



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2017-1077; Project Identifier 2016-SW-070-AD; Amendment 39-21493; AD 2021-07-16]

RIN 2120-AA64

#### Airworthiness Directives; Leonardo S.p.a. Helicopters

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Leonardo S.p.a. Model AB412 helicopters. This AD was prompted by a cracked spiral bevel gear. This AD requires a one-time visual inspection and a recurring fluorescent magnetic particle inspection (FMPI) of affected spiral bevel gears for a crack, and depending on the inspection results, removing the spiral bevel gear from service. This AD also prohibits installing an affected spiral bevel gear unless it has recently passed an FMPI. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain document listed in this AD as of [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The FAA must receive comments on this 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 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 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. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2017-1077.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2017-1077; 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 Aviation Safety Agency (now 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, Policy & Innovation Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone

(817) 222-5110; email rao.edupuganti@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Background**

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2016-0166-E, dated August 12, 2016 and corrected October 4, 2017 (EASA AD 2016-0166-E), to correct an unsafe condition for Leonardo S.p.A. (formerly AgustaWestland S.p.A., Agusta S.p.A., Costruzioni Aeronautiche Giovanni Agusta) Model AB204B, AB205A1, and AB212 helicopters, all serial numbers (S/Ns), and AB412 helicopters all S/Ns up to S/N 25669 inclusive. EASA advises that a crack was found in a spiral bevel gear part number (P/N) 204-040-701-103 during a scheduled inspection of a main rotor (M/R) transmission P/N 212-040-001-59. The initial investigation determined that the crack originated from the bottom of one of the 32 threaded holes. EASA further advises that other spiral bevel gears manufactured with the same process as the defective one could be affected by the same issue. This condition, if not addressed, could lead to failure of the M/R transmission and possible loss of control of the helicopter.

Accordingly, EASA AD 2016-0166-E requires a one-time visual inspection and a recurring FMPI of certain serial-numbered spiral bevel gears P/N 204-040-701-103 for a crack, and if there is a crack, replacing the spiral bevel gear or the M/R transmission. EASA AD 2016-0166-E also prohibits installing an affected spiral bevel gear unless it is a serviceable part. EASA considers its AD an interim action and states that further AD action may follow.

### **FAA's Determination**

This model helicopter has been approved by EASA and is 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

issuing this AD after evaluating all known relevant information and determining that the unsafe condition described previously is likely to exist or develop on other helicopters of the same type design.

### **Related Service Information Under 1 CFR Part 51**

The FAA reviewed Finmeccanica Helicopter Division (FHD) Alert Bollettino Tecnico No. 412-146, Revision A, dated July 7, 2016. This service information specifies procedures for a one-time visual inspection of the spiral bevel gear by marking one tooth of the spiral bevel gear with white chalk (or equivalent), and with the aid of a light source, rotating the tail rotor blades, and visually inspecting the teeth of the spiral bevel gear for a crack. This service information also specifies procedures for a recurring FMPI of the spiral bevel gear for a crack. If there is a crack, this service information specifies removing the spiral bevel gear from service and reporting findings to FHD Product Support Engineering.

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.

### **AD Requirements**

This AD requires a one-time visual inspection and a recurring FMPI of certain serial-numbered spiral bevel gears P/N 204-040-701-103 for a crack, and if there is a crack, removing the spiral bevel gear from service. This AD also prohibits installing an affected spiral bevel gear unless it has previously passed an FMPI within less than 300 hours time-in-service.

### **Differences Between this AD and the EASA AD**

EASA AD 2016-0166-E applies to Model AB204B, AB205A1, and AB212 helicopters, whereas this AD does not because those model helicopters are not FAA type-certificated. EASA AD 2016-0166-E applies to certain serial-numbered helicopters,

whereas this AD applies to certain serial-numbered helicopters with certain serial-numbered spiral bevel gears P/N 204-040-701-103 installed instead. EASA AD 2016-0166-E also includes a compliance time of before the spiral bevel gear accumulates 1,200 flight hours since first installation on a helicopter, whereas this AD does not.

