the repetitive health checks as required by paragraph (4) of this AD.

Corrective Action(s):

- (3) If, during the DET as required by paragraph (1) of this AD, any discrepancy is detected, before next flight, contact Airbus for approved instructions and accomplish those instructions accordingly.

Repetitive Health Checks:

- (4) Following the health check as required by paragraph (2) of this AD, depending on findings, repeat the health check of the LH and RH slat PCU TSU in accordance with the instructions of the AOT and within the threshold and intervals specified in Appendix 5 of the AOT and, depending on findings, accomplish the applicable corrective action(s).

Terminating Action:

- (5) Replacing each affected part on an aeroplane with a PCU that is not an affected part constitutes terminating action for the repetitive health checks as required by paragraph (4) of this AD for that aeroplane, provided that the replacement is accomplished in accordance with approved instructions issued by Airbus and that, following that replacement, no affected parts are (re)installed on that aeroplane.



Credit:

- (6) DET of LH and RH slat transmission systems and corrective action(s) accomplished on an aeroplane before the 11 March 2021 [the effective date of the original issue of this AD] in accordance with the instructions of Airbus AOT A27P015-20 are acceptable to comply with the requirements of paragraph (1) of this AD for that aeroplane.

Parts Installation:

- (7) For Group 1 and Group 2 aeroplanes: From 11 March 2021 [the effective date of the original issue of this AD], it is allowed to install on any aeroplane an affected part, provided that it is a serviceable part, as defined in this AD, and that, following installation, repetitive health checks are accomplished on that affected part as required by paragraph (4) of this AD.

Ref. Publications:

Airbus AOT A27P015-20 original issue dated 20 July 2020.

Airbus AOT A27P016-20 Revision 01 dated 17 December 2020.

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

Remarks:

1. This Proposed AD will be closed for consultation on 06 April 2021.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this PAD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
4. For any question concerning the technical content of the requirements in this PAD, please contact: AIRBUS A350 XWB, E-mail: continued-airworthiness.a350@airbus.com.

