



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2024-2425; Project Identifier MCAI-2023-00967-R; Amendment 39-23009; AD 2025-07-07]

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 all Leonardo S.p.a. Model A109C, A109E, A109S, and AW109SP helicopters. This AD was prompted by a report of a quality escape on a batch of main rotor blades (MRBs). This AD requires repetitively tap inspecting certain MRBs and replacing those MRBs. This AD also prohibits installing those MRBs, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the 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 a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **ADDRESSES:**

*AD Docket:* You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-2425; 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 mandatory continuing airworthiness information (MCAI), any comments received, and other information. The 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.

*Material Incorporated by Reference:*

- For EASA material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: ADs@easa.europa.eu; website: easa.europa.eu. You may find this material on the EASA website at ad.easa.europa.eu.

- You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Parkway, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at regulations.gov under Docket No. FAA-2024-2425.

**FOR FURTHER INFORMATION CONTACT:** Frank Huynh, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (404) 983-5288; email: frank.huynh@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 all Leonardo S.p.a. Model A109C, A109E, A109S, and AW109SP helicopters. The NPRM published in the *Federal Register* on November 19, 2024 (89 FR 91291). The NPRM was prompted by AD 2023-0159, dated August 10, 2023, issued by EASA, which is the Technical Agent for the Member States of the European Union (EASA AD 2023-0159) (also referred to as the MCAI). The MCAI states that a report was received of a quality escape on a batch of MRBs, where the tip cap had been replaced by following a procedure and using tools not in accordance with Leonardo Technical Publications.

In the NPRM, the FAA proposed to require repetitively tap inspecting certain MRBs and replacing those MRBs. The NPRM also proposed to prohibit installing those MRBs. The FAA is issuing this AD to prevent premature debonding of an MRB tip cap, which could lead to the loss of the MRB tip cap in flight, possibly resulting in loss of control of, and damage to, the helicopter, and injury to occupants.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2024-2425.

## **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received three comments from an anonymous commenter. The following presents the comments received on the NPRM and the FAA's response to each comment.

### **Request to Allow Special Flight Permits**

The commenter stated that there may be scenarios where a special flight permit could be warranted (e.g., ferrying a helicopter to a maintenance facility under controlled conditions). The commenter recommended the FAA consider outlining limited circumstances under which such permits may be granted.

The FAA agrees with the commenter's request and paragraph (j) of this AD was revised to allow a special flight permit to operate the helicopter to a location where the MRB replacement can be performed, provided no passengers are onboard.

### **Request to Mitigate the Costs of the AD**

The commenter stated that the proposed AD may impose significant costs on operators, particularly given the high replacement costs of \$111,558 per MRB, and suggested that the FAA explore possible cost mitigation strategies such as engaging with Leonardo S.p.a. to offset replacement costs or providing further guidance on identifying at-risk MRBs to minimize unnecessary replacements due to the high cost of replacing an MRB.

The FAA infers that the commenter is requesting the FAA require the manufacturer to share the cost of replacing an MRB as required by the AD. The FAA, as a federal agency, is responsible for all directives, policies, and mandates issued under its authority. The FAA does not have the authority to require a manufacturer to bear AD costs incurred in privately-owned aircraft. The general obligation of the operator to maintain its aircraft in an airworthy condition is vital, but sometimes expensive. If the manufacturer determines it will cover the cost of implementing a particular action, then the manufacturer does so voluntarily. Regarding the comment for the FAA to provide

further guidance on identifying at-risk MRBs, the proposed AD references EASA AD 2023-0159 for compliance. EASA AD 2023-0159 defines the “affected part” as an MRB assembly having part number 709-0103-01-111 or 709-0104-01-111 and, narrows down that definition to 19 particular MRB serial numbers (with or without the letter “M” after the serial number) and excludes those that have been repaired in accordance with certain procedures in the material referenced within. For an MRB with a specified part number and serial number, records may be reviewed to determine if the MRB is exempted by previous repair. The FAA has made no changes to this final rule based on this comment.

### **Request for Clarification of the Compliance Times**

The commenter stated that the proposed AD does not specify precise compliance intervals for the tap inspections. The anonymous commenter also stated that the EASA AD suggests intervals based on flight hours and stated that it would be helpful for the FAA to clarify these timelines.

The FAA infers that the commenter requested clarification of the compliance time intervals for the tap inspections. As required by paragraph (g) of the proposed AD, the FAA requires compliance with EASA AD 2023-0159 in its entirety through incorporation by reference, except for any differences identified as exceptions in the regulatory text of the proposed AD. The intervals specified in EASA AD 2023-0159 for the tap inspections are not suggested, they are required. EASA AD 2023-0159 states the compliance time for the tap inspection of the MRB tip caps is within 25 flight hours (FH) of the MCAI and thereafter at intervals not to exceed 25 FH. In the NPRM, the FAA proposed the exception that where EASA AD 2023-0159 requires compliance in terms of FH, the AD would require using hours time-in-service (TIS) instead. Also, in the NPRM, the FAA proposed the exception that where EASA AD 2023-0159 uses its effective date, the AD would require using its effective date. Accordingly, the compliance time for the repetitive inspections is within 25 hours TIS of the effective date of this AD, and thereafter at intervals not to exceed 25 hours TIS. The FAA has made no changes to this final rule based on this comment.

