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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2018-0720; Product Identifier 2017-SW-012-AD; Amendment 39-19348; AD 2018-16-08]**

**RIN 2120-AA64**

**Airworthiness Directives; Leonardo S.p.A. Helicopters (Type Certificate Previously Held By Finmeccanica S.p.A., AgustaWestland S.p.A)**

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

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

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for Leonardo S.p.A. (Leonardo) Model A109E, A109S, and AW109SP helicopters with an oil cooler fan assembly (fan assembly) installed. This AD requires inspecting each oil cooler system pulley assembly (pulley assembly) bearing and replacing each fan assembly. This AD is prompted by reports of degraded pulley assembly bearings. The actions of this AD are intended to correct an unsafe condition on these products.

**DATES:** This AD becomes effective August 20, 2018.

We must receive comments on this AD by October 2, 2018.

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Docket: Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- Fax: 202-493-2251.
- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.
- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

## **Examining the AD Docket**

You may examine the AD docket on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0720; 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 (EASA) AD, the economic evaluation, any comments received, and other information. The street address for Docket Operations (telephone 800- 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this final rule, contact Leonardo S.p.A. Helicopters, Matteo Ragazzi, Head of Airworthiness, Viale G.Agusta 520, 21017 C.Costa di Samarate (Va) Italy; telephone +39-0331-711756; fax +39-0331-229046; or at <http://www.leonardocompany.com/-/bulletins>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

**FOR FURTHER INFORMATION CONTACT:** Eric Haight, Aviation Safety Engineer, Regulations and Policy Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222 5110; email [eric.haight@faa.gov](mailto:eric.haight@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments prior to it becoming effective. However, we invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that resulted from adopting this AD. The most helpful comments reference a specific portion of the AD, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit them only one time. We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this rulemaking during the comment period. We will consider all the comments we receive and may conduct additional rulemaking based on those comments.

### **Discussion**

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA Emergency AD No. 2017-0046-E, dated March 10, 2017, to correct an unsafe condition for Leonardo (previously Finmeccanica S.p.A, AgustaWestland S.p.A.) Model A109E, A109LUH, A109S, and AW109SP helicopters. EASA advises that during inspections of two AW109SP helicopters, degraded bearings, part number (P/N) 109G6320L01-101, were discovered on the engine and transmission oil cooling system pulley assembly, P/N 109G6320A26-101. EASA further states that because of this condition, both fan assemblies could cease to function, resulting in engine power loss, transmission failure, and loss of control of the helicopter. To correct this unsafe condition, the EASA AD requires a one-time inspection of each pulley assembly bearing and replacing each fan assembly.

### **FAA's Determination**

These helicopters have been approved by the aviation authority of Italy and are approved for operation in the United States. Pursuant to our bilateral agreement with Italy, EASA, its technical

representative, has notified us of the unsafe condition described in the EASA AD. We are issuing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs.

### **Related Service Information**

We reviewed Leonardo Helicopters Emergency Alert Service Bulletin (EASB) No. 109-EP-153 for Model A109E helicopters, EASB No. 109S-075 for Model A109S helicopters, and EASB No. 109SP-112 for Model AW109SP helicopters, all dated March 8, 2017. This service information contains procedures for inspecting each pulley assembly bearing P/N 109G6320L01-101 for grease shield damage or leaking grease and axial and radial play, and freedom of rotation of the bearing. This service information also provides procedures for replacing each fan assembly P/N 109-0455-01-103 with a fan assembly P/N 109-0455-01-101.

### **AD Requirements**

This AD requires, within 5 hours time-in-service (TIS), inspecting with a borescope each bearing P/N 109G6320L01-101 grease shield for a crack, position of the grease shield, and leaking grease. If there is a crack or leaking grease or if the grease shield is out of position, this AD requires replacing each fan assembly with fan assembly P/N 109-0455-01-101 before further flight.

This AD also requires inspecting each bearing for axial and radial play and freedom of rotation. If there is any axial or radial play, rotation resistance, or binding, this AD requires replacing each fan assembly with fan assembly P/N 109-0455-01-101 before further flight. If there is no play, no rotation resistance, and no binding, this AD requires replacing each fan assembly with fan assembly P/N 109-0455-01-101 within 20 hours TIS.

Finally, this AD prohibits installing fan assembly P/N 109-0455-01-103 on any helicopter.

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

The EASA AD applies to Model A109LUH helicopters; this AD does not as this model is a military model and does not have an FAA type certificate.

