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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2017-0103; Product Identifier 2016-SW-086-AD; Amendment 39-19207; AD 2018-04-11]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Agusta S.p.A. Helicopters**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for Agusta S.p.A. Model AB139 and Model AW139 helicopters. This AD requires inspecting the thickness of the tail gearbox (TGB) central housing (housing). This AD was prompted by reports that the housing thickness does not conform to its type design. The actions of this AD are intended to detect and correct an unsafe condition on these products.

**DATES:** This AD is effective April 5, 2018.

The Director of the Federal Register approved the incorporation by reference of a certain document listed in this AD as of April 5, 2018.

**ADDRESSES:** For service information identified in this final rule, contact Leonardo S.p.A., 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. It is also available on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0103.

#### **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-2017-0103; 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, any incorporated-by-reference service information, the economic evaluation, any comments received, and other information. The street address for

Docket Operations (phone: 800-647-5527) is U.S. Department of Transportation, Docket Operations Office, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Matt Fuller, Senior Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy, Fort Worth, TX 76177; telephone (817) 222-5110; email matthew.fuller@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

On September 22, 2017, at 82 FR 44363, the Federal Register published our notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 by adding an AD that would apply to Agusta S.p.A. Model AB139 and Model AW139 helicopters. The NPRM proposed to require inspecting the thickness of the TGB housing and replacing the TGB before further flight if the thickness is less than 2.65 mm (0.104 inch). The proposed requirements were intended to prevent a crack in the TGB central housing, which could result in the failure of the tail gear rotor transmission and loss of helicopter control.

The NPRM was prompted by AD No. 2016-0246, dated December 13, 2016, 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. and Agusta S.p.A.) Model AB139 and Model AW139 helicopters.

EASA advises that the thickness of some sections of the housing do not conform to the type design and could lead to premature cracks in the housing, resulting in failure of the tail gear rotor transmission and reduced control of the helicopter. The EASA AD consequently requires a one-time inspection to determine the thickness of the housing wall, and depending on the findings, replacing the housing or TGB assembly with an airworthy part.

The FAA is in the process of updating Agusta S.p.A.'s name change to Leonardo S.p.A. on its FAA type certificate. Because this name change is not yet effective, this AD specifies Agusta S.p.A. as the type certificate holder.

### **Comments**

We gave the public the opportunity to participate in developing this AD, but we received no comments on the NPRM.

### **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 and that air safety and the public interest require adopting the AD requirements as proposed.

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

If a housing has fewer than 7,500 hours TIS, the EASA AD requires a dimensional inspection of the housing wall at a helicopter's first return to a shop or service station for a TGB overhaul or repair after the EASA AD's effective date but no later than 7,500 hours TIS. This AD requires such an inspection only before reaching 7,500 hours TIS.

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

We reviewed Leonardo Helicopters Bollettino Tecnico No. 139-274, dated September 14, 2016 (BT 139-274), which specifies procedures for a dimensional check of the housing or TGB to determine the thickness of the housing wall. For housings with fewer than 7,500 flight hours, BT 139-274 specifies compliance with the dimensional check by measurement during the next repair or overhaul, and replacing the housing if it does not meet its thickness requirement. For housings with 7,500 or more flight hours, BT 139-274 specifies compliance with the dimensional check by ultrasonic inspection within 300 flight hours, and replacing the TGB if it does not meet its thickness requirement. BT 139-274 excludes certain serial-numbered housings from the applicability because they were inspected before delivery to customers.

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**

We estimate that this AD affects 103 helicopters of U.S. Registry and that labor costs average \$85 per work-hour. Based on these estimates, we expect the following costs:

- Measuring the thickness of the housing requires .5 work-hour, and no parts are needed for a total cost of \$43 per helicopter.
- Ultrasonic inspecting the thickness of the housing requires 2 work-hours, and no parts are needed for a total cost of \$170 per helicopter.
- Replacing the TGB housing requires 5 work-hours, and parts cost \$11,185 for a total cost of \$11,610 per helicopter.

## **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 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) 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):



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**2018-04-11 Agusta S.p.A.:** Amendment 39-19207; Docket No. FAA-2017-0103; Product Identifier 2016-SW-086-AD.

**(a) Applicability**

This AD applies to Agusta S.p.A. Model AB139 and Model AW139 helicopters, certificated in any category, with a tail gearbox (TGB) assembly part number (P/N) 3T6522A00239, 3T6522A00242, 3T6522A00243, or 3T6522A00246 that has a central housing P/N 3T6522A05144 or 3T6522A05146, all serial numbers except those listed in Table 1 of Leonardo Helicopters Bollettino Tecnico No. 139-274, dated September 14, 2016.

**(b) Unsafe Condition**

This AD defines the unsafe condition as nonconforming thickness in a section of a TGB central housing, which can lead to a crack in the TGB central housing. This condition could result in the failure of the tail gear rotor transmission and loss of helicopter control.

**(c) Effective Date**

This AD becomes effective April 5, 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) For helicopters with a TGB central housing with less than 7,500 hours time-in-service (TIS), before accumulating 7,500 hours TIS, measure the thickness of the central housing in accordance with the Compliance Instructions, Part I paragraphs 1. and 2., of Leonardo Helicopters Bollettino Tecnico No. 139-274, dated September 14, 2016 (BT 139-274). If the thickness is less than 2.65 mm (0.104 inch), replace the TGB central housing before further flight.

(2) For helicopters with a TGB central housing with 7,500 or more hours TIS, within 300 hours TIS, ultrasonic inspect the TGB in accordance with the Compliance Instructions, Part II paragraphs 4. through 4.5 of BT 139-274. If the thickness is less than 2.65 mm (0.104 inch), replace the TGB before further flight.

(3) After the effective date of this AD, do not install a central housing P/N 3T6522A05144 or 3T6522A05146, all serial numbers except those listed in Table 1 of BT 139-274, on any helicopter unless it has passed inspection in accordance with paragraph (e)(1) of this AD.

**(f) Special Flight Permits**

Special flight permits are prohibited.

**(g) 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: Matt Fuller, Senior Aviation Safety Engineer, Safety Management 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.

**(h) Additional Information**

The subject of this AD is addressed in European Aviation Safety Agency (EASA) AD No. 2016-0246, dated December 13, 2016. You may view the EASA AD on the internet at <http://www.regulations.gov> in Docket No. FAA-2017-0103.

**(i) Subject**

Joint Aircraft Service Component (JASC) Code: 6720, Tail Rotor Control System.

**(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) Leonardo Helicopters Bollettino Tecnico No. 139-274, dated September 14, 2016.

(ii) Reserved.

(3) For Leonardo Helicopters service information identified in this AD, contact Leonardo S.p.A., 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>.

(4) You may view this service information at 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, call (202) 741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Fort Worth, Texas, on February 16, 2018.

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