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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0636; Directorate Identifier 2012-SW-065-AD; Amendment 39-17709; AD 2013-25-13]

RIN 2120-AA64

Airworthiness Directives; Sikorsky Aircraft Corporation (Sikorsky) Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for Sikorsky Model S-70, S-70A, and S-70C helicopters. This AD establishes a new life limit based on a prorated formula for certain identified components (parts) installed on Model S-70, S-70A, and S-70C helicopters after being previously installed on certain military model helicopters. This AD was prompted by the discovery that certain parts have been interchanged between military helicopter models with different life limits and the possibility that these same parts can be interchanged with civilian models with different life limits. The actions are intended to establish a pro-rated in service life limit for each identified part to prevent fatigue failure of a part and subsequent loss of control of the helicopter.

DATES: This AD is effective February 25, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain document listed in this AD as of February 25, 2014.

ADDRESSES: For service information identified in this AD, contact Sikorsky Aircraft Corporation, Customer Service Engineering, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email sikorskywcs@sikorsky.com. You may review a copy of the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

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 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: Michael Davison, Flight Test Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, Massachusetts 01803; telephone (781) 238-7156; email michael.davison@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On July 23, 2013, at 78 FR 44045, 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 Sikorsky Model S-70, S-70A, and S-70C helicopters. The NPRM proposed inserting the component life prorating formula into the airworthiness limitation section of the maintenance manual or instructions for continued airworthiness, calculating the new life limit for each part by applying the formula, and establishing life limits for certain parts without applying the formula. Furthermore, the NPRM proposed updating the component log or equivalent record with the new in-service life limit and replacing each part that has reached or exceeded its new life limit with an airworthy part. Lastly, the NPRM proposed prohibiting installation of any applicable part on a Model S-70, S-70A, or S-70C helicopter if the number of hours is unknown or if certain parts have been previously installed on a Model UH-60M helicopter. The NPRM was prompted by the discovery that certain parts with identical part numbers but different life limits have been interchanged between military helicopter models and the possibility that these same parts can be interchanged with civilian models with different life limits.

The proposed requirements were intended to establish a pro-rated in service life limit for each identified part to prevent fatigue failure of a part and subsequent loss of control of the helicopter.

Comments

We gave the public the opportunity to participate in developing this AD, but we did not receive any comments on the NPRM (78 FR 44045, July 23, 2013).

FAA's Determination

We have reviewed the relevant information and determined that an unsafe condition exists and is likely to exist or develop on other products of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed.

Costs of Compliance

We estimate that this AD affects 9 helicopters of U.S. Registry.

We estimate that the cost to insert pages into the aircraft's airworthiness limitation section is negligible.

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.

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.

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):

2013-25-13 Sikorsky Aircraft Corporation (Sikorsky): Amendment 39-17709; Docket No. FAA-2013-0636; Directorate Identifier 2012-SW-065-AD.

(a) Applicability

This AD applies to Model S-70, S-70A, and S-70C helicopters, certificated in any category, with the following parts installed:

(1) Spindle and liner assembly, part number (P/N) 38023-10374-041;
(2) Main Rotor Hub, P/N 70070-10046-055 and -056;
(3) Main Rotor Spindle nut, P/N 70102-08105-102;
(4) Main Rotor Control Horn, P/N 70102-08111-047;
(5) Main Rotor Hub, P/N 70103-08112-041 and -047;
(6) Rotating Swashplate, P/N 70104-08001-044 and -045;
(7) Main Rotor Shaft Extension, P/N 70351-08186-043;
(8) Main Rotor Gear Box Housing, P/N 70351-38110-043, -044, and -045;
(9) Main Rotor Shaft, P/N 70351-38131-042;
(10) Output Bevel Gear and Shaft, P/N 70358-06620-101 and -102;
(11) Left Tie Rod Assembly, P/N 70400-08115-043, -045, -046, and -047;
(12) Forward Bellcrank Support Assembly, P/N 70400-08162-042;
(13) Lateral Servo Bellcrank, P/N 70400-08166-041; or
(14) Tail Rotor Servo Assembly, P/N 70410-06520-044 through -046.

(b) Unsafe Condition

This AD defines the unsafe condition as a critical part remaining in service beyond its life limit due to previously being installed on a different helicopter model with higher usage and flight loads. This condition could result in fatigue failure of a critical part and subsequent loss of control of the helicopter.

(c) Effective Date

This AD becomes effective February 25, 2014.

