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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0364; Project Identifier MCAI-2020-00274-R; Amendment 39-21675; AD 2021-16-13]

RIN 2120-AA64

Airworthiness Directives; Leonardo S.p.a. Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for Leonardo S.p.a. (Leonardo) Model A109S and AW109SP helicopters with a certain part-numbered vertical fin vibration absorber installation installed. This AD requires repetitive inspections of the vertical fin vibration absorber installation and the surrounding structure and depending on the inspection results, removing certain parts from service. This AD also prohibits installing certain part-numbered vertical fin vibration absorber installations on any helicopter. This AD was prompted by a report of cracks and damage detected on the vertical fin absorber installation and surrounding structure during scheduled inspections. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective September 22, 2021.

ADDRESSES: For service information identified in this final rule, contact Leonardo S.p.a. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G.Agusta 520, 21017 C. Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at https://www.leonardocompany.com/en/home. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0364; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the European Union Aviation Safety Agency (EASA) AD, any comments received, and other information. The street

address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Kristin Bradley, Aerospace Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email kristin.bradley@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to Leonardo Model A109S and AW109SP helicopters with a vertical fin vibration absorber installation part number (P/N) 109-B810-79-101 installed. The NPRM published in the Federal Register on May 13, 2021 (86 FR 26198). In the NPRM, the FAA proposed, within 30 hours time-in-service (TIS), and thereafter at intervals not to exceed 100 hours TIS, removing the vertical fin vibration absorber installation and, using a mirror and light source, inspecting the rib assembly and depending on the inspection results, removing certain parts from service. The NPRM also proposed to require inspecting the vertical fin vibration absorber installation for hole elongation; for fretting between the plate and the masses, and in between the masses; for fretting on the doubler; and the bolts for scratches and corrosion. Depending on the inspection results, the NPRM proposed removing the vertical fin vibration absorber installation from service. The NPRM also proposed to require, within 12 months TIS, removing the vertical fin vibration absorber installation from service. Finally, the NPRM proposed to prohibit installing an affected part on any helicopter, and provided a terminating action for the 100-hour TIS repetitive inspections.

The NPRM was prompted by EASA AD 2014-0150, dated June 18, 2014 (EASA AD 2014-0150), issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for certain AgustaWestland S.p.A. (now Leonardo S.p.a. Helicopters) (formerly Agusta S.p.A.) Model A109S and AW109SP helicopters with an absorber P/N 109-B810-79-101installed. EASA advises that during a scheduled inspection on Model A109S and AW109SP helicopters, cracks and damage were detected on the vertical fin vibration absorber installation and the surrounding structure. EASA stated that investigation results determined the cracks and damage were likely related to the design of the vertical fin vibration absorber installation and incorrect installation. Accordingly, EASA AD 2014-0150 required repetitive inspections and removal of the affected part.

After EASA AD 2014-0150 was issued, EASA determined certain helicopters were not included in the applicability and may also be subject to the unsafe condition. Accordingly, EASA issued EASA AD 2019-0294, dated December 4, 2019 (EASA AD 2019-0294), which supersedes EASA AD 2014-0150. EASA AD 2019-0294 retains the requirements of EASA AD 2014-0150 and expands the applicability, prohibits vertical fin vibration absorber installation P/N 109-B810-79-101 from being installed on any helicopter, and considers removal of the affected part to constitute terminating action for the repetitive inspections. EASA states that the unsafe condition, if not detected and corrected, could affect the structural integrity of the helicopter.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA about the unsafe condition described in its AD. The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed except for a correction to the compliance time for removing the vertical fin vibration absorber installation from service. The NPRM stated that removing this part from service would be required "within 12 months TIS"; the term "TIS" was included in error and has been removed. This change does not increase the economic burden on any operator. Accordingly, the FAA is issuing this AD to address the unsafe condition on these helicopters.

