[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-0397; Directorate Identifier 2014-SW-048-AD;

Amendment 39-18107; AD 2015-04-05]

RIN 2120-AA64

Airworthiness Directives; Sikorsky Aircraft Corporation (Sikorsky) Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Sikorsky Model S-76A, B, C, and D helicopters. This AD requires inspecting the tail rotor drive shaft (TDS) flange-to-shaft attachment hardware for correct assembly and correct torque of the fasteners. If there is a discrepancy, this AD requires, before further flight, applying an index mark to the flange and TDS, inspecting the flange and shaft for a crack, fracture, wear, and certain measurements, and replacing any part that does not meet the approved criteria before further flight. This AD is prompted by a partial loss of tail rotor drive resulting in a forced landing. The actions specified by this AD are intended to prevent failure at the flange-to-shaft attachment, loss of a tail rotor drive, and subsequent loss of control of the helicopter.

DATES: This AD becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain document as of [INSERT DATE 15 days AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

We must receive comments on this AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Docket: Go to http://www.regulations.gov. Follow the online instructions for sending your comments electronically.
- Fax: 202-493-2251.
- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.
- Hand Delivery: Deliver to the "Mail" address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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, any incorporated by reference service information, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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 the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. It is also available on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2015-0397.

FOR FURTHER INFORMATION CONTACT: Michael Schwetz, Aviation Safety Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, FAA, 12 New England Executive Park, Burlington, Massachusetts 01803; telephone (781) 238-7761; email michael.schwetz@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments prior to it becoming effective. However, we invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that resulted from adopting this AD. The most helpful comments reference a specific portion of the AD, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit them only one time. We will file in the docket all comments that we receive, as well as a report

summarizing each substantive public contact with FAA personnel concerning this rulemaking during the comment period. We will consider all the comments we receive and may conduct additional rulemaking based on those comments.

Discussion

We are adopting a new AD for certain Sikorsky Model S-76A, B, C, and D helicopters. This AD requires inspecting the TDS flange-to-shaft attachment hardware at four locations for correct installation and correct torque of the fasteners. If there is movement, misalignment of the torque stripe, a misassembled part, or torque of less than 105 inch-pounds on any nut, this AD requires applying an index mark to the flange and shaft to make sure the flange is reinstalled in the same position to maintain shaft balance, and, before further flight, inspecting the flange and shaft for a crack, fracture, wear on the mounting hole, and diameter measurements, and replacing the TDS if the flange or stub does not meet the inspection criteria. This AD is prompted by a partial loss of tail rotor drive resulting in a forced landing, and instances where TDS flange-to-shaft attachment hardware was found to be loose or fractured. The actions specified by this AD are intended to detect loose or fractured hardware and prevent failure of the TDS at the flange-to-shaft attachment, loss of a tail rotor drive, and subsequent loss of control of the helicopter.

FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

Related Service Information under 1 CFR part 51

Sikorsky issued Alert Service Bulletin ASB 76-66-52, Basic Issue, on April 1, 2014, which specifies a one-time inspection of the TDS flange-to-shaft attachment hardware for proper installation and torque. If there is movement, torque stripe misalignment, or misassembled hardware, the ASB specifies removing and returning the hardware to Sikorsky with certain forms and replacing hardware with airworthy TDS hardware before returning the helicopter to service. The ASB also specifies either replacing the TDS or inspecting the flange and shaft for a crack, fracture, wear of the mounting hole, and diameter and replacing any part that does not meet the approved criteria. The ASB states there were instances where the TDS flange-to-shaft attachment hardware was found loose or fractured. This service information is reasonably available; see ADDRESSES for ways to access this service information.

AD Requirements

This AD requires, within 30 days:

- Inspecting each TDS flange attachment hardware at all four locations for looseness and torque stripe misalignment, inspecting each nut to determine whether it can be rotated by hand, determining whether the hardware is assembled correctly, and determining the torque of each nut.

- If there is no looseness, torque stripe misalignment, incorrect hardware assembly, and if no nut can be rotated by hand and the torque of any nut is not less than 105 inch-pounds, no further action is required by this AD.

- If there is looseness, torque stripe misalignment, incorrect hardware assembly, a nut rotated by hand, or the torque of any nut is less than 105 inch-pounds:

° Applying an index mark to the flange and shaft, unbolting and removing the flange from the shaft, visually inspecting each radius washer for wear or fretting, and replacing any washer with wear or fretting.

° Inspecting the flange and shaft for a crack, fracture, wear on the mounting hole, and diameter, and replacing the TDS with an airworthy TDS if the flange and shaft fail any of the inspection criteria.

