



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-1139; Product Identifier 2018-SW-056-AD; Amendment 39-21447; AD 2021-05-04]

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 certain serial-numbered Leonardo S.p.a. (Leonardo) Model A109S and AW109SP helicopters. This AD requires installing a placard in the baggage compartment, revising the existing Rotorcraft Flight Manual (RFM) for your helicopter, and inspecting the installation of the terminal lugs. Depending on the outcome of the inspection, this AD requires restoring the installation of the terminal lugs. This AD would also require modifying the helicopter to shim the baggage fairing assy (fwd up) away from the circuit breaker panel and incorporating protective coverings. This AD was prompted by reports of several occurrences of fire ignition and smoke in the baggage compartment. The actions of this AD are intended to address an unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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 this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1139.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1139; 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 AD, the European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD, any service information that is incorporated by reference, 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:

Discussion

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 helicopters, serial number (S/N) 22702, 22703, 22705, and 22706 and AW109SP helicopters with S/N up to

22386 inclusive, except S/N 22375 and S/N 22376. The NPRM published in the *Federal Register* on December 21, 2020 (85 FR 82972). The NPRM proposed to require, before further flight, for certain serial-numbered helicopters, installing a placard and revising the existing RFM for your helicopter. The NPRM also proposed to require within 5 hours time-in-service (TIS), for certain model helicopters, inspecting the installation of the terminal lugs, shimming the installation of the baggage fairing assembly (fwd up), and installing a silicon rubber protection over the blind rivets of the hinge in accordance with certain applicable service information. The NPRM also proposed to require within 10 hours TIS and thereafter at intervals not to exceed 25 hours TIS until protective coverings are installed, removing the baggage fairing assembly (fwd up), removing the rubber protections, and inspecting the cable assembly routing of both circuit breaker panels for damage. Depending on the outcome of these inspections, the NPRM proposed to require repairing or replacing certain parts. The NPRM also proposed to require, within 200 hours TIS, modifying the helicopter to incorporate a certain protective coverings, which would provide a terminating action for the repetitive inspections. The proposed requirements were intended to prevent fire in the baggage department.

The NPRM was prompted by EASA Emergency AD No. 2018-0120-E, dated May 29, 2018 (EASA AD 2018-0120-E), issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Leonardo S.p.a. (formerly Finmeccanica S.p.A., AgustaWestland S.p.A., Agusta S.p.A.) Model A109S and AW109SP helicopters. EASA advises that an occurrence was reported on an AW109SP helicopter experiencing fire ignition and smoke in the baggage compartment. The investigation determined the event was due to chafing of electrical wiring and further analysis indicated that due to similarity of design, this event could also occur on A109S helicopters. Accordingly, the EASA AD requires modification of the affected baggage fairing assembly (fwd up) part number (P/N) 109-0344-31-101 and

temporarily amending the existing RFM and installing a placard prohibiting carrying any loads in the baggage compartment.

After EASA AD 2018-0120-E was issued, a second occurrence was reported of fire ignition and smoke in the baggage compartment, and as a precautionary measure, Leonardo Helicopters issued a series of emergency alert service bulletins providing instructions to prevent damage of electrical assemblies in the baggage compartment. Accordingly, EASA issued EASA Emergency No. 2018-0149-E, dated July 13, 2018 (EASA AD 2018-0149-E), which retains the requirements of EASA AD 2018-0120-E, and also requires repetitive inspections of the baggage compartment electrical assemblies and depending on the inspection outcomes, repairing or replacing certain parts. Also, EASA AD 2018-0149-E expands the applicability to include three additional serial-numbered helicopters, and requires a modification, which acts as a terminating action for the repetitive inspections.

Comments

The FAA gave the public the opportunity to participate in developing this final rule, but the agency did not receive any comments on the NPRM or on the determination of the cost to the public.

Conclusion

The FAA reviewed the relevant data and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes.

The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

FAA's Determination

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 of the unsafe condition described in its AD. The FAA is issuing this AD after evaluating all of the information provided by EASA and determining the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed.

Differences Between this AD and the EASA AD

The EASA AD uses compliance times in terms of calendar dates, whereas this AD uses compliance times terms of in hours TIS.

Related Service Information Under 1 CFR part 51

The FAA has reviewed Leonardo Helicopters Emergency Alert Service Bulletin (EASB) No. 109S-079, and Leonardo Helicopters EASB No. 109SP-120, each Revision A, and each dated June 4, 2018. This service information specifies instructions for manufacturing a placard for the baggage compartment door and also specifies instructions for modifying and inserting a specific cutout into the existing RFM. This service information also specifies instructions for removing the baggage fairing assembly (fwd up) and the rubber protections, inspecting the cable assemblies routing of both circuit breaker panels, and inspecting the installation of the terminal lugs.

The FAA also reviewed Leonardo Helicopters EASB No. 109SP-122, and Leonardo Helicopters EASB No. 109S-081, each dated July 5, 2018, which specify procedures for modifying the helicopter by incorporating protective coverings.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 15 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates that operators may incur the following costs in order to comply with this AD.

Installing a placard and revising the existing RFM for your helicopter takes about 1 work-hour for an estimated cost of \$85 per helicopter and \$1275 for the U.S. fleet.

Inspecting the installation of the terminal lugs, shimming the baggage fairing assembly (fwd up), and installing a silicon rubber protection over the blind rivets takes about 3 work-hours for an estimated cost of \$255 per helicopter.