### **Interim Action**

The FAA considers this AD to be an interim action. If final action is later identified, the FAA might consider further rulemaking then.

### **Justification for Immediate Adoption and Determination of the Effective Date**

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C. 551 *et seq.*) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for “good cause,” finds that those procedures are “impracticable, unnecessary, or contrary to the public interest.” Under this section, an agency, upon finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause. There are no helicopters with this type certificate on the U.S. Registry. Accordingly, notice and opportunity for prior public comment are unnecessary, pursuant to 5 U.S.C. 553(b)(3)(B).

In addition, for the foregoing reason(s), the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days.

### **Comments Invited**

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2017-1077; Project Identifier 2016-SW-070-AD” at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, 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 final rule 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 final rule.

### **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 AD 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 AD, 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 AD. Submissions containing CBI should be sent to Rao Edupuganti, Aerospace Engineer, Dynamic Systems Section, Technical Innovation Policy Branch, Policy & Innovation Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email [rao.edupuganti@faa.gov](mailto: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.

### **Regulatory Flexibility Act**

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and

comment. Because the FAA has determined that it has good cause to adopt this rule without prior notice and comment, RFA analysis is not required.

### **Costs of Compliance**

There are no costs of compliance with this AD because there are no helicopters with this type certificate on the U.S. Registry.

### **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, I certify that this AD:

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

### **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:

2021-07-16 **Leonardo S.p.a.:** Amendment 39-21493; Docket No. FAA-2017-1077; Project Identifier 2016-SW-070-AD.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to Leonardo S.p.a. Model AB412 helicopters, certificated in any category, with a serial number up to 25669 inclusive, with a spiral bevel gear part number 204-040-701-103 with a serial number identified in Table 1 of Finmeccanica Helicopter Division Alert Bollettino Tecnico No. 412-146, Revision A, dated July 7, 2016 (Alert BT 412-146 Rev A).

#### **(d) Subject**

Joint Aircraft Service Component (JASC) Code: 6300, Main Rotor Drive System.

#### **(e) Unsafe Condition**

This AD was prompted by a cracked spiral bevel gear. The FAA is issuing this AD to prevent failure of the main rotor transmission. The unsafe condition, if not

addressed, could result in 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 10 hours time-in-service (TIS) after the effective date of this AD:

(i) Visually inspect the spiral bevel gear teeth for a crack by following the Accomplishment Instructions, part I, paragraphs 9. and 10., of Alert BT 412-146 Rev A.

(ii) If there is a crack, before further flight, remove the spiral bevel gear from service.

(iii) If there is not a crack, within 100 hours TIS following paragraph (g)(1)(i) of this AD and thereafter at intervals not to exceed 300 hours TIS, fluorescent magnetic particle inspect the spiral bevel gear for a crack by following the Accomplishment Instructions, part II, paragraph 3., of Alert BT 412-146 Rev A. If there is a crack, before further flight, remove the spiral bevel gear from service.

(2) As of the effective date of this AD, do not install a spiral bevel gear that is identified in paragraph (c) of this AD unless the actions required by paragraph (g)(1)(iii) have been previously accomplished within less than 300 hours TIS.

**(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 Rao Edupuganti, Aerospace Engineer, Dynamic Systems Section, Technical Innovation Policy Branch, Policy & Innovation Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email rao.edupuganti@faa.gov.

(2) The subject of this AD is addressed in European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD 2016-0166-E, dated August 12, 2016 and corrected October 4, 2017. You may view the EASA AD on the Internet at <https://www.regulations.gov> in Docket No. FAA-2017-1077.

**(j) 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) Finmeccanica Helicopter Division Alert Bollettino Tecnico No. 412-146, Revision A, dated July 7, 2016.

(ii) [Reserved]

(3) For Finmeccanica Helicopter Division 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](mailto:fedreg.legal@nara.gov), or go to:

<https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on March 25, 2021.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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