° Aligning index marks, installing the flange on the shaft, and coating the grip length of each bolt and the contact surfaces on each radius washer and washer with epoxy polyamide primer.

° Torquing each nut.

Differences between this AD and the Service Information

The AD does not require returning the unairworthy parts with certain forms to the manufacturer as does the service information.

Costs of Compliance

We estimate that this AD affects 260 helicopters of U.S. Registry. We estimate that operators may incur the following costs in order to comply with this AD. We estimate $85 per work-hour for labor. We estimate 2.2 work-hours to inspect the hardware assembly and torque at a cost of $187 per helicopter and $48,620 for the fleet. We estimate 2.2 work-hours if the hardware is replaced and $1,200 for the required parts, for a total cost of $1,387 per helicopter.

FAA's Justification and Determination of the Effective Date

Providing an opportunity for public comments before adopting these AD requirements would delay implementing the safety actions needed to correct this known

unsafe condition. Therefore, we find that the risk to the flying public justifies waiving notice and comment before adopting this rule because the required corrective actions must be done within 30 days, a very short time period based on the average flight-hour utilization rate of these helicopters used for commuter, air ambulance, and offshore operations.

Since an unsafe condition exists that requires the immediate adoption of this AD, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in less than 30 days.

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

We determined that 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, 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):

2015-04-05 **Sikorsky Aircraft Corporation:** Amendment 39-18107; Docket No. FAA-2015-0397; Directorate Identifier 2014-SW-048-AD.

(a) Applicability

This AD applies to Model S-76A, S-76B, S-76C, and S-76D helicopters, serial numbers (S/N) up to and including 761050, certificated in any category, with a tail drive shaft (TDS) part number (P/N) and S/N as follows:

(a) P/N 76361-04004 (all dash numbers) with an S/N up to and including A127-01092; or

(b) P/N 76361-04604 (all dash numbers) with an S/N with a prefix A240 or B240, or with an S/N C240-00001 through C240-00880.

(b) Unsafe Condition

This AD defines the unsafe condition as loose or fractured TDS flange-to-shaft attachment hardware. This condition could result in loss of a tail rotor drive and subsequent loss of control of the helicopter.

(c) Effective Date

This AD becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(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

Within 30 hours time-in-service:

(1) Inspect each TDS flange attachment hardware at all four locations for looseness and torque stripe misalignment as depicted in Figure 1 and shown in Figure 2 of Sikorsky Aircraft Corporation Alert Service Bulletin ASB 76-66-52, Basic Issue, dated April 1, 2014 (ASB). Inspect each nut to determine whether it can be rotated by hand. Determine whether the hardware is assembled correctly by following the Accomplishment Instructions, paragraph B.(3)(a) through B.(3)(b) of the ASB. Determine the torque of each nut.

(2) If there is no looseness, torque stripe misalignment, incorrect hardware assembly, and if no nut can be rotated by hand and the torque of any nut is not less than 105 inch-pounds, no further action is required by this AD.

(3) If there is looseness, torque stripe misalignment, incorrect hardware assembly, a nut rotated by hand, or the torque of any nut is less than 105 inch-pounds, do the following:

(i) Apply an index mark to the flange and shaft to make sure the flange is reinstalled in the same position and to maintain shaft balance, unbolt and remove the flange from the shaft, and visually inspect each radius washer for wear or fretting. Replace any washer with wear or fretting.

(ii) Inspect the flange and shaft for a crack, fracture, wear on the mounting hole, and diameter by following the Accomplishment Instructions, paragraph 3.D.(5)(a) through 3.D.(5)(e), of the ASB. If the flange and shaft fail any of the inspection criteria, before further flight, replace the TDS with an airworthy TDS.

(iii) Align index marks, install the flange on the shaft, and coat the grip length of each bolt and the contact surfaces on each radius washer and washer with epoxy polyamide primer.

(iv) Torque each nut by following either paragraph D.(9) or D.(10) of the Accomplishment Instructions of the ASB.

(f) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Boston Aircraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Michael Schwetz, Aviation Safety Engineer, Engine & Propeller Directorate, FAA, 12 New England Executive Park, Burlington, Massachusetts 01803; telephone (781) 238-7761; email michael.schwetz@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: 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) Sikorsky Aircraft Corporation Alert Service Bulletin ASB 76-66-52, Basic issue, dated April 1, 2014.

(ii) Reserved.

(3) For Sikorsky Aircraft Corporation 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 February 9, 2015.

Bruce E. Cain,

Acting Directorate Manager, Rotorcraft Directorate,
Aircraft Certification Service.

[FR Doc. 2015-03703 Filed 02/24/2015 at 8:45 am; Publication Date: 02/25/2015]