Related Service Information

The FAA reviewed AgustaWestland S.p.A. Bollettino Technico No. 109S-58 for Model A109S helicopters, and AgustaWestland S.p.A Bollettino Technico No. 109SP-074 for Model AW109SP helicopters, each dated May 7, 2014. This service information specifies instructions for removing the vertical fin vibration absorber installation, inspecting the rib assembly and vertical fin vibration absorber installation and depending on the inspection results, removing certain parts from service.

Differences Between This AD and the EASA AD

EASA AD 2019-0294 applies to certain serial-numbered Model A109S and AW109SP helicopters, whereas this AD applies to all serial-numbered Model A109S and AW109SP helicopters with a certain part-numbered vertical fin vibration absorber installation installed.

Costs of Compliance

The FAA estimates that this AD affects 96 helicopters of U.S. Registry and that operators may incur the following costs in order to comply with this AD. Labor costs are estimated at $85 per work-hour.

Removing and inspecting the vertical fin vibration absorber installation and surrounding structure takes about 8 work-hours for an estimated cost of $680 per helicopter per inspection cycle and $65,280 for the U.S. fleet per inspection cycle.

Replacing the rib assembly, shim, doubler, and bracket will take about 16 work-hours and parts will cost about $10,000 for an estimated cost of $11,360 per helicopter.

According to Leonardo some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. The FAA does not control warranty coverage by Leonardo. Accordingly, all costs are included in this cost estimate.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on helicopters identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-16-13 Leonardo S.p.a.: Amendment 39-21675; Docket No. FAA-2021-0364; Project Identifier MCAI-2020-00274-R.

(a) Effective Date

This airworthiness directive (AD) is effective September 22, 2021.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Leonardo S.p.a. Model A109S helicopters and AW109SP helicopters, certificated in any category, with vertical fin vibration absorber installation part number (P/N) 109-B810-79-101 installed.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 2740, Stabilizer Control System.

(e) Unsafe Condition

This AD defines the unsafe condition as cracks or damage on the vertical fin vibration absorber installation and surrounding structure. This condition could affect the structural integrity of the helicopter and lead to subsequent loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Within 30 hours time-in-service (TIS) after the effective date of this AD, and thereafter at intervals not to exceed 100 hours TIS:

(i) Remove the vertical fin vibration absorber installation P/N 109-B810-79-101, and using a mirror and light source, visually inspect the rib assembly P/N 109-0372-53-201 for hole elongation, fretting, and cracks. If there is any hole elongation, fretting, or cracks, before further flight, remove rib assembly P/N 109-0372-53-201, shim P/N 109-0372-53-211, doubler P/N 109-0372-53-213, and bracket P/N 109-0373-02-113 from service and replace with airworthy parts.

(ii) Inspect the vertical fin vibration absorber installation P/N 109-B810-79-101 for hole elongation; for fretting between the plate and the masses and in-between the masses; for fretting on doubler P/N 109-0372-53-213; and the bolts for scratches and corrosion. If there is any hole elongation; fretting between the plate and the masses or in-between the masses; fretting on doubler

P/N 109-0372-53-213; or bolts with scratches or corrosion, before further flight, remove the vertical fin vibration absorber installation P/N 109-B810-79-101 from service.

(2) Within 12 months after the effective date of this AD unless already accomplished per paragraph (g)(1)(ii) of this AD, remove the vertical fin vibration absorber installation P/N 109-B810-79-101 from service.

(3) As of the effective date of this AD, do not install vertical fin vibration absorber installation P/N 109-B810-79-101 on any helicopter.

(4) Removing the vertical fin vibration absorber installation P/N 109-B810-79-101 from service, as described in paragraphs (g)(1)(ii) or (2) of this AD provides a terminating action for the 100 hour TIS repetitive inspections required by paragraph (g)(1) of this AD.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (i)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

(1) For more information about this AD, contact Kristin Bradley, Aerospace Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email kristin.bradley@faa.gov.

(2) The subject of this AD is addressed in European Union Aviation Safety Agency (EASA) AD 2019-0294, dated December 4, 2019. You may view the EASA AD on the internet at https://www.regulations.gov in Docket No. FAA-2021-0364.

Issued on July 29, 2021.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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