



## Airworthiness Directive

**AD No.:** 2018-0054

**Issued:** 09 March 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):

A380 aeroplanes

**Effective Date:** 23 March 2018

**TCDS Number(s):** EASA.A.110

**Foreign AD:** Not applicable

**Supersedure:** None

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

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### Manufacturer(s):

Airbus

### Applicability:

Airbus A380-841, A380-842 and A380-861 aeroplanes, all manufacturer serial numbers (MSN).

### Definitions:

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

**Applicable SB:** Airbus Service Bulletin (SB) A380-27-8058, SB A380-27-8059, SB A380-27-8060, SB A380-27-8061 and SB A380-27-8062, as applicable to aeroplane MSN and depending on aeroplane configuration.

**Affected THSA:** Trimmable Horizontal Stabilizer Actuators (THSA) having a Part Number (P/N) listed as 'old' in Table 1 of this AD.

**Affected ballscrew assembly:** Ballscrew assemblies having a P/N listed as "old" in Table 2 of this AD.

**Groups:** Group 1 aeroplanes are those that have an affected THSA installed. Group 2 aeroplanes are those that do not have an affected THSA installed. An aeroplane on which Airbus modification (mod) 77622 has been embodied in production is a Group 2 aeroplane, provided the aeroplane remains in that configuration.



**Reason:**

A design weakness has been determined to exist, affecting the secondary load path of the A380 THSA. In the event of a primary load path failure (ballscrew fracture), the failsafe tube nut retention device may not withstand the applied loads, possibly resulting in loss of the secondary load path integrity.

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 introduced by Airbus mod 77622 on the production line, and published the applicable SB to provide modification instructions for in-service aeroplanes. The applicable SB refers to UTC Aerospace Systems (Ratier-Figeac) SB FE380-27-11 for detailed technical instructions.

For the reasons described above, this AD requires modification of the special retention nut of the affected ballscrew assembly, re-identification of the affected ballscrew assembly and of the affected THSA, 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) For Group 1 aeroplanes: Within 8 months after the effective date of this AD, modify the special retention nut of the affected ballscrew assembly, re-identify the affected ballscrew assembly and re-identify the affected THSA, in accordance with the instructions of the applicable SB. Tables 1 and 2 of this AD provide the relation between affected parts and the new (post-mod) P/N.

Table 1 – THSA P/N change

Old P/N	New P/N	Applicable SB
FE380000030	FE380000034	SB A380-27-8059
FE380000032	FE380000036	SB A380-27-8059
FE380000033	FE380000037	SB A380-27-8058
FE380000100	FE380000110	SB A380-27-8060
FE380000130	FE380000134	SB A380-27-8062
FE380000131	FE380000135	SB A380-27-8061
FE380000132	FE380000136	SB A380-27-8062
FE380000133	FE380000137	SB A380-27-8061



Table 2 – Ballscrew Assembly P/N change

Old P/N	New P/N	For New P/N THSA
FE380190002	FE380190007	FE380000034
FE380190003		FE380000036 or FE380000037
FE380190004	FE380190006	FE380000110, FE380000134, FE380000135, FE380000136 or FE380000137

**Replacement:**

- (2) Replacing an affected THSA on an aeroplane with a THSA having the corresponding P/N listed as “new” in Table 1 of this AD, is an acceptable method to comply with the requirements of paragraph (1) of this AD for that aeroplane.

**Parts Installation:**

- (3) Do not install on any aeroplane an affected THSA, and do not modify the special nut of a ballscrew assembly, having a P/N identified as “new” in Table 2 of this AD, on any THSA installed on an aeroplane, as required by paragraph (3.1) or (3.2) of this AD, as applicable.

(3.1) For Group 1 aeroplanes: After modification of the aeroplane as required by paragraph (1), or as specified in paragraph (2), as applicable, of this AD.

(3.2) For Group 2 aeroplanes: From the effective date of this AD.

**Ref. Publications:**

Airbus SB A380-27-8058 original issue, dated 07 December 2017.

Airbus SB A380-27-8059 original issue, dated 07 December 2017.

Airbus SB A380-27-8060 original issue, dated 07 December 2017.

Airbus SB A380-27-8061 original issue, dated 07 December 2017.

Airbus SB A380-27-8062 original issue, dated 07 December 2017.

UTC Aerospace Systems (Ratier-Figeac) SB FE380-27-11 Revision 2 dated 15 February 2018.

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

**Remarks:**

- If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
- This AD was posted on 11 January 2018 as PAD 18-002 for consultation until 08 February 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](mailto:ADs@easa.europa.eu).
4. For any question concerning the technical content of the requirements in this AD, please contact: Airbus – EIANA (Airworthiness Office), Telephone: +33 562 110 253, Fax: +33 562 110 307, E-mail: [account.airworth-A380@airbus.com](mailto:account.airworth-A380@airbus.com).

