



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0373; Project Identifier MCAI-2020-01352-R]

RIN 2120-AA64

Airworthiness Directives; Leonardo S.p.a. Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2020-19-11 for certain Leonardo S.p.a. Model A119 and AW119 MKII helicopters. AD 2020-19-11 requires repetitive borescope inspections of the 90-degree tail rotor gearbox (TGB) and depending on the inspection results, removing the TGB from service. Since the FAA issued AD 2020-19-11, it was determined that additional parts may be susceptible to the unsafe condition. This proposed AD would retain the inspection requirements of AD 2020-19-11, and revise the compliance time and applicability. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.

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

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, 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 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.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0373; 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 NPRM, the European Union Aviation Safety Agency (EASA) AD, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Rao Edupuganti, Aerospace Engineer, Dynamic Systems Section, Technical Innovation Policy Branch, FAA, 10101

Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email

rao.edupuganti@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0373; Project Identifier MCAI-2020-01352-R” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Rao Edupuganti,

Aerospace Engineer, Dynamic Systems Section, Technical Innovation Policy Branch, telephone (817) 222-5110; email rao.edupuganti@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA issued AD 2020-19-11, Amendment 39-21254 (85 FR 59404, September 22, 2020) (AD 2020-19-11) for Leonardo Model A119 and AW119 MKII helicopters with TGB part number (P/N) 109-0440-06-101 or P/N 109-0440-06-105 having serial number (S/N) 167, 169 through 172 inclusive, 215 through 225 inclusive, 227, 230, 232, 233, AW268, K3, K16, M47, or L29, installed. AD 2020-19-11 requires within 25 hours time-in-service (TIS) or 3 months, whichever occurs first, and thereafter at intervals not to exceed 100 hours TIS or 6 months, whichever occurs first, borescope inspecting the internal surface of the TGB output shaft for corrosion and depending on the inspection results, removing the TGB from service before further flight.

AD 2020-19-11 was prompted by EASA AD 2018-0156, dated July 24, 2018 (EASA AD 2018-0156), issued by the EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Leonardo S.p.a. Helicopters (formerly Finmeccanica S.p.A., AgustaWestland S.p.A., Agusta S.p.A.; and AgustaWestland Philadelphia Corporation, formerly Agusta Aerospace Corporation) Model A119 and AW119MKII helicopters with TGB P/N 109-0440-06-101 or P/N 109-0440-06-105 having serial number 167, 169 through 172 inclusive, 215 through 225 inclusive, 227, 230, 232, 233, AW268, K3, K16, M47, or L29, installed. EASA AD 2018-0156 advised of two reported occurrences of corrosion on the internal surface of the TGB shaft installed on Model A119 helicopters. Further analysis identified a specific batch of parts that may be susceptible to similar conditions. Due to design similarity

Model AW119MKII helicopters are also affected. This condition, if not addressed, could result in failure of the tail rotor, possibly resulting in reduced control of the helicopter.

Accordingly, the EASA AD required performing repetitive endoscope inspections on the internal surface of the TGB output shaft for corrosion and depending on the findings, replacing the TGB. EASA considered its AD an interim action and stated that further AD action may follow.

Actions Since AD 2020-19-11 Was Issued

Since the FAA issued AD 2020-19-11, EASA issued EASA AD 2020-0206, dated September 30, 2020 (EASA AD 2020-0206), which supersedes EASA AD 2018-0156. EASA advises that additional parts may be susceptible to similar occurrences and some TGB shafts could have been reinstalled on a TGB other than the one on which they were initially installed. Accordingly, EASA AD 2020-0206 retains the inspection requirements of EASA AD 2018-0156 for certain part numbered TGB shafts and revises the definition of an affected part by adding certain serial-numbered TGB shafts.

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 about the unsafe condition described in its AD. The FAA is proposing this AD after evaluating all known relevant information and determining that the unsafe condition described previously is likely to exist or develop on other products of the same type designs.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Leonardo Helicopters Alert Service Bulletin (ASB) No. 119-090, Revision A, dated September 14, 2020. This service information specifies procedures for conducting an endoscope inspection of the internal surface of the TGB output shaft for corrosion. This service information also specifies replacing the TGB if

corrosion is found.

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.

