



Emergency Airworthiness Directive

AD No.: 2018-0047-E

Issued: 28 February 2018

Note: This Emergency 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:

LEONARDO S.p.A

Type/Model designation(s):

AW189 helicopters

Effective Date: 02 March 2018

TCDS Number(s): EASA.R.510

Foreign AD: Not applicable

Supersedure: None

ATA 55 – Stabilizers – Tail Plane Installation – Modification

Manufacturer(s):

Leonardo S.p.A. Helicopters (formerly Finmeccanica S.p.A., AgustaWestland S.p.A.)

Applicability:

Leonardo AW189 helicopters, all serial numbers (s/n).

Definitions:

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

The SB: Leonardo Service Bulletin (SB) 189-177 Rev. A.

Groups: Group 1 helicopters are those indicated in Section 1.A. Part I and II of the SB (s/n without Leonardo SB 189-130 embodied, except s/n equipped with the new tail plane installation design in production). Group 2 helicopters are those indicated in Section 1.A. Part III of the SB (s/n with Leonardo SB 189-130 embodied and s/n equipped with the new tail plane installation design in production, but using incorrect torque values). Group 3 are all other helicopters.

Reason:

Two in-service failures were reported of the forward left-hand side tail plane installation bolt of AW189 helicopters. Further investigation identified fretting and wear as the root cause for the failure of these bolts.



This condition, if not detected and corrected, could lead to reduced control of the helicopter.

To address this potential unsafe condition, Leonardo issued SB 189-177 (later revised to add/remove s/n) to provide instructions for inspection of the tail plane installation, modification by installing an improved tail plane installation design and subsequent torque adjustment and checks.

The improved tail plane installation design has been introduced previously on a number of helicopters in production or through optional Leonardo SB 189-130 (Tail Plane Installation Retromod Part Number 8G5510P00511). However, application of the adjusted torque values is still necessary for helicopters with SB 189-130 embodied and for some other s/n modified in production using incorrect torque values (see Group 2).

For the reason described above, this AD requires repetitive inspections of the forward bolt of the tail plane, modification of the tail plane installation, and, thereafter, the introduction of improved torque values for the tail plane installation bolts for certain helicopters, as well as repetitive torque checks for all helicopters.

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

Required as indicated, unless accomplished previously:

Inspection(s):

- (1) For Group 1 helicopters: Before each flight after the effective date of this AD, visually inspect the tail plane installation bolts in accordance with the instructions of Section 3. Part I of the SB.

Corrective Action(s):

- (2) If, during any inspection as required by paragraph (1) of this AD, any bolt is found damaged, before next flight, modify the tail plane installation in accordance with the instructions of Section 3. Part II of the SB.

Modification:

- (3) For Group 1 helicopters: Unless accomplished as required by paragraph (2) of this AD, within 100 flight hours (FH) or 30 days, whichever occurs first after the effective date of this AD, modify the tail plane installation in accordance with the instructions of Section 3. Part II of the SB.

Torque Adjustment:

- (4) For Group 2 helicopters: Within 10 FH after the effective date of this AD, adjust the tightening torque values of the tail plane installation bolts in accordance with the instructions of Section 3. Part III of the SB.

Torque Checks:

- (5) For Group 1, Group 2 and Group 3 helicopters: Within the compliance time as specified in Table 1 of this AD and, thereafter, at intervals not exceeding the values as specified in Section 1.B. Part IV of the SB, as applicable, accomplish repetitive checks of the torque values of the tail plane installation bolts in accordance with the instructions of Section 3. Part IV of the SB.



Table 1 – Initial Torque Check

Helicopter Configuration	Compliance Time
Group 1	Within 10 FH after the modification as required by paragraph (2) or (3) of this AD, as applicable
Group 2	Within 10 FH after the torque adjustment as required by paragraph (4) of this AD
Group 3	Within 10 FH after the effective date of this AD

- (6) If, during any check as required by paragraph (5) of this AD, the measured torque value is outside the range as specified in the SB, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of Section 3. Part IV of the SB.

Terminating Action:

- (7) Modification of the tail plane installation on a Group 1 helicopter, as required by paragraph (2) or (3) of this AD, as applicable, constitutes terminating action for the repetitive inspections required by paragraph (1) of this AD for that helicopter.
- (8) Accomplishment of corrective action(s) on a helicopter as required by paragraph (6) of this AD does not constitute terminating action for the repetitive torque checks required by paragraph (5) of this AD for that helicopter.

Credit:

- (9) Inspections, corrective actions, modifications, torque adjustments and/or torque checks, accomplished on a helicopter before the effective date of this AD in accordance with the instructions of Leonardo SB 189-177 at original issue, are acceptable to comply with the initial requirements of this AD for that helicopter.

Ref. Publications:

Leonardo SB 189-177 original issue dated 22 February 2018, or Rev. A dated 28 February 2018.

The use of later approved revisions of the above-mentioned document 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 results of the safety assessment have indicated the need for immediate publication and notification, without the full consultation process.
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: Leonardo S.p.A. Helicopters, E-mail: PSE_AW189.MBX@leonardocompany.com.

