European Union Aviation Safety Agency

Airworthiness Directive

AD No.: 2017-0237R1

Issued: 08 June 2022

Note: This Airworthiness Directive (AD) 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.

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, or Annex Vb Part ML.A.301, as applicable, 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 Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

AIRBUS S.A.S.

Type/Model designation(s):

A318, A319, A320 and A321 aeroplanes

Effective Date:	Revision 1: 22 June 2022 Original issue: 18 December 2017
TCDS Number(s):	EASA.A.064
Foreign AD:	Not applicable
Revision:	This AD revises EASA AD 2017-0237 dated 04 December 2017, which superseded EASA AD 2014-0147 dated 11 June 2014.

ATA 27 – Flight Controls – Trimmable Horizontal Stabilizer Actuator – Modification

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Manufacturer(s):

Airbus, formerly Airbus Industrie

Applicability:

Airbus A318-111, A318-112, A318-121, A318-122, A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-211, A320-212, A320-214, A320-215, A320-216, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231 and A321-232 aeroplanes, all manufacturer serial numbers.

Definitions:

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

Affected part: Trimmable Horizontal Stabilizer Actuators (THSA), having a Part Number listed in Appendix 1 of this AD.

Groups: Group 1 aeroplanes are those that do not have the Electrical Load Sensing Device (ELSD) activated. Group 2 aeroplanes are those that have the ELSD activated.

Reason:

The THSA of Airbus A320 Family aeroplanes has been rig-tested to check secondary load path behaviour in case of primary load path failure. In that configuration, the loads are transferred to the secondary load path, which should jam, preventing any Trimmable Horizontal Stabilizer motion. The test results showed that the secondary load path did not jam as expected, preventing detection of the primary load path failure. To verify the integrity of the THSA primary load path and the correct installation of the THSA, Airbus issued Service Bulletin (SB) A320-27-1164, later revised multiple times, and SB A320-27A1179, and EASA issued AD 2006-0223, AD 2007-0178, AD 2008-0150 and AD 2014-0147, each AD superseding the previous one, requiring one-time and repetitive inspections.

After EASA AD 2014-0147 was issued, Airbus designed a new device, called ELSD, to introduce a new means of THSA upper secondary load path engagement detection. Consequently, Airbus issued several SBs (Airbus SB A320-27-1245, A320-27-1246, and A320-27-1247, depending on aeroplane configuration), providing instructions to install the wiring provision for ELSD installation and to install ELSD on the THSA, and SB A320-27-1248, providing instructions to activate the ELSD. Airbus also revised SB A320-27-1164 (Revision 13), including instructions applicable for aeroplanes with ELSD installed.

Prompted by several reported deficiencies, Airbus released Alert Operator Transmission (AOT) A27N010-17 to provide instructions for inspection and associated corrective actions. Consequently, EASA issued AD 2017-0237, retaining the requirements of EASA AD 2014-0147, which was superseded, and requiring installation of ELSD on the THSA, ELSD activation, and a one-time inspection to verify the bush presence on the THSA lower attachment.

Since that AD was issued, Airbus published ALS Part 4 Revision 08, introducing the repetitive inspections of the THSA and the associated corrective actions.

For the reason described above, this AD is revised to remove the THSA inspections and associated actions from the requirements of this AD.

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

Required as indicated, unless accomplished previously:

Re-statement of the requirements of EASA AD 2014-0147:

Note 1: DELETED.

Repetitive Inspections:

(1) DELETED.

(2) DELETED.

Corrective Action(s):

(3) DELETED.

Reporting Requirements:

(4) DELETED.

New requirements of this AD:

One-Time Inspection:

(5) DELETED.

Corrective Action(s):

(6) DELETED.

Modification:

Note 2: DELETED (moved to Definitions).

(7) For Group 1 aeroplanes with an affected part installed: Concurrently with or before the modification as required by paragraph (9) of this AD, modify the aeroplane in accordance with the instructions of Airbus SB A320-27-1247.

(8) For Group 1 aeroplanes: Concurrently with or before the modification as required by paragraph (9) of this AD, modify the aeroplane in accordance with the instructions of Airbus SB A320-27-1245 or SB A320-27-1246, as applicable.

(9) For Group 1 aeroplanes: Within 4 years after 18 December 2017 [the effective date of EASA AD 2017-0237], activate the ELSD of the THSA on the aeroplane in accordance with the instructions of Airbus SB A320-27-1248.

Terminating Action:

(10) DELETED.

Note 3: DELETED.

Credit:

(11) An aeroplane on which Airbus modification 155955 has been embodied in production is considered compliant with paragraphs (7), (8) and (9) on this AD, provided it is determined that no affected part is installed on that aeroplane, and that the ELSD is kept activated. A review of aeroplane maintenance records is acceptable to make this determination, provided those records can be relied upon for that purpose.

(12) DELETED.

(13) DELETED.

Parts Installation:

(14) Do not install an affected part on any aeroplane and do not deactivate the ELSD as required by paragraph (14.1) or (14.2) of this AD, as applicable.

(14.1) For Group 1 aeroplanes: After modification of the aeroplane as required by paragraph (9) of this AD.

(14.2) For Group 2 aeroplanes: From 18 December 2017 [the effective date of EASA AD 2017-0237].

Ref. Publications:

Airbus SB A320-27-1245 original issue dated 06 March 2017, or Revision 01 dated 20 August 2018, or Revision 02 dated 22 July 2020.

Airbus SB A320-27-1246 original issue dated 20 March 2015, or Revision 01 dated 04 November 2016.

Airbus SB A320-27-1247 original issue dated 06 March 2017, or Revision 01 dated 28 June 2018, or Revision 02 dated 17 October 2019, or Revision 03 dated 28 October 2020.

Airbus SB A320-27-1248 original issue dated 06 March 2017, or Revision 01 dated 16 April 2018, or Revision 02 dated 20 September 2019, or Revision 03 dated 23 July 2020, or Revision 04 dated 12 November 2021, or Revision 05 dated 01 February 2022.

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. The original issue of this AD was posted on 06 October 2017 as PAD 17-140 for consultation until 03 November 2017. 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. This may include reporting on the same or similar components, other than those covered by the design to which this AD 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.

5. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS S.A.S. – Airworthiness Office – IIASA;
E-mail: account.airworth-eas@airbus.com.

Appendix 1 – THSA without ELSD – Part Numbers

47145-021	47145-050	47145-130	47145-141	47145-151	47145-162
47145-030	47145-051	47145-131	47145-142	47145-152	47145-163
47145-031	47145-052	47145-132	47145-143	47145-153	47145-164
47145-032	47145-053	47145-133	47145-144	47145-154	47145-165
47145-033	47145-054	47145-134	47145-145	47145-155	47145-166
47145-034	47145-055	47145-135	47145-146	47145-156	47145-167
47145-035	47145-056	47145-136	47145-147	47145-157	47145-168
47145-036	47145-057	47145-137	47145-148	47145-160	
47145-037	47145-121	47145-140	47145-150	47145-161	