

Airworthiness Directive

AD No.: 2022-0153

Issued: 28 July 2022

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, or Annex Vb Part ML.A.301, as applicable, 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 Annex Vb Part ML.A.303, as applicable] 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):

A109E, A109S and A109LUH helicopters

Effective Date: 11 August 2022

TCDS Number(s): EASA.R.005

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2020-0256 dated 17 November 2020.

ATA 53 – Fuselage – Centre Fuselage Frame Assembly – Inspection / Repair

Manufacturer(s):

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

Applicability:

A109E helicopters, all serial numbers (s/n); A109S helicopters, all s/n up to 22199 inclusive; and A109LUH helicopters, all s/n.

Definitions:

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

The ASB: Leonardo Alert Service Bulletins (ASB) 109EP-173 Revision (Rev.) A, ASB 109EP-179, ASB 109S-109 or ASB 109L-120, as applicable.

Affected area: Centre fuselage frame assembly at station (STA) 1815, the intersection of lateral pylon with floor spar, left-hand (LH) and right-hand (RH) side.

Groups:

Group 1 helicopters are A109E helicopters having a s/n from 11001 to 11674 inclusive.

Group 2 helicopters are those which are not Group 1.

Reason:

Cracks have been reportedly found in the affected area on A109E helicopters.

This condition, if not detected and corrected, could affect the structural integrity of the helicopter.

To address this potential unsafe condition, Leonardo published ASB 109EP-173, original issue, providing inspection instructions for the affected area, and EASA issued AD 2020-0256 to require accomplishment of those inspections and, depending on findings, repair.

Since that AD was issued, it has been determined that additional helicopters may be affected by a similar potential unsafe condition, and Leonardo published the ASB, as defined in this AD, to provide inspection instructions accordingly.

For the reasons described above, this AD retains the requirements of EASA AD 2020-0256, which is superseded, and expands the Applicability.

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

Required as indicated, unless accomplished previously:

Repetitive Inspections:

- (1) For Group 1 helicopters: Within the compliance time as defined in Table 1 of this AD, as applicable, and, thereafter, at intervals not exceeding 100 flight hours (FH), inspect each affected area in accordance with the instructions of the ASB.

Table 1 – Initial Inspection (see Note 1 of this AD)

FH and Landings	Compliance Time
Less than 1 000 FH and less than 3 500 landings	Within 100 FH upon accumulation of 1 000 FH or 3 500 landings, whichever occurs first
1 000 FH or more, or 3 500 landings or more	Within 100 FH after 01 December 2020 [the effective date of EASA AD 2020-0256]

Note 1: Unless otherwise specified, the FH and landings indicated in Table 1 of this AD are those accumulated on 01 December 2020 [the effective date of EASA AD 2020-0256] by the helicopter since first flight.

- (2) For Group 2 helicopters: Within the compliance time as identified in Table 2 of this AD, as applicable, and, thereafter, at intervals not exceeding 100 FH, inspect each affected area in accordance with the instructions of the ASB.



Table 2 – Initial Inspection (see Note 2 of this AD)

FH and Landings	Compliance Time
Less than 1 000 FH and less than 3 500 landings	Within 100 FH upon accumulation of 1 000 FH or 3 500 landings, whichever occurs first
1 000 FH or more, or 3 500 landings or more	Within 100 FH after the effective date of this AD

Note 2: Unless otherwise specified, the FH and landings indicated in Table 2 of this AD are those accumulated on the effective date of this AD by the helicopter since first flight.

Corrective Action(s):

- (3) For Group 1 and Group 2 helicopters: If, during any inspection as required by paragraph (1) or (2) of this AD, as applicable, one crack is detected on the FWD CAP, having a length not exceeding 50 mm, and no other damage is detected in the affected area, within 25 FH after detection of the crack, accomplish the applicable corrective actions in accordance with the instructions of the ASB, as applicable, or contact Leonardo for approved repair instructions and accomplish those instructions accordingly.
- (4) For Group 1 and Group 2 helicopters: If, during any inspection as required by paragraph (1) or (2) of this AD, as applicable, any crack is detected on the FWD CAP, having a length of 50 mm or more, or any other damage is detected in the affected area, before next flight, accomplish the applicable corrective actions in accordance with the instructions of the ASB, as applicable, or contact Leonardo for approved repair instructions and accomplish those instructions accordingly.
- (5) For Group 1 and Group 2 helicopters: After accomplishment of a repair in an affected area as required by paragraph (3) or (4) of this AD, as applicable, or in accordance with repair drawing Part Number (P/N) 109-0952-67-117 (LH side) or P/N 109-0952-67-102 (RH side), as applicable, the next due inspection of that affected area, as required by paragraph (1) or (2) of this AD, as applicable, can be deferred up to 1 000 FH or 3 500 landings, whichever occurs first. Subsequently, inspections of that area must be accomplished at intervals not exceeding 100 FH.

Terminating Action:

- (6) None.

Credit:

- (7) For Group 1 helicopters: Inspection and corrective actions, accomplished on a helicopter before the effective date of this AD in accordance with the instructions of Leonardo ASB 109EP-173 original issue, are acceptable to comply with the initial requirements of this AD for that helicopter.

Ref. Publications:

Leonardo S.p.A. ASB 109EP-173 original issue dated 10 November 2020, and Rev. A dated 21 July 2022.

Leonardo S.p.A. ASB 109EP-179 original issue dated 21 July 2022.



Leonardo S.p.A. ASB 109S-109 original issue dated 21 July 2022.

Leonardo S.p.A. ASB 109L-120 original issue dated 21 July 2022.

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 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](#). 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, Customer Support & Services, Product Support Engineering & Licenses DPT,
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