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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0625; Product Identifier 2016-SW-007-AD; Amendment 39-21315; AD 2020-22-19]

RIN 2120-AA64

Airworthiness Directives; Various Restricted Category Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for various restricted category helicopters, originally manufactured by Sikorsky Aircraft Corporation (Sikorsky), Model EH-60A, HH-60L, S-70, S-70A, S-70C, S-70C(M), S-70C(M1), and UH-60A. This AD requires initial and recurring inspections of the main rotor (M/R) blade spindle cuff for a crack. This AD was prompted by multiple reports of a cracked M/R blade spindle cuff. These actions are intended to prevent an unsafe condition on these products.

DATES: This AD is effective December 3, 2020.

ADDRESSES: For service information identified in this final rule, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-946-4337 (1-800-Winged-S); email wcs_cust_service_eng.gr-sik@lmco.com. Operators may also log on to the Sikorsky 360 website at https://www.sikorsky360.com. You may view 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 https://www.regulations.gov by searching for and locating Docket No. FAA-2020-0625; 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, any comments received, and other information. The street address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Kristopher Greer, Aerospace Engineer, Boston ACO Branch, Compliance and Airworthiness Division, FAA, 1200 District Avenue, Burlington, Massachusetts 01803; telephone 781-238-7799; email kristopher.greer@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to various restricted category helicopters, originally manufactured by Sikorsky, Model EH-60A, HH-60L, S-70, S-70A, S-70C, S-70C(M), S-70C(M1), and UH-60A, with an M/R blade spindle cuff part number 70150-09109-041 installed. The NPRM published in the Federal Register on July 9, 2020 (85 FR 41221).

The NPRM was prompted by multiple reports of a cracked M/R blade spindle cuff. In 2008, Sikorsky reported an M/R blade spindle cuff on a Model UH-60A helicopter that cracked across the lower inboard bolt holes. Investigation determined the crack was caused by a non-conforming hole edge break, specifically a burr, introduced during an overhaul at a non-Sikorsky overhaul facility. Sikorsky issued Sikorsky Safety Advisory No. SSA-S70-08-002, dated December 11, 2008 (SSA-S70-08-002), for Black Hawk Model H-60- and S-70-series helicopters to inform operators of the incident and recommend compliance with Sikorsky's preventative maintenance inspections. The safety advisory also recommended that operators with M/R blades overhauled by a non-Sikorsky repair facility contact that facility to verify whether the hole edge radius requirement was met during the overhaul.

In 2015, the FAA received an additional report of an M/R blade spindle cuff on a military model helicopter that cracked. Investigation from this reporting has revealed no anomalies at the crack initiation site. In each instance, a crack initiated at a bolt hole and spread to either an adjacent bolt hole or to the free edge. Due to design similarity, Model EH-60A, HH-60L, S-70, S-70A, S-70C, S-70C(M), S-70C(M1), and UH-60A helicopters are all affected by this unsafe condition.

Accordingly, the NPRM proposed to require initial and recurring inspections of the M/R blade spindle cuff for a crack. The proposed requirements were intended to detect a crack, prevent failure of an M/R blade spindle cuff, loss of an M/R blade, and loss of control of the helicopter.

Comments

The FAA gave the public the opportunity to participate in developing this final rule, but the FAA did not receive any comments on the NPRM or on the determination of the cost to the public.

FAA's Determination

The FAA is issuing this AD after evaluating all known relevant information and determining that an 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.

Related Service Information

The FAA reviewed SSA-S70-08-002. This service information recommends, for helicopters with M/R blades overhauled by non-Sikorsky M/R blade repair facilities, contacting the facilities to verify whether the hole edge radius requirement was met during cuff replacement. The safety advisory also recommends operators conduct 10 hour/14 day visual inspections and follow the inspection procedures regarding sudden onset of low frequency vibration or an out of track condition.

The FAA also reviewed Sikorsky Technical Manual Preventative Maintenance Services 10 Hour/14 Day (30 Hour/42 Day) Inspection Checklist TM 1-70-PMS-1, dated December 1, 2014, for Sikorsky Model S-70 helicopters. This service information contains procedures for the 10 hour/14 day and 30 hour/42 day inspections.

Costs of Compliance

The FAA estimates that this AD affects 204 helicopters of U.S. Registry. The FAA estimates that operators may incur the following costs in order to comply with this AD. Labor costs are estimated at $85 per work-hour.

Inspecting the M/R blade spindle cuffs takes about 1 work-hour for an estimated cost of $85 per helicopter and $17,340 for the U.S. fleet. Replacing an M/R blade spindle cuff takes about 175 work-hours and required parts cost about $10,000 for a total estimated replacement cost of $24,875 per M/R blade spindle cuff.

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.

The FAA is 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) Will not affect intrastate aviation in Alaska, and

(3) 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.

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:

2020-22-19 Various Restricted Category Helicopters: Amendment 39-21315; Docket No. FAA-2020-0625; Product Identifier 2016-SW-007-AD.

(a) Applicability

This airworthiness directive (AD) applies to various restricted category helicopters originally manufactured by Sikorsky Aircraft Corporation, Model EH-60A, HH-60L, S-70, S-70A, S-70C, S-70C(M), S-70C(M1), and UH-60A helicopters with a main rotor (M/R) blade spindle cuff part number 70150-09109-041 installed; type certificate holders include but are not limited to ACE Aeronautics, LLC; BHI H60 Helicopters, LLC; Billings Flying Service Inc.; Carson Helicopters; Delta Enterprise; High Performance Helicopters Corp.; Northwest Rotorcraft LLC; Pickering Aviation, Inc.; PJ Helicopters Inc.; Sikorsky Aircraft Corporation; SixtyHawk TC, LLC; Skydance Blackhawk Operations, LLC; Timberline Helicopters, Inc.; and Unical Aviation, Inc.

(b) Unsafe Condition

This AD defines the unsafe condition as a crack in an M/R blade spindle cuff. This condition could result in failure of an M/R blade spindle cuff, loss of an M/R blade, and loss of control of the helicopter.

(c) Effective Date

This AD becomes effective December 3, 2020.

(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

Before further flight, unless already done within the last 10 hours time-in-service (TIS), and thereafter at intervals not to exceed 10 hours TIS from the last inspection:

(1) Using 10X or higher power magnification, visually inspect each M/R blade spindle cuff for a crack. Pay particular attention to the area around each bolt hole and the upper and lower surfaces of the leading and trailing edges of each M/R blade spindle cuff.

(2) If there is a crack, replace the M/R blade spindle cuff before further flight.

(f) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Boston ACO Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Kristopher Greer, Aerospace Engineer, Boston ACO Branch, Compliance and Airworthiness Division, FAA, 1200 District Avenue, Burlington, Massachusetts 01803; telephone 781-238-7799; email kristopher.greer@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, the FAA suggests 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

Sikorsky Safety Advisory No. SSA-S70-08-002, dated December 11, 2008, and Sikorsky Technical Manual Preventative Maintenance Services 10 Hour/14 Day (30 Hour/42 Day) Inspection Checklist 1-70-PMS-1, dated December 1, 2014, which are not incorporated by reference, contain additional information about the subject of this AD. For service information identified in this AD, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-946-4337 (1-800-Winged-S); email wcs_cust_service_eng.gr-sik@lmco.com. Operators may also log on to the Sikorsky 360 website at https://www.sikorsky360.com. You may view 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.

Joint Aircraft Service Component (JASC) Code: 6220, Main Rotor Head–Main Rotor Spindle Cuff.

Issued on October 23, 2020.

Lance T. Gant,

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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