(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 25 hours time-in-service (TIS):

(i) Insert into the airworthiness limitation section of the maintenance manual or instructions for continued airworthiness the component life prorating formula in Section 1.1.3, Component Life Prorating, pages 1-25 and 1-26, of Sikorsky Technical Manual TM 1-70-23AW-2, Change 3, dated April 15, 2012.

(ii) Using the service life limits in Table 1 to Paragraph (e) of this AD, apply the component life prorating formula and calculate the new life limit for each specified part. If the number of hours of a part is unknown, that part cannot be installed on a Sikorsky Model S-70, S-70A, or S-70C helicopter. Do not calculate a new life limit for the part where the Model SH-60 life limit is higher than the life limit on Models S-70, S-70A, and S-70C.

Table 1 to Paragraph (e)

P/N	Part description	S-70, S-70A, S-70C service life	UH-60M service life	SH-60B/F service life
38023-10374-041	Spindle and Liner Assembly	8,000	6,400	10,000
70070-10046-055 and -056	Main Rotor Hub	5,100	3,100	[1]N/A
70102-08105-102	Main Rotor Spindle Nut	8,000	6,400	10,000
70102-08111-047	Main Rotor Control Horn	20,000/1,300[2]/2,500[2]	10,000	[1]N/A
70103-08112-041 and -047	Main Rotor Hub	5,100	3,100	[1]N/A
70104-08001-044-045	Rotating Swashplate	11,000	4,600	9,600
70351-08186-043	Main Rotor Shaft Extension	14,000	4,900	16,000
70351-38110-043, -044, and -045	Main Rotor Gear Box Housing	11,000	4,000	9,000
70351-38131-042	Main Rotor Shaft	17,000	5,200	19,000
70358-06620-101 and -102	Output Bevel Gear and Shaft	5,000	1,800	[1]N/A
70400-08115-043, -045, -046, and -047	Left Tie Rod Assembly	14,000	4,600	6,300
70400-08162-042	Forward Bellcrank Support Assembly	14,000/2,500[3]	5,600	7,600
70400-08166-041	Lateral Servo Bellcrank	20,000	11,000	14,000
70410-06520-044 through -046	Tail Rotor Servo Assembly	15,000	11,000	[1]N/A

[1]There is no service life limit listed because the parts on Model SH-60B/F have a different P/N than the parts on Models S-70, S-70A, and S-70C.

[2]For serial number (S/N) 32479930 through 324791859, with CAGE code 60078, the life limit is 1,300 hours TIS.

For S/N A241-07543 through A241-07594, A241-07706 through A241-07755, A241-07768 through A241-07771, A241-07800 through A241-07831, R241-00101 through R241-00355, R241-00701 through R241-00966, and R241-01001 through R241-01166, the life limit is 2,500 hours TIS.

[3]For S/N A-367-00001 through A367-00035, with CAGE code 78286, the life limit is 2,500 hours TIS.

(iii) Record the newly-established life limit of each part on the part's component log card or equivalent record.

(2) After establishing the new life limit, replace each part that has reached or exceeded its new life limit with an airworthy part before further flight.

(3) Do not install the following parts on a Model S-70, S-70A, or S-70C helicopter if they have been previously installed on a Model UH-60M helicopter:

(i) Bolt, self retaining, P/N 70103-08801-102;

(ii) Bifilar, P/N 70107-08400-046;

(iii) Aft Bellcrank, P/N 70400-08102-045;

(iv) Aft Walking Beam Assembly, P/N 70400-08104-048; or

(v) Close Tolerance Bolt, P/N 70400-26802-102 and -103.

(f) Alternative Methods of Compliance (AMOC)

(1) The Manager, Boston Aircraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Michael Davison, Flight Test Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, Massachusetts 01803; telephone (781) 238-7156; email michael.davison@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) Subject

Joint Aircraft Service Component (JASC) Code: 6220 Main Rotor Hub, 6230 Main Rotor Mast/Swashplate, 6320 Main Rotor Gearbox, 6310 Engine/Transmission Coupling, 6510 Tail Rotor Drive Shaft.

(h) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) 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) Pages 1-25 and 1-26, Section 1.1.3, Component Life Prorating, of Sikorsky Technical Manual TM 1-70-23AW-2, Change 3, dated April 15, 2012.

(ii) Reserved.

(3) For Sikorsky service information identified in this AD, contact Sikorsky Aircraft Corporation, Customer Service Engineering, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email sikorskywcs@sikorsky.com.

(4) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. 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 December 5, 2013.
Kim Smith,
Directorate Manager, Rotorcraft Directorate,
Aircraft Certification Service.