



## Airworthiness Directive

**AD No.:** 2021-0037

**Issued:** 25 January 2021

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, 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 (EU) 2018/1139, Article 71 exemption].

### Design Approval Holder's Name:

AIRBUS

### Type/Model designation(s):

A340 aeroplanes

**Effective Date:** 08 February 2021

**TCDS Number(s):** EASA.A.015

**Foreign AD:** Not applicable

**Supersedure:** None

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

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### Manufacturer(s):

Airbus, formerly Airbus Industrie

### Applicability:

Airbus A340-541, A340-542 and A340-642 aeroplanes, all manufacturer serial numbers (MSN).

### Definitions:

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

**The modification SB:** Airbus Service Bulletin (SB) A340-27-5072.

**The additional modification SB:** Airbus SB A340-27-5054, SB A340-27-5060 and SB A340-27-5065, as applicable.

**Affected THSA:** Trimmable horizontal stabilizer actuators (THSA), having Part Number (P/N) 47175-500, P/N 47175-520, P/N 47175-530 or P/N 47175-540.

**Serviceable THSA:** THSA, having P/N 47175-501, P/N 47175-521, P/N 47175-531 or P/N 47175-541.

### Reason:

A design weakness was determined to exist, affecting the secondary load path of the Airbus A380 THSA. In the event of a primary load path failure (ballscrew fracture), the failsafe tube nut retention



device might not withstand the applied loads, possibly resulting in loss of the secondary load path integrity. A similar issue has been identified on A340-500/-600 aeroplanes.

This condition, if not corrected, may lead to THSA mechanical disconnection, possibly resulting in loss of control of the aeroplane.

To address this potential unsafe condition, Airbus developed a new retention nut design, and published the modification SB to provide modification instructions for in-service aeroplanes. The modification SB refers to Goodrich Actuation Systems SAS VSB 47175-27-13, which modifies the special retention nut.

For the reasons described above, this AD requires to upgrade the special retention nut of the affected ballscrew assembly and re-identification of the affected THSA after the modification, or replacement of the affected THSA with a modified unit.

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

Required as indicated, unless accomplished previously:

#### Modification:

- (1) Within 3 800 flight hours after the effective date of this AD, modify the special retention nut of the affected ballscrew assembly and re-identify the affected THSA after the modification, in accordance with the instructions of the modification SB. Table 1 of this AD provides the relation between affected THSA and serviceable THSA (post-modification SB) P/N.

Table 1 – THSA P/N Change

Affected P/N	Serviceable P/N
47175-500	47175-501
47175-520	47175-521
47175-530	47175-531
47175-540	47175-541

Note 1: When an affected THSA is modified and becomes a serviceable THSA, the life accumulated by the affected THSA remains valid for the serviceable THSA (i.e. life is **not** set to 'zero' by modification and P/N change).

#### Replacement:

- (2) Replacement of an affected THSA on an aeroplane with a corresponding serviceable THSA, as listed in Table 1 of this AD, is an acceptable method to comply with the requirements of paragraph (1) of this AD for that aeroplane.

#### Concurrent Requirement(s) / Additional Modification(s):

- (3) Prior to, or concurrently with, the modification as required by paragraph (1), or as specified in paragraph (2) of this AD, as applicable, depending on aeroplane configuration, as defined in the



modification SB, modify the aeroplane in accordance with the instructions of the additional modification SB.

Note 2: The modification SB also identifies Airbus SB A340-27-5030 as a concurrent requirement. This AD does not require that action, as EASA previously issued AD 2014-0219 to require accomplishment of that SB.

**Parts Installation:**

(4) After modification of an aeroplane as required by paragraph (1), or as specified in paragraph (2), as applicable, do not install an affected part on that aeroplane.

**Ref. Publications:**

Airbus SB A340-27-5072 original issue dated 29 September 2020.

Airbus SB A340-27-5054 original issue dated 10 January 2011.

Airbus SB A340-27-5060 original issue dated 19 June 2014.

Airbus SB A340-27-5065 original issue dated 13 January 2016.

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 12 November 2020 as PAD 20-180 for consultation until 10 December 2020. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto: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 – IIAL (Airworthiness Office), E-mail: [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com).

