



Airworthiness Directive

AD No.: 2020-0230

Issued: 22 October 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):

A109 helicopters

Effective Date: 05 November 2020

TCDS Number(s): EASA.R.005

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA Emergency AD 2007-0306-E dated 14 December 2007.

ATA 62 – Rotor – Main Rotor Blade Tip Cap – Inspection

Manufacturer(s):

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

Applicability:

A109E, A109K2 and A109C helicopters, all serial numbers.

Definitions:

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

The applicable SB: Leonardo Alert Service Bulletin (SB) 109-125 revision A, SB 109K-048 revision A and SB 109EP-085 revision A, as applicable to helicopter model.

Affected part: Main rotor blade tip cap, having Part Number (P/N) 709-0103-29-109.

Serviceable part: A main rotor blade tip cap which is not an affected part; or an affected part which is new; or an affected part which, within 50 flight hours (FH) before installation, passed an inspection (no defects found) in accordance with the instructions of the applicable SB.

Groups: Group 1 are helicopters that have an affected part installed. Group 2 are helicopters that do not have an affected part installed.

Reason:

Occurrences of affected parts detachment have been reported on A109E helicopters, with subsequent increase of the helicopter vibratory level. Investigations identified fracture of the welded bead (joint line of shells) of the tip leading edge as the cause of these detachments.

This condition, if not detected and corrected, could lead to further affected parts detachments, possibly resulting in reduced control of the helicopter.

Due to similarity of design, this condition may also affect A109C and A109K2 helicopters.

Prompted by this occurrence, Agusta issued the original issue of the applicable SB to provide instructions for visual inspections of the affected parts and, depending on findings, accomplishment of dye penetrant inspection. Consequently, EASA issued AD 2007-0306-E to require accomplishment of those repetitive inspections.

Since that AD was issued, new occurrences of affected parts detachment have been reported. Consequently, Leonardo issued the applicable SB, removing the instructions for visual inspections.

For the reasons described above, this AD partially retains the requirements of EASA AD 2007-0306-E, which is superseded, and requires repetitive dye penetrant inspections of affected parts and, depending on findings, replacement.

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

Required as indicated, unless accomplished previously:

Inspection(s):

- (1) For Group 1 helicopters: Before exceeding 600 FH since first installation on a helicopter, or within 50 FH after the effective date of this AD, whichever occurs later, but without exceeding 50 FH after the last inspection accomplished as required by EASA AD 2007-0306-E, and, thereafter, at intervals not to exceed 50 FH, accomplish an inspection of each affected part in accordance with the instructions of the applicable SB.

Corrective Action(s):

- (2) If, during any inspection as required by paragraph (1) of this AD, any crack is detected on an affected part, before next flight, replace that affected part with a serviceable part in accordance with the instructions of the applicable SB.

Terminating Action:

- (3) None.

Part Installation:

- (4) For Group 1 and Group 2 helicopters: From the effective date of this AD, it is allowed to install an affected part on a helicopter, provided it is a serviceable part, as defined in this AD, and that, following installation, it is inspected as required by this AD.
- (5) For Group 1 and Group 2 helicopters: From the effective date of this AD, it is allowed to install a main rotor blade having an affected part installed on a helicopter, provided that affected part is

a serviceable part, as defined in this AD and, that, following installation, it is inspected as required by this AD.

Ref. Publications:

Leonardo S.p.A. Helicopters SB 109-125 revision A dated 19 October 2020.

Leonardo S.p.A. Helicopters SB 109K-048 revision A dated 19 October 2020.

Leonardo S.p.A. Helicopters SB 109EP-085 revision A dated 19 October 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, Customer Support & Services, Product Support Engineering, E-mail: aw109.mbx.aw@leonardocompany.com.