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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0333; Directorate Identifier 2013-SW-025-AD; Amendment 39-18474; AD 2016-07-29]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters (Previously Eurocopter France) Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for Airbus Helicopters Model EC225LP, AS332C, AS332L, AS332L1, and AS332L2 helicopters. This AD requires inspecting each TECALEMIT flexible hydraulic hose (hose) installed in the main gearbox (MGB) compartment and replacing the hose if a crack, cut, or other damage exists. This AD was prompted by reports about the loss of in-flight hydraulic pressure on Eurocopter France helicopters. The actions of this AD are intended to prevent loss of the hydraulic system and consequently, loss of helicopter control.

DATES: This AD is effective May 16, 2016.

ADDRESSES: For service information identified in this final rule, contact Airbus Helicopters, Inc., 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <http://www.airbushelicopters.com/techpub>. 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.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office 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 the Docket Operations Office (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: Rao Edupuganti, Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email rao.edupuganti@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On June 2, 2014, at 79 FR 31229, 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 Airbus Helicopters (previously Eurocopter France) Model EC225LP, AS332C, AS332L, AS332L1, and AS332L2 helicopters with a TECALEMIT MGB hose installed.

The NPRM proposed to require repetitively inspecting each hose installed in the MGB compartment and replacing the hose before further flight if a crack, cut, or other damage exists that allows you to see the metal braid underneath. If a crack, cut, or other damage exists on the right-hand hydraulic system that does not allow you to see the metal braid underneath, the NPRM proposed replacing the hose within 300 hours TIS. If a crack, cut, or other damage exists on the left-hand hydraulic system that does not allow you to see the metal braid underneath, the NPRM proposed replacing the hose within 600 hours TIS. The proposed requirements were intended to prevent failure of a hose, which could result in loss of the hydraulic system and consequently, loss of helicopter control.

The NPRM was prompted by AD No. 2013-0069, dated March 18, 2013, issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Eurocopter (now Airbus Helicopters) Model AS332C, AS332C1, AS332L, AS332L1, AS332L2, and EC225LP helicopters. EASA advises that in-flight losses of hydraulic pressure were reported on these helicopters because of "significant" tears on the protection sheath of MGB hydraulic flexible "pipes" manufactured by TECALEMIT. This condition could lead to simultaneous left-hand and right-hand hydraulic system leakage, loss of the hydraulic system, and consequently, loss of helicopter control could occur, EASA advises.

The NPRM incorrectly stated that the Model AS332C1 helicopter did not have an FAA type certificate. We plan additional rulemaking to supersede this AD to include the Model AS332C1 helicopter.

Comments

After our NPRM (79 FR 31229, June 2, 2014) was published, we received comments from one commenter.

Request

Airbus Helicopters noted that the proposed AD does not mention Airbus Helicopters service information specifying installation of non-TECALEMIT hoses, which it considers terminating action for the repetitive inspections of the hoses. Airbus Helicopters requested that the AD reflect that action. We agree with the comment but disagree that a change to the AD is necessary. Because the AD is only applicable if a TECALEMIT hose is installed, replacing the hose as described by Airbus Helicopters in its comment would serve as "terminating action" for the required inspections. If a non-TECALEMIT hose is installed, the AD does not apply.

Airbus Helicopters stated that the proposed AD would require that a damaged hose sheath on right-hand hydraulic system be replaced within 300 hours time-in-service (TIS) and a damaged hose sheath on the left-hand system be replaced within 600 hours TIS. Airbus Helicopters requested that we change these proposed requirements to replacing the hose within 300 hours TIS if the hose sheath is damaged on both the right- and left-hand system and replacing the hose within 600 hours TIS if the

hose sheath is damaged on only one side. We do not agree. The right-hand hose is subject to higher pressure and therefore we determined more stringent requirements for the right-hand hose are necessary than for the left-hand hose.

Lastly, Airbus Helicopters requested that we extend the repetitive inspection to every 1,200 hours TIS after the initial inspection at 110 hours TIS. When asked for additional information, Airbus Helicopters stated that no discrepancies have been found as a result of the inspections on its EC225 fleet, and that most of its AS332 fleet that are operating have complied with the service information. We disagree. Airbus Helicopters provided no support for its position that the hoses perform safely for 1,200 hours TIS after the initial inspection. Because the root cause of the cracking is unknown, we have determined that inspecting the hoses every 110 hours TIS is necessary.