### **Conclusion**

These products have been approved by the aviation authority of another country

and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes increase the economic burden on any operator.

### **Material Incorporated by Reference under 1 CFR Part 51**

The FAA reviewed EASA AD 2023-0159, which specifies repetitively tap inspecting certain part-numbered and serial-numbered MRBs for deficiency (debonding) of the tip cap, and depending on the results, replacing the MRB. For affected MRBs that are not replaced as a result of a tap inspection, EASA AD 2023-0159 specifies replacing those MRBs within a longer compliance time. EASA AD 2023-0159 also prohibits installing those MRBs on any helicopter.

This material 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 19 helicopters of U.S. registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Tap inspecting the MRBs (up to four affected MRBs per helicopter) takes up to 1 work-hour for an estimated cost of up to \$85 per helicopter and \$1,615 for the U.S. fleet, per inspection cycle. Replacing an MRB takes 4 work-hours and parts will cost \$111,218 for an estimated cost of \$111,558 per MRB.

### **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**

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:

**2025-07-07 Leonardo S.p.a.:** Amendment 39-23009; Docket No. FAA-2024-2425;  
Project Identifier MCAI-2023-00967-R.

**(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Leonardo S.p.a. Model A109C, A109E, A109S, and AW109SP helicopters, certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 6210, Main Rotor Blades.

**(e) Unsafe Condition**

This AD was prompted by a report of a quality escape on a batch of main rotor blades (MRBs). The FAA is issuing this AD to detect and address non-conforming MRB tip caps. The unsafe condition, if not addressed, could result in premature debonding of an MRB tip cap, loss of the MRB tip cap in flight, and subsequent loss of control of, and damage to, the helicopter, and injury to occupants.

**(f) Compliance**

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

**(g) Requirements**

Except as specified in paragraphs (h) and (i) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency AD 2023-0159, dated August 10, 2023 (EASA AD 2023-0159).

**(h) Exceptions to EASA AD 2023-0159**

(1) Where EASA AD 2023-0159 requires compliance in terms of flight hours, this AD requires using hours time-in-service.

(2) Where EASA AD 2023-0159 refers to its effective date, this AD requires using the effective date of this AD.

(3) Where the note in the material referenced in paragraph (1) of EASA AD 2023-

0159 specifies that the hammer tapping inspection must be performed only by appropriate qualified personnel in accordance with the national aviation regulation; for this AD, the tap test must be accomplished by persons authorized under 14 CFR 43.3. These inspections must be performed by at least a Level I inspector certified in the FAA-acceptable standards for nondestructive inspection personnel.

(4) Where paragraph (2) of EASA AD 2023-0159 states “any deficiency;” this AD requires replacing that text with “any debonding.”

(5) Where paragraph (2) of EASA AD 2023-0159 states “replace that affected part with a serviceable part in accordance with the instructions of Part II of the ASB;” this AD requires replacing that text with “replace that affected part, as defined in EASA AD 2023-0159, with a serviceable part, as defined in EASA AD 2023-0159.”

(6) Where paragraph (3) of EASA AD 2023-0159 states “replace each affected part with a serviceable part in accordance with the instructions of Part II of the ASB;” this AD requires replacing that text with “replace each affected part, as defined in EASA AD 2023-0159, with a serviceable part, as defined in EASA AD 2023-0159.”

(7) This AD does not adopt the “Remarks” section of EASA AD 2023-0159.

**(i) No Reporting Requirement**

Although the material referenced in EASA AD 2023-0159 specifies to submit certain information to the manufacturer, this AD does not require that action.

**(j) Special Flight Permits**

Special flight permits may be issued in accordance with 14 CFR 21.197 and 21.199 to operate the helicopter to a location where the MRB replacement can be performed, provided no passengers are onboard.

**(k) 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 responsible Flight Standards 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 (l) of this AD and email to: [AMOC@faa.gov](mailto:AMOC@faa.gov).

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

**(l) Additional Information**

For more information about this AD, contact Frank Huynh, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (404) 983-5288; email: Frank.Huynh@faa.gov.

**(m) Material Incorporated by Reference**

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

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

(i) European Union Aviation Safety Agency (EASA) AD 2023-0159, dated August 10, 2023.

(ii) [Reserved]

(3) For EASA material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: ADs@easa.europa.eu; website: easa.europa.eu. You may find this material on the EASA website at ad.easa.europa.eu.

(4) You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Parkway, 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 material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit [www.archives.gov/federal-register/cfr/ibr-locations](http://www.archives.gov/federal-register/cfr/ibr-locations) or email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov).

Issued on April 1, 2025.

Steven W. Thompson,  
Acting Deputy Director, Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2025-06711 Filed: 4/17/2025 8:45 am; Publication Date: 4/18/2025]