FAA
Aviation Safety

EMERGENCY AIRWORTHINESS DIRECTIVE

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DATE: November 8, 2018
AD #: 2018-23-52

This Emergency Airworthiness Directive (AD) 2018-23-52 is being sent to owners and operators of Leonardo S.p.A. Model AW169 and AW189 helicopters.

Background

This emergency AD was prompted by an accident of a Model AW169 helicopter. This emergency AD requires inspecting the tail rotor (T/R) servo-actuator feedback lever link, applying a paint stripe or torque seal on a nut, and reporting information. The actions in this emergency AD are intended to prevent failure of a T/R servo-actuator feedback lever link, which could result in loss of T/R control and subsequent loss of control of the helicopter.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD No. 2018-0241-E, dated November 7, 2018, to correct an unsafe condition for Leonardo S.p.A. Model AW169 and AW189 helicopters. EASA advises of an accident of a Model AW169 helicopter that appears to have lost yaw control during its take-off low forward speed phase of flight. The root cause of the accident has not been identified and the investigation is on-going. As a precaution, the EASA AD requires inspecting the T/R servo-actuator for correct installation on Model AW169 and Model AW189 helicopters. EASA has included Model AW189 helicopters due to design similarity. If there is any damage or other finding from this inspection, the EASA AD requires contacting Leonardo Helicopters. The EASA AD also requires applying a paint mark on the nut and reporting the inspection results to Leonardo Helicopters. EASA states that the incorrect installation of the T/R servo-actuator could result in loss of control of the helicopter, depending on the flight condition.

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 emergency 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 the same type design. Due to the need to correct an urgent safety of flight situation, good cause exists to make this AD effective in less than 30 days.

Related Service Information

We reviewed Leonardo Helicopters Emergency Alert Service Bulletin (EASB) No. 169-120, dated November 5, 2018, for Model AW169 helicopters and Leonardo Helicopters EASB No. 189-213, dated November 6, 2018, for Model AW189 helicopters. This service information specifies a one-time visual inspection of the T/R servo-actuator feedback lever and connecting parts for condition and proper installation, and applying a paint mark on the nut from the rod end to the hinge bracket. This service information specifies contacting Leonardo Helicopters for instructions if there is

any damage or findings. Lastly, regardless of the inspection outcome, this service information specifies submitting digital photos of the inspected area along with a compliance form with information about the inspection to Leonardo Helicopters.

Emergency AD Requirements

This emergency AD requires inspecting the nut, cotter pin, lock-wire, hinge bracket connected to the T/R servo-actuator feedback lever link, and each connection of the T/R servo-actuator feedback lever link. This emergency AD also requires applying a paint stripe or torque seal on the nut and reporting certain information to Leonardo Helicopters.

Differences Between This Emergency AD and the EASA AD

The EASA AD specifies visually inspecting the nut, cotter pin, lock wire, and hinge bracket for condition and absence of damage, while this emergency AD requires inspecting those parts for correct installation and loose, broken, and missing parts. The EASA AD specifies visually inspecting the connection elements of the T/R servo-actuator feedback lever link, while this emergency AD requires inspecting all three connections of the T/R servo-actuator feedback lever link for correct installation and loose, broken, and missing parts. The inspections specified by this emergency AD are not limited to visual inspections. The EASA AD requires contacting Leonardo Helicopters for approved instructions if there is any damage or other finding, while this emergency AD requires performing any necessary repairs in accordance with FAA-approved procedures.

Interim Action

We consider this emergency AD to be an interim action. If final action is later identified, we might consider further rulemaking then.

Costs of Compliance

We estimate that this emergency AD affects 7 helicopters of U.S. registry. We estimate that operators may incur the following costs in order to comply with this AD. Labor rates are estimated at $85 per work-hour.

Inspecting the T/R servo-actuator feedback lever link and applying a paint stripe or torque seal takes about 2 work-hours, and reporting information to Leonardo Helicopters takes about 1 work-hour. Based on these estimates, the total cost of this emergency AD is $255 per helicopter and $1,785 for the U.S. fleet.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

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.

Adoption of the Emergency Airworthiness Directive (AD)

We are issuing this emergency AD under 49 U.S.C. Sections 106(g), 40113, and 44701 according to the authority delegated to me by the Administrator.

2018-23-52 **Leonardo S.p.A.:** Product Identifier 2018-SW-093-AD.

(a) Applicability

This emergency AD applies to Model AW169 and AW189 helicopters, certificated in any category.

(b) Unsafe Condition

This emergency AD defines the unsafe condition as failure of the tail rotor (T/R) servo-actuator feedback lever. This condition could result in loss of T/R control and subsequent loss of control of the helicopter.

(c) Effective Date

This emergency AD is effective upon receipt.

(d) Compliance

You are responsible for performing each action required by this emergency 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 or 24 clock-hours, whichever occurs first:

(i) Inspect the nut, cotter pin, lock-wire, and hinge bracket connected to the T/R servo-actuator feedback lever link for correct installation and loose, broken, and missing parts. If a nut, cotter pin, lock-wire, or hinge bracket is not correctly installed or is loose, broken, or missing, before further flight, repair in accordance with FAA-approved procedures.

(ii) Inspect each connection of the T/R servo-actuator feedback lever link for correct installation and loose, broken, and missing parts. If a connection is not correctly installed or if a part is loose, broken, or missing, before further flight, repair in accordance with FAA-approved procedures.

(iii) Apply a paint stripe or torque seal on the nut starting at the rod end to the hinge bracket.

(2) Within 7 days after completing the inspection in paragraph (e)(1) of this AD, report the following information to Leonardo Helicopters by email to pse_aw189.mbx.aw@leonardocompany.com.

(i) Date of Inspection.

(ii) Helicopter Model.

(iii) Helicopter Serial Number.

(iv) Total Helicopter Hours Time-In-Service.

(v) Hours Time-In-Service Since Last Overhaul.

(vi) Helicopter Primary Operating Location.

(vii) Description of Inspection Results (include digital photos if possible).

(f) Special Flight Permit

A special flight permit is prohibited.

(g) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Section, Rotorcraft Standards Branch, FAA, may approve AMOCs for this emergency AD. Send your proposal to: David Hatfield, 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 Emergency AD through an AMOC.

(h) Additional Information

(1) For further information contact: David Hatfield, Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email david.hatfield@faa.gov.

(2) For a copy of the service information referenced in this emergency 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.

(3) The subject of this AD is addressed in European Aviation Safety Agency (EASA) AD No. 2018-0241-E, dated November 7, 2018.

(i) Subject

Joint Aircraft Service Component (JASC) Code: 6400, Tail Rotor System.

Issued in Fort Worth, Texas, on November 8, 2018.

Scott A. Horn,

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