FAA's Determination

These helicopters have been approved by the aviation authority of France and are approved for operation in the United States. Pursuant to our bilateral agreement with France, 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, reviewed the relevant information, considered the comments received, 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

The EASA AD requires a one-time inspection, while this AD requires that the inspection of the hoses be repeated every 110 hours TIS. The EASA AD requires that if severe damage is found in a hose on the right-hand hydraulic system, then the hose be replaced before the next flight, while this AD requires this regardless of whether the hose is on the right-hand or left-hand hydraulic system. EASA has set some compliance times based on months. We set compliance times based only on hours TIS.

Related Service Information

Eurocopter issued Service Bulletin (SB) No. EC225-05-027, Revision 1, dated July 17, 2013, for Model EC225LP helicopters and SB No. AS332-05.00.92, Revision 1, dated July 17, 2013, for Model AS332C, AS332C1, AS332L, AS332L1, AS332L2 and military Model AS332B, AS332B1, AS332F1, AS332M and AS332M1 helicopters. The SBs state Eurocopter received a report concerning the loss of pressure in the left hand hydraulic system in-flight. Hydraulic fluid was found in the cabin, though the flight was completed without further incident. An examination of the hydraulic system showed that the hose located between the forward servo-control and the hydraulic manifold had burst. Further investigations have shown corrosion on the metal braid located under the fire-resistant sheath of hoses manufactured by TECALEMIT. The corrosion may be caused by the deterioration or gapping of the fire-resistant sheath at the hose ends, enabling humidity to enter between the sheath and the metal braid. As a result, SB No. EC225-05-027 and SB No. AS332-05.00.92 call for inspecting each hose for a notch, tear, crack, or scuff mark, and replacing any damaged hose.

Costs of Compliance

We estimate that this AD affects 19 helicopters of U.S. Registry and that labor costs average \$85 a work-hour. Based on these estimates, we expect the following costs:

- Inspecting the hoses installed in a MGB compartment requires 1.5 work-hours for a labor cost of about \$128 per helicopter, \$2,432 for the U.S. fleet.

- Replacing a hose requires 2.5 work-hours for a labor cost of about \$213. Parts cost \$2,000 for a total cost of \$2,213 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):



2016-07-29 Airbus Helicopters (Previously Eurocopter France): Amendment 39-18474; Docket No. FAA-2014-0333; Directorate Identifier 2013-SW-025-AD.

(a) Applicability

This AD applies to Airbus Helicopters Model EC225LP, AS332C, AS332L, AS332L1, and AS332L2 helicopters with a TECALEMIT main gear box (MGB) hydraulic flexible hose (hose) installed, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as loss of hydraulic pressure because of the failure of a hose. This condition could result in loss of the hydraulic system and consequently, loss of helicopter control.

(c) Effective Date

This AD becomes effective May 16, 2016.

(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 110 hours time-in-service (TIS), and thereafter at intervals not to exceed 110 hours TIS, visually inspect each TECALEMIT hose installed in the MGB compartment for a cut, crack, or other damage.

(2) If there is a cut, crack, or any other damage in the hose sheath that allows you to see the metal braid underneath when pinching or twisting the sheath, replace the hose before further flight.

(3) If there is a cut, crack, or any other damage in the hose sheath on the right hand hydraulic system that does not allow you to see the metal braid underneath, replace the hose within 300 hours TIS.

(4) If there is a cut, crack, or any other damage in the hose sheath on the left hand hydraulic system that does not allow you to see the metal braid underneath, replace the hose within 600 hours TIS.

(f) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Rao Edupuganti, Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, 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) Eurocopter Service Bulletin (SB) No. EC225-05-027 and SB No. AS332-05.00.92, both Revision 1 and dated July 17, 2013; Eurocopter SB No. AS332-29.00.17 and SB No. EC225-29-005, both Revision 0 and both dated June 21, 2013; and Eurocopter Information Notice No. 2506-I-29, Revision 2, dated July 24, 2013; which are not incorporated by reference, contain additional information about the subject of this AD. For service information identified in this AD, contact Airbus Helicopters, Inc., 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <http://www.airbushelicopters.com/techpub>. 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.

(2) The subject of this AD is addressed in the European Aviation Safety Agency (EASA) AD No. 2013-0069, dated March 18, 2013. You may view the EASA AD on the Internet at <http://www.regulations.gov> in Docket No. FAA-2014-0333.

(h) Subject

Joint Aircraft Service Component (JASC) Code: 2910, Main Hydraulic System.

Issued in Fort Worth, Texas, on March 31, 2016.

James A. Grigg,
Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.