



Emergency Airworthiness Directive

AD No.: 2018-0261-E

Issued: 30 November 2018

Note: This Emergency 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:

LEONARDO S.p.A.

Type/Model designation(s):

AW169 and AW189 helicopters

Effective Date: 03 December 2018

TCDS Number(s): EASA.R.509, EASA.R.510

Foreign AD: Not applicable

Supersedure: None

ATA 64 – Tail Rotor – Tail Rotor Servo Actuator – Inspection

Manufacturer(s):

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

Applicability:

AW169 helicopters, all serial numbers (s/n); and
AW189 helicopters, all s/n.

Definitions:

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

The applicable ASB: Leonardo Emergency Alert Service Bulletin (ASB) 169-126 and ASB 189-217, as applicable.

Reason:

An accident occurred on an AW169 helicopter, the root cause of which is still under investigation. While the helicopter was on a take-off phase at low forward speed, a loss of yaw control has been observed. As a precautionary measure, Leonardo issued ASB 169-120 for AW169 helicopters to provide inspection instructions to check correct installation of the tail rotor (TR) servo-actuator and, subsequently, ASB 189-213 with the same instructions for AW189 helicopters, since these have a TR flight control system of similar design to AW169 helicopters.



The incorrect installation of the TR servo-actuator, if not detected and corrected, depending on the flight condition, could possibly result in loss of control of the helicopter.

EASA issued Emergency AD 2018-0241-E to require a one-time visual inspection of the TR servo-actuator installation and, depending on findings, accomplishment of applicable corrective action(s), as well as reporting of inspection results to Leonardo.

After that AD was issued, building on further information, EASA issued Emergency AD 2018-0250-E, retaining the requirements of EASA AD 2018-0241-E, which was superseded, and requiring a precautionary one-time inspection of the TR duplex bearing and, depending on findings, accomplishment of applicable corrective action(s).

After that AD was issued, Leonardo published ASB 169-120 and ASB 189-213, as applicable, providing further instructions to inspect the TR duplex bearing. Consequently, EASA issued Emergency AD 2018-0252-E, which partially retained the requirements of AD 2018-0250-E, which was superseded, to require a one-time inspection and breakaway torque check of the TR duplex bearing, inspection and reinstallation of the TR servo-actuator castellated nut and, depending on findings, accomplishment of applicable corrective action(s). That AD also defined conditions for installation of TR servo-actuators.

Since EASA AD 2018-0252-E was published, it was determined that certain repetitive inspections are necessary for continued monitoring of the fleet while complementary analyses are ongoing and Leonardo published the applicable ASB accordingly, providing instructions.

For the reasons described above, this AD requires repetitive inspections of the TR servo actuator's back-end castellated nut slippage marking, and of the roughness and breakaway force of the TR duplex bearing and, depending on findings, accomplishment of applicable corrective action(s). This AD is still considered to be an interim action and further AD action may follow.

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

Required as indicated, unless accomplished previously:

Repetitive inspection:

- (1) Within 10 flight hours (FH) after the effective date of this AD, and, thereafter, at intervals not exceeding the value as specified in Table 1 of this AD, as applicable, inspect the slippage marking of the castellated nut installed on the back-end of the TR servo actuator in accordance with the instructions of Part I, and inspect the roughness and breakaway force of the TR duplex bearing in accordance with the instructions of Part II, of the applicable ASB.

Table 1 – Inspection Intervals

Part of applicable ASB	Interval (not to exceed)
Part I	10 FH
Part II	30 FH



Corrective Action(s):

- (2) If, during any inspection in accordance with the instructions of Part I of the applicable ASB, as required by paragraph (1) of this AD, any evidence of rotation is found, before next flight, contact Leonardo for approved instructions and accomplish those instructions accordingly.
- (3) If, during any inspection in accordance with the instructions of Part II of the applicable ASB, as required by paragraph (1) of this AD, any discrepancy is found, before next flight, contact Leonardo for approved instructions and accomplish those instructions accordingly.

Reporting:

- (4) Within 2 days after each inspection as required by paragraph (1) of this AD, submit a report to Leonardo. This can be done by using the instructions of the applicable ASB.

Part Removal and Send to Leonardo:

- (5) From the effective date of this AD, within 2 days after removal of a TR duplex bearing, if part of the corrective actions as required by paragraph (2) or (3) of this AD, as applicable, send the TR duplex bearing and the collecting containers of the grease to Leonardo for in-shop inspection. This can be done by using the instructions of the applicable ASB.

Terminating Action:

- (6) None.

Ref. Publications:

Leonardo S.p.A. Emergency ASB 169-126 original issue dated 30 November 2018.

Leonardo S.p.A. Emergency ASB 189-217 original issue dated 30 November 2018.

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 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. 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](#).
5. For any question concerning the technical content of the requirements in this AD, please contact: Leonardo S.p.A. Helicopters, Customer Support & Services, Product Support



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