



Emergency Airworthiness Directive

AD No.: 2017-0085-E

Issued: 12 May 2017

Note: This Emergency Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 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 (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:

LEONARDO S.p.A.

Type/Model designation(s):

A109S and AW109SP helicopters

Effective Date: 16 May 2017

TCDS Number(s): EASA.R.005

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2011-0150 dated 09 August 2011.

ATA 55 – Stabilizers – Elevator Assembly – Inspections

Manufacturer(s):

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

Applicability:

A109S and AW109SP helicopters, all serial numbers.

Reason:

An occurrence on an A109S helicopter was reported of finding a fractured left hand (LH) elevator assembly, Part Number (P/N) 109-0200-02-601. The crack extended along the riveting of the upper skin to the fourth rib. The investigation determined that fatigue caused the fracture.

This condition, if not detected and corrected, could lead to elevator failure, possibly resulting in reduced control of the helicopter.

Due to similarity of design, LH and right hand (RH) elevator assemblies P/N 109-0200-02-801 (LH) and P/N 109-0200-02-602 or -802 (RH), as installed on A109S helicopters, and elevator assemblies P/N 109-0200-02-803/-804 (LH/RH), as installed on AW109SP helicopters, could also be affected by the same issue. Prompted by this occurrence, Agusta issued Bolletino Tecnico (BT) 109S-44 and BT 109SP-032, providing inspection instructions, and EASA issued AD 2011-0150, requiring accomplishment of repetitive inspections and, depending on findings, corrective action(s).



Since that AD was issued, another elevator assembly was found fractured during a post-flight inspection on an A109S helicopter. Prompted by this new occurrence, Leonardo issued Service Bulletin (SB) 109S-076 and SB 109SP-113 (later revised), as applicable to helicopter model, providing new instructions for a one-time inspection, new repetitive inspections and reduced inspection threshold and intervals.

For the reasons described above, this AD supersedes EASA AD 2011-0150, and requires the new one-time inspection and the new repetitive inspections at reduced intervals of the LH and RH elevator assemblies, and, depending on findings, accomplishment of applicable corrective action(s).

This AD is considered to be an interim action and, depending on availability of a technical solution, further AD action may follow.

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

Required as indicated, unless accomplished previously:

Note 1: SB 109S-076 and SB 109SP-113, as applicable to helicopter model, are collectively referred to as “the applicable SB” in this AD.

Note 2: Elevator assemblies P/N 109-0200-02-601 (LH), P/N 109-0200-02-801 (LH), P/N 109-0200-02-602 (RH), P/N 109-0200-02-802 (RH), P/N 109-0200-02-803 (LH), and P/N 109-0200-02-804 (RH) are collectively referred to as “affected elevator assembly” in this AD.

Note 3: For the purpose of this AD, Group 1 helicopters are those equipped with an affected elevator assembly (see Note 2 of this AD). Group 2 helicopters are those not equipped with affected elevator assemblies.

Inspection:

(1) For Group 1 helicopters: Before next flight after the effective date of this AD, or before an affected elevator assembly (see Note 2 of this AD) exceeds 400 flight hours (FH) since first installation on a helicopter, whichever occurs later, accomplish a visual inspection or a liquid penetrant inspection of each affected elevator assembly in accordance with the instructions of the applicable SB.

Repetitive Inspections:

(2) For Group 1 helicopters: Before an affected elevator assembly exceeds 400 FH since first installation on a helicopter, or within 10 FH after the effective date of this AD, whichever occurs later, and, thereafter, at intervals not to exceed 25 FH, accomplish an endoscope inspection (see Note 4 of this AD) of each affected elevator assembly in accordance with the instructions of the applicable SB.

Note 4: To enable accomplishment of the first endoscope inspection on a helicopter, drilling inspection holes in accordance with the instructions of the applicable SB is required.

Corrective Action:

(3) If, during any inspection as required by paragraph (1) or (2) of this AD, as applicable, a cracked elevator assembly is found, before next flight, replace that elevator assembly with a serviceable



elevator assembly in accordance with the instructions of the applicable SB, or contact Leonardo for approved repair instructions and accomplish those instructions accordingly.

Credit:

- (4) Accomplishment on a helicopter of an endoscope inspection of an affected elevator assembly in accordance with the instructions of the applicable SB is acceptable to comply with the visual or liquid penetrant inspection as required by paragraph (1) of this AD for that affected elevator assembly on that helicopter.

Terminating Action:

- (5) Replacement of an affected elevator assembly with an affected elevator assembly or accomplishment of a repair on a helicopter, as required by paragraph (3) of this AD, does not constitute terminating action for the repetitive inspections as required by paragraph (2) of this AD for that helicopter.

Parts Installation:

- (6) For Group 1 and Group 2 helicopters: From the effective date of this AD, it is allowed to install an affected elevator assembly on a helicopter, provided it is inspected as required by this AD.

Ref. Publications:

Leonardo S.p.A. Helicopters SB 109S-076 original issue, dated 09 May 2017, or revision A dated 12 May 2017.

Leonardo S.p.A. Helicopters SB 109SP-113 original issue, dated 09 May 2017, or revision A dated 12 May 2017.

The use of later approved revisions of these 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. 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 DPT, via Giovanni Agusta 520, 21017 Cascina Costa di Samarate (VA) – Italy
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