### **Costs of Compliance**

We estimate that this AD affects 127 helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this AD.

At an average labor rate of \$85 per work-hour, inspecting the bearings will require 1 hour, for a cost per helicopter of \$85. Replacing both fan assemblies will require 8 hours and \$44,800 for parts. Based on these figures, we estimate a total cost of \$45,565 per helicopter and \$5,786,755 for the U.S. fleet to comply with this AD.

According to the Leonardo service information, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage by Leonardo. Accordingly, we have included all costs in our cost estimate.

### **FAA's Justification and Determination of the Effective Date**

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because the previously described unsafe condition can adversely affect the controllability of the helicopter and the initial required corrective action must be accomplished within 5 hours TIS. Therefore, we find good cause that notice and opportunity for prior public comment are impracticable.

In addition, for the reason stated above, we find that good cause exists for making this amendment effective in less than 30 days.

### **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.

We are 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**

We determined that 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;
2. Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and
4. 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.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

### **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 (AD):



**2018-16-08 Leonardo S.p.A. (Type Certificate Previously Held By Finmeccanica S.p.A., AgustaWestland S.p.A.):** Amendment 39-19348; Docket No. FAA-2018-0720; Product Identifier 2017-SW-012-AD.

**(a) Applicability**

This AD applies to Leonardo S.p.A. (Type Certificate previously held by Finmeccanica S.p.A., AgustaWestland S.p.A) Model A109E, A109S, and AW109SP helicopters with an oil cooler fan assembly (fan assembly) part number (P/N) 109-0455-01-103 installed, certificated in any category.

**(b) Unsafe Condition**

This AD defines the unsafe condition as failure of an oil cooler system pulley assembly (pulley assembly) bearing. This condition could lead to failure of a fan assembly, resulting in engine power loss, transmission failure, and loss of control of the helicopter.

**(c) Effective Date**

This AD becomes effective August 20, 2018.

**(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) Within 5 hours time-in-service (TIS), remove the fan belt from each pulley assembly and, using a borescope inspect the grease shield of each bearing P/N 109G6320L01-101 for a crack, leaking grease, and position of the grease shield.

(i) If there is a crack, any leaking grease, or if the grease shield is out of position, before further flight, replace each fan assembly P/N 109-0455-01-103 on both sides of the helicopter with a fan assembly P/N 109-0455-01-101.

(ii) If there are no cracks, no leaking grease, and the grease shield is correctly positioned, inspect each bearing P/N 109G6320L01-101 for axial and radial play and freedom of rotation.

(A) If there is any axial or radial play, rotation resistance, or binding, before further flight, replace each fan assembly P/N 109-0455-01-103 on both sides of the helicopter with a fan assembly P/N 109-0455-01-101.

(B) If there is no play, no rotation resistance, and no binding, within 20 hours TIS, replace each fan assembly P/N 109-0455-01-103 on both sides of the helicopter with a fan assembly P/N 109-0455-01-101.

(2) After the effective date of this AD, do not install a fan assembly P/N 109-0455-01-103 on any helicopter.

**(f) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Safety Management Section, Rotorcraft Standards Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Eric Haight, Aviation Safety Engineer, Regulations and Policy Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222 5110; email 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

**(g) Additional Information**

(1) Leonardo Helicopters Emergency Alert Service Bulletin (EASB) No. 109EP-153, EASB No. 109S-075, and EASB No 109SP-112, all dated March 8, 2017, and which are not incorporated by reference, contain additional information about the subject of this AD. For service information identified in this AD, contact Leonardo S.p.A. Helicopters, Matteo Ragazzi, Head of Airworthiness, Viale G.Agusta 520, 21017 C.Costa di Samarate (Va) Italy; telephone +39-0331-711756; fax +39-0331-229046; or at <http://www.leonardocompany.com/-/bulletins>. You may review a copy of the service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

(2) The subject of this AD is addressed in European Aviation Safety Agency (EASA) Emergency AD No. 2017-0046-E, dated March 10, 2017. You may view the EASA AD on the internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2018-0720.

**(h) Subject**

Joint Aircraft Service Component (JASC) Code: 6322 Rotorcraft Cooling Fan System.

Issued in Fort Worth, Texas, on July 26, 2018.

Scott A. Horn,  
Deputy Director for Regulatory Operations, Compliance & Airworthiness Division,  
Aircraft Certification Service.