Removing the baggage fairing assembly (fwd up), removing the rubber protections, and performing a repetitive inspection of the cable assemblies of both circuit breaker panels for damage takes about 2 work-hours for an estimated cost of \$170 per helicopter per inspection cycle and \$2,550 for the U.S. fleet per inspection cycle.

Repairing a cable assembly takes about 4 work-hours and parts would cost about \$340 for an estimated cost of \$680 per repair.

Modifying the helicopter by installing protective coverings takes about 4 work-hours and parts would cost about \$20 for an estimated cost of \$360 per helicopter and \$5,400 for the U.S. fleet.

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.

Adoption of 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:

2021-05-04 Leonardo S.p.a.: Amendment 39-21447; Docket No. FAA-2020-1139;
Product Identifier 2018-SW-056-AD.

(a) Applicability

This airworthiness directive (AD) applies to Leonardo S.p.a. Model A109S helicopters, serial number (S/N) 22702, 22703, 22705, and 22706 and AW109SP helicopters with S/N up to 22386 inclusive, except S/N 22375 and S/N 22376, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as chafing of electrical wiring. This condition could result in fire ignition and smoke in the baggage compartment and subsequent loss of control of the helicopter.

(c) Effective Date

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(d) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(e) Required Actions

(1) For all helicopters, except Model A109S having S/N 22705 or S/N 22706 and Model AW109SP having S/N 22384, before further flight:

(i) Install a placard with the information in Figure 5 of Leonardo Helicopters Emergency Alert Service Bulletin (EASB) No. 109S-079 (EASB 109S-079), or Leonardo Helicopters EASB No. 109SP-120 (EASB 109SP-120), each Revision A, and each dated June 4, 2018, as applicable to your helicopter model, in the baggage compartment on the internal side of the baggage door D8.

(ii) Revise the existing Rotorcraft Flight Manual (RFM) for your helicopter by cutting along the dashed line of Figure 6 of EASB 109S-079 or EASB 109SP-120, as

applicable to your model helicopter, and inserting the cutout to replace page 1-28 or 1-3, as applicable to your model helicopter, of the existing RFM for your helicopter.

(2) For all helicopters, except Model A109S having S/N 22705 or S/N 22706 and Model AW109SP having S/N 22384, within 5 hours time-in-service (TIS):

(i) Visually inspect the installation of the terminal lugs to determine whether the installation is consistent with Figure 2 of EASB 109SP-120 or EASB 109S-079, as applicable to your model helicopter. If the installation is not consistent with Figure 2 of EASB 109SP-120 or EASB 109S-079, as applicable to your model helicopter, restore the installation to be consistent with Figure 2 of EASB 109SP-120 or EASB 109S-079, as applicable to your model helicopter.

(ii) Shim the installation of the baggage fairing assembly (fwd up) part number (P/N) 109-0344-31-101 to move it away from the circuit breaker panel, and install a silicon rubber protection over the blind rivets of the hinge in accordance with the Accomplishment Instructions, Part II, steps 3 through 8 of EASB 109S-079 or EASB 109SP-120, as applicable to your model helicopter.

(3) Performing the steps as described in paragraph (e)(2) of this AD allows the RFM revision described in paragraph (e)(1) of this AD to be removed from the existing RFM for your helicopter and the placard described in paragraph (e)(1) of this AD to be removed from the helicopter.

(4) For all helicopters, within 10 hours TIS and thereafter at intervals not to exceed 25 hours TIS, remove the baggage fairing assembly (fwd up) P/N 109-0344-31-101, remove the rubber protections P/N 109-0746-52-105 and P/N 109-0746-52-107, and inspect the cable assemblies routing of both circuit breaker panels for damage. For the purposes of this inspection, damage may be indicated by chafing. If there is any damage, repair or replace the cables in accordance with FAA accepted procedures and protect the cables by installing Nomex sleeve P/N EN6049-006.

(5) For all helicopters, within 200 hours TIS, modify the helicopter's baggage compartment by adding the protective coverings in accordance with the Accomplishment Instructions, Part II, steps 3 through 14 of Leonardo Helicopters EASB No. 109SP-122, dated July 5, 2018, or Leonardo Helicopters EASB No. 109S-081, dated July 5, 2018, as applicable to your model helicopter. Completion of this modification is a terminating action for the 25 hour TIS repetitive inspections of paragraph (e)(4) of this AD.

(f) 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: Kristin Bradley, Aerospace Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email 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.

(g) Additional Information

The subject of this AD is addressed in European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD No. 2018-0149-E, dated July 13, 2018. You may view the EASA AD on the internet at <https://www.regulations.gov> in Docket No. FAA-2020-1139.

(h) Subject

Joint Aircraft Service Component (JASC) Code: 5397, Fuselage Wiring, Baggage Fairings Modification.

(i) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Leonardo Helicopters Emergency Alert Service Bulletin (EASB) No. 109S-079, Revision A, dated June 4, 2018.

(ii) Leonardo Helicopters EASB 109SP-120, Revision A, dated June 4, 2018.

(iii) Leonardo Helicopters EASB No. 109SP-122, dated July 5, 2018.

(iv) Leonardo Helicopters EASB No. 109S-081, dated July 5, 2018.

(3) For service information identified in this AD, 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>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on February 17, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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