

## Airworthiness Directive

**AD No.:** 2021-0259

**Issued:** 17 November 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:**

LEONARDO S.p.A.

**Type/Model designation(s):**

AB139 and AW139 helicopters

**Effective Date:** 24 November 2021

**TCDS Number(s):** EASA.R.006

**Foreign AD:** Not applicable

**Supersedure:** None

### ATA 53 – Fuselage – Tail Gearbox Fitting – Inspection / Replacement

**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 and AW139 helicopters, all serial numbers.

**Definitions:**

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

**Affected part:** Tail gear box (TGB) fittings, having Part Number (P/N) 3G5351A01151 or P/N 3G5351A01152.

**The ASB:** Leonardo Alert Service Bulletin (ASB) 139-686.

**Reason:**

During a scheduled inspection of an AW139 helicopter, a large crack was detected on the inner forward-right side of the TGB fitting P/N 3G5351A01151.

The investigation results have revealed that previous scheduled inspections on the inner forward-right side of the TGB fitting were accomplished possibly without the use of a borescope.

This condition, if not detected and corrected, could lead to crack propagation up to critical length, reducing the capability to sustain loads from the TGB and tail rotor and possibly resulting in reduced control of the helicopter.

To address this potential unsafe condition, Leonardo issued the ASB, as defined in this AD, providing instructions to inspect the affected part using a borescope.

Additionally, Leonardo intends to amend data module 39-A-53-40-40-00-00A-31AC-A of the AW139 Maintenance Publication Manual to use the boroscope during the inspection of the inner areas of the TGB fitting.

For the reason described above, this AD requires a one-time inspection of the affected part and, depending on findings, replacement.

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

Required as indicated, unless accomplished previously:

#### **Inspection:**

- (1) Within the compliance time specified in Table 1 of this AD, as applicable, inspect, using a borescope, the affected part in accordance with the instructions of Section 3 Part I of the ASB.

Table 1 – TGB Fitting Inspection

<b>Flight Hours (FH) accumulated by the affected part (on the effective date of this AD)</b>	<b>Compliance Time</b>
3 000 or more since first installation on a helicopter	Within 25 FH after the effective date of this AD
Less than 3 000 since first installation on a helicopter	Within 25 FH after the affected part accumulates 3 000 FH since first installation on a helicopter

#### **Corrective Action(s):**

- (2) If, during the inspection as required by paragraph (1) this AD, a crack or any discrepancy is detected, replace the affected part in accordance with the instructions of Section 3 Part II of the ASB.

#### **Reporting:**

- (3) Within 30 days after the inspection as required by paragraph (1) of this AD, report the results to Leonardo, in case a crack or any discrepancy is detected. This can be accomplished in accordance with the instructions of Section 3 Part I of the ASB.

#### **Part(s) Installation:**

- (4) From the effective date of this AD it is allowed to (re)install on any helicopter an affected part, provided it is inspected as required by paragraph (1) of this AD.



**Ref. Publications:**

Leonardo S.p.A. Helicopters ASB 139-686 original issue dated 08 November 2021.

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. 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 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: Leonardo S.p.A. Helicopters. E-mail: [engineering.support.lhd@leonardocompany.com](mailto:engineering.support.lhd@leonardocompany.com).

