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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-3929; Directorate Identifier 2015-SW-031-AD; Amendment 39-18746; AD 2016-25-20]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for Airbus Helicopters Model EC130B4, EC130T2, AS350B, AS350B1, AS350B2, AS350B3, AS350BA, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters. This AD requires inspecting each bi-directional suspension cross-bar (cross-bar). This AD was prompted by two reports of cracks in a cross-bar. These actions are intended to prevent the unsafe condition on these products.

DATES: This AD is effective January 31, 2017.

ADDRESSES: For service information identified in this final rule, contact Airbus Helicopters, 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. 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> by searching for and locating Docket No. FAA-2015-3929; 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: Robert Grant, Aviation Safety Engineer, Safety Management Group, FAA, 10101 Hillwood Pkwy, Fort Worth, TX 76177; telephone (817) 222-5110; email robert.grant@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On April 11, 2016, at 81 FR 21284, 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 Model EC130B4, EC130T2, AS350B, AS350B1, AS350B2, AS350B3, AS350BA, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters with a cross-bar part number (P/N) 350A38-1040-20 or P/N 350A38-1040-00 installed. The NPRM proposed to require repetitively inspecting each cross-bar for a crack and replacing any cracked cross-bar before further flight. The proposed requirements were intended to detect cracks in a cross-bar and prevent failure of the cross-bar and subsequent loss of control of the helicopter.

The NPRM was prompted by AD No. 2015-0094, dated May 29, 2015, issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Airbus Helicopters Model AS350B, AS350BA, AS350BB, AS350B1, AS350B2, AS350B3, AS350D, AS355E, AS355F, AS355F1, AS355F2, AS355N, AS355NP, EC130B4, and EC130T2 helicopters. EASA advises that two cases of cracks in a cross-bar were reported on AS350B3 helicopters. The cracks were found at the transmission deck attachment fitting holes in helicopters equipped with a cargo hook that had completed missions with a significant number of torque cycles. Because of common design features, cracks may also occur on other Model AS350-series, AS355-series, and EC130-series helicopters. EASA advises that crack growth may lead to failure of one of the four yokes and significantly increase stress loads on the remaining yokes. This condition, if not detected or corrected, could lead to cracks on the remaining yokes and increased load on the cross-bar, possibly resulting in cross-bar failure and consequently loss of the helicopter. To correct this condition, EASA AD No. 2015-0094 requires repetitive cross-bar inspections and, depending on the findings, replacing the cross-bar.

Comments

One commenter submitted comments supporting the NPRM (81 FR 21284, April 11, 2016).

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 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 applies to Airbus Helicopters Model AS350BB helicopters. This AD does not apply to the Model AS350BB because it does not have an FAA type certificate. However, this AD

applies to Model AS350C and AS350D1 helicopters, while the EASA AD does not. The EASA AD requires a florescent dye-penetrant inspection if the visual inspection of the bi-directional suspension cross-bar causes doubts. This AD does not require a florescent dye-penetrant inspection. The EASA AD requires returning the damaged bi-directional suspension cross-bar to Airbus Helicopters, and this AD does not.

Related Service Information

Airbus Helicopters has issued Alert Service Bulletin (ASB) No. EC130-05A021 for Model EC130B4 helicopters; ASB No. EC130-05A022 for Model EC130T2 helicopters; ASB No. AS350-05.00.84 for Model AS350B, AS350B1, AS350B2, AS350B3, AS350BA, AS350BB, AS350D, and military Model AS350L1 helicopters; and ASB No. 355-05.00.73 for Model AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355 NP helicopters (ASBs). All of the ASBs are Revision 0 and dated May 21, 2015. The ASBs specify visually inspecting the cross-bar. If there is any doubt after the visual inspection, the ASBs call for a dye-penetrant inspection to make sure there are no cracks. If a crack is detected, the ASBs call for replacing the cross-bar before further flight and sending the damaged cross-bar to Airbus Helicopters.

Costs of Compliance

We estimate that this AD affects 1,132 helicopters of U.S. Registry and that labor costs average \$85 a work-hour. Based on these estimates, we expect the following costs:

Visually inspecting the cross-bar requires 16.5 work-hours for a labor cost of about \$1,403. No parts are needed so that the cost for the U.S. fleet totals \$1,588,196 per inspection cycle.

Replacing the cross-bar costs \$1,630 for parts. No additional labor costs are needed.

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):



2016-25-20 Airbus Helicopters: Amendment 39-18746; Docket No. FAA-2015-3929; Directorate Identifier 2015-SW-031-AD.

(a) Applicability

This AD applies to Airbus Helicopters Model EC130B4, EC130T2, AS350B, AS350B1, AS350B2, AS350B3, AS350BA, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355NP helicopters with a bi-directional suspension cross-bar (cross-bar) part number (P/N) 350A38-1040-20 or P/N 350A38-1040-00 installed, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as a crack in a bi-directional cross-bar, which could result in failure of a cross-bar and loss of control of the helicopter.

(c) Effective Date

This AD becomes effective January 31, 2017.

(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 the initial inspection times shown in Table 1 to paragraph (e) of this AD or the next time maintenance of the helicopter involves removing the main gearbox, whichever comes first; and thereafter at intervals not to exceed the compliance times shown in Table 1 to paragraph (e) of this AD, inspect each cross-bar for a crack. For purposes of this AD, a torque cycle is defined as one landing with or without stopping the rotor or one external load-carrying operation; an external load-carrying operation occurs each time a helicopter picks up an external load and drops it off.

Table 1 to Paragraph (e)

Helicopter model	Initial and recurrent inspection interval
AS350B, AS350BA, AS350B1, AS350B2, AS350C, AS350D, and AS350D1	4,500 hours time-in-service (TIS) or 60,000 torque cycles, whichever occurs first.
AS350B3, AS355E, AS355F, AS355F1, AS355F2, AS355N, and AS355 NP EC130B4	3,300 hours TIS or 60,000 torque cycles, whichever occurs first.
EC130T2	3,300 hours TIS or 40,000 torque cycles, whichever occurs first.

(2) If there is a crack, before further flight, replace the cross-bar.

(f) Special Flight Permits

Special flight permits are prohibited.

(g) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Robert Grant, Aviation Safety Engineer, Safety Management Group, 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

(1) Airbus Helicopters Alert Service Bulletin No. EC130-05A021, No. EC130-05A022, No. AS350-05.00.84, and No. AS355-05.00.73, all Revision 0 and all dated May 21, 2015, which are not incorporated by reference, contain additional information about the subject of this final rule. For service information identified in this final rule, contact Airbus Helicopters, 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 European Aviation Safety Agency (EASA) AD No. 2015-0094, dated May 29, 2015. You may view the EASA AD on the Internet at <http://www.regulations.gov> in Docket No. FAA-2015-3929.

(i) Subject

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

Issued in Fort Worth, Texas, on December 6, 2016.
Scott A. Horn,
Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.