

Airworthiness Directive

AD No.: 2020-0271

Issued: 08 December 2020

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:

LEONARDO S.p.A.

Type/Model designation(s):

AB139, AW139, and AW189 helicopters

Effective Date: 15 December 2020

TCDS Number(s): EASA.R.006 and EASA.R.510

Foreign AD: Not applicable

Supersedure: None

ATA 62 – Main Rotor – Swashplate Boot – Inspection

Manufacturer(s):

Leonardo S.p.A. Helicopters, formerly Finmeccanica S.p.A, AgustaWestland S.p.A., Agusta S.p.A.; and AgustaWestland Philadelphia Corporation, formerly Agusta Aerospace Corporation

Applicability:

AB139, AW139 and AW189 helicopters, all serial numbers (s/n).

Definitions:

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

Affected part: Main rotor (MR) swashplate boot, having Part Number (P/N) 3G6230V00251.

Affected rings: Three stainless steel external rings bonded to the affected part.

Adhesive: The adhesive used in the bonding areas between the affected rings and the affected part.

The ASB: Leonardo Alert Service Bulletin (ASB) 139-654 and ASB 189-277, as applicable.

Groups:

Group 1 helicopters are those that are listed by s/n in Appendix 1 of this AD and have an affected part installed.

Group 2 helicopters are those that are listed by s/n in Appendix 1 of this AD and have an affected part installed. A Group 2 helicopter on which the affected part was replaced in-service with another affected part, must be considered as a Group 1 helicopter.

Group 3 helicopters are those that do not have an affected part installed.

Reason:

An occurrence was reported of in-flight failure of one of the three affected rings installed on AB/AW139 helicopters. The broken ring, under the effects of the centrifugal force, was released from the affected part and impacted one tail rotor blade, causing extensive damage. The investigation results showed that failure of the external ring was caused by fatigue initiated by corrosion. A likely contributing factor to the ring failure was disbonding at the four points, where the affected ring was bonded to the affected part. Due to design similarities, the affected part is also installed on AW189 helicopters.

This condition, if not detected and corrected, may lead to further in-flight failures of affected rings, possibly resulting in damage to, and reduced control of, the helicopter.

To address this potential unsafe condition, Leonardo issued the ASB, providing instructions to inspect the affected rings for corrosion, cracks and adhesive conditions.

For the reasons described above, this AD requires repetitive detailed inspections (DET) of the affected rings, and, depending on findings, accomplishment of applicable corrective action(s). For certain helicopters, this AD additionally requires a one-time restoring of the adhesive between the bonding areas of the affected rings and affected part. Finally, for all helicopters, this AD allows, under certain conditions, (re)installation of an affected part on a helicopter.

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

Required as indicated, unless accomplished previously:

Inspection / Adhesive Restoring:

- (1) For Group 1 helicopters: Within 25 flight hours (FH) after the effective date of this AD, accomplish a DET of each affected ring and restore the adhesive in the bonding areas between each affected ring and affected part, in accordance with the instructions of Part I of the ASB.

Repetitive Inspections:

- (2) For Group 1 and Group 2 helicopters: Within the compliance time specified in Table 1 of this AD, as applicable, and, thereafter, at intervals not to exceed 50 FH, accomplish a DET of each affected ring and a DET of the bonding areas between the affected part and each affected ring, in accordance with the instructions of Part II of the ASB.

Table 1 – Paragraph (2) Initial Inspection

Group	Compliance Time
1	Within 50 FH after the inspection as required by paragraph (1) of this AD
2	Within 50 FH after the effective date of this AD



Corrective Action(s):

- (3) If, during the inspection as required by paragraph (1) this AD, any discrepancy is detected as specified in the ASB, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of Part I of the ASB.
- (4) If, during any inspection as required by paragraph (2) of this AD, any discrepancy is detected as specified in the ASB, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of Part II of the ASB.

Terminating Action:

- (5) None.

Reporting:

- (6) Within 30 days after the DET as required by paragraph (1) of this AD, when discrepancies are detected, report the DET results to Leonardo.

Part Installation:

- (7) For Group 1, Group 2 and Group 3 helicopters: From the effective date of this AD, it is allowed to install on any helicopter an affected part, provided that, within 25 FH after installation, the part is inspected / corrected, depending on findings, and adhesive is restored in accordance with the instructions of Part I of the ASB, and, thereafter, at intervals not to exceed 50 FH, inspected / corrected, depending on findings, in accordance with the instructions of Part II of the ASB.

Ref. Publications:

Leonardo S.p.A. Helicopters ASB 139-654 original issue dated 02 December 2020.

Leonardo S.p.A. Helicopters ASB 189-277 original issue dated 02 December 2020.

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. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
3. Enquiries regarding this AD should be referred to the EASA Programming and Continued Airworthiness 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: Leonardo S.p.A. Helicopters. E-mail: cse.aw139.AW@leonardocompany.com, PSE_AW189.MBX.AW@leonardocompany.com.

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Appendix 1 - Helicopter Groups

Group	Type	Having s/n	Except
1	AB/AW139	Up to 31925 inclusive; Up to 41575 inclusive; and 41801, 41802, 41803 and 41804.	those s/n listed in Table 1 of the ASB
	AW189	Up to 49065 inclusive; Up to 89012 inclusive; and Up to 92010 inclusive	s/n 49024, 49036, 49040, 49041, 89005 and 89006
2	AB/AW139	31926 and higher; 41576 and higher; and those s/n listed in Table 1 of the ASB	s/n 41801, 41802, 41803 and 41804
	AW189	49024, 49036, 49040, 49041; 49066 and higher; 89005, 89006 and 89013 and higher; 92011 and higher; and 93001 and higher	