Proposed AD Requirements in this NPRM

This proposed AD would retain certain requirements of AD 2020-19-11. This proposed AD would revise the compliance time for the repetitive inspections from intervals not to exceed 100 hours TIS or 6 months to only intervals not to exceed 6 months. This proposed AD would also revise the applicability paragraph by adding certain serial-numbered TGB shafts.

Differences Between this Proposed AD and the EASA AD

The EASA AD uses flight hours to describe one compliance time, whereas this proposed AD would use hours TIS. The EASA AD requires using an endoscope for inspection, whereas this proposed AD would require inspecting with a borescope. The EASA AD defines the affected part as the 90-degree TGB shaft installed on TGB P/N 109-0440-06-01-101, whereas the applicability paragraph of this proposed AD would include TGB P/N 109-0440-06-101 instead.

Interim Action

The FAA considers this proposed AD an interim action.

Costs of Compliance

The FAA estimates that this proposed AD would affect 134 helicopters of U.S. Registry. The FAA estimates that operators may incur the following costs in order to comply with this proposed AD. Labor costs are estimated at \$85 per work-hour.

Borescope inspecting the TGB output shaft would take about 3 work-hours for an estimated cost of \$255 per helicopter and \$34,170 for the U.S. fleet per inspection cycle.

Replacing a TGB would take about 18 work-hours and parts would cost about \$49,000 (overhauled TGB) for an estimated cost of \$50,530 per helicopter.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected operators.

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 products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and

(3) Would 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 Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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:

a. Removing Airworthiness Directive (AD) 2020-19-11, Amendment 39-21254 (85 FR 59404, September 22, 2020); and

b. Adding the following new AD:

Leonardo S.p.a: Docket No. FAA-2021-0373; Project Identifier MCAI-2020-01352-R.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2020-19-11, Amendment 39-21254 (85 FR 59404, September 22, 2020); (AD 2020-19-11).

(c) Applicability

This AD applies to Leonardo S.p.a. Model A119 and AW119 MKII helicopters, certificated in any category, with 90-degree tail rotor gearbox (TGB) part number (P/N)

109-0440-06-101 or 109-0440-06-105, and with TGB shaft P/N 109-0443-03-107 having a serial number (S/N) listed in Table 1 of Leonardo Helicopters Alert Service Bulletin No. 119-090, Revision A, dated September 14, 2020 (ASB 119-090), installed.

Note 1 to paragraph (c): A TGB shaft is also referred to as a mast gear assembly.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6510, Tail Rotor Drive Shaft.

(e) Unsafe Condition

This AD was prompted by two occurrences of corrosion on the internal surface of the TGB shaft. The FAA is issuing this AD to detect corrosion of the TGB shaft. The unsafe condition, if not addressed, could result in failure of the tail rotor, possibly resulting in reduced control of the helicopter.

(f) Compliance

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

(g) Required Actions

(1) Within 25 hours time-in-service (TIS) or 3 months, whichever occurs first after the effective date of this AD, and thereafter at intervals not to exceed 6 months, borescope inspect the entire internal surface of the TGB shaft for corrosion. Refer to Detail A of Figure 1 of ASB 119-090, for a depiction of the entry point for the borescope. If there is corrosion, before further flight, remove the TGB from service.

(2) As of the effective date of this AD, do not install on any helicopter any TGB P/N 109-0440-06-101 or 109-0440-06-105 that has TGB shaft P/N 109-0443-03-107 having an S/N listed in Table 1 of ASB 119-090, unless the actions required by paragraph (g)(1) of this AD have been accomplished.

(h) Special Flight Permits

A special flight permit may be permitted provided that there are no passengers onboard.

(i) 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 (j)(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.

(j) Related Information

(1) For more information about this AD, contact Rao Edupuganti, Aerospace Engineer, Dynamic Systems Section, Technical Innovation Policy Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email rao.edupuganti@faa.gov.

(2) 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>. 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. For information on the availability of this material at the FAA, call (817) 222-5110.

(3) The subject of this AD is addressed in European Union Aviation Safety Agency (EASA) AD 2020-0206, dated September 30, 2020. You may view the EASA AD on the Internet at <https://www.regulations.gov> in the AD Docket.

Issued on May 15, 2021.

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

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