



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2017-0491; Product Identifier 2016-SW-020-AD; Amendment 39-19031; AD 2017-19-01]**

**RIN 2120-AA64**

**Airworthiness Directives; Sikorsky Aircraft Corporation Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for Sikorsky Aircraft Corporation (Sikorsky) Model S-76A, S-76B, S-76C, and S-76D helicopters. This AD requires inspecting the main rotor (M/R) servo pushrod (pushrod) assembly and applying slippage marks. This AD was prompted by an accident of a Sikorsky Model S-76C helicopter caused by a failed pushrod assembly. The actions of this AD are intended to prevent an unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Sikorsky Aircraft Corporation, Customer Service Engineering, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-Winged-S or 203-416-4299; email: [wcs\\_cust\\_service\\_eng.gr-sik@lmco.com](mailto:wcs_cust_service_eng.gr-sik@lmco.com). You may review a copy of 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-2017-0491; 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:** Blaine Williams, Aerospace Engineer, Boston ACO Branch, Compliance and Airworthiness Division, 1200 District Avenue, Burlington, Massachusetts 01803; telephone (781) 238-7161; email [blaine.williams@faa.gov](mailto:blaine.williams@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

On June 5, 2017, at 82 FR 25748, 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 Model S-76A, S-76B, S-76C, and S-76D helicopters, serial numbers up to and including 761075, with an M/R pushrod assembly part number (P/N) 76400-00034-059, 76400-00014-074, 76400-00014-076, or 76400-00014-077 installed. The NPRM proposed to require inspecting each pushrod assembly and applying two

slippage marks across each control rod and jamnut. Depending on the outcome of the inspection, the NPRM proposed to require replacing the pushrod assembly or inspecting the jamnut. Depending on the outcome of inspecting the jamnut, the NPRM proposed to require replacing the pushrod assembly or applying 140 inch-pounds of torque to the jamnut. The proposed requirements were intended to detect a loose jamnut and prevent failure of the pushrod assembly, loss of M/R flight control, and subsequent loss of control of the helicopter.

Since the NPRM was issued, the FAA's Aircraft Certification Service has changed its organizational structure. The new structure replaces product directorates with functional divisions. We have revised some of the office titles and nomenclature throughout this Final rule to reflect the new organizational changes. Additional information about the new structure can be found in the Notice published on July 25, 2017 (82 FR 34564).

### **Comments**

We gave the public the opportunity to participate in developing this AD, but we did not receive any comments on the NPRM.

### **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.

## **Related Service Information**

We reviewed Sikorsky S-76 Helicopter Alert Service Bulletin 76-67-58, Basic Issue, dated November 19, 2015 (ASB), which specifies a one-time inspection of the M/R forward, aft, and lateral pushrod assemblies and jamnuts for proper installation, condition, and security. If a pushrod or jamnut does not meet criteria specified in the inspections, the ASB specifies replacing the assembly. The ASB also specifies applying torque to each jamnut and applying two slippage marks across each control rod and jamnut.

## **Differences Between This AD and the Service Information**

The Sikorsky ASB specifies returning any removed M/R pushrod assembly to Sikorsky. This AD does not require returning any parts to Sikorsky.

## **Costs of Compliance**

We estimate that this AD affects 198 helicopters of U.S. Registry.

We estimate 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 pushrod assemblies takes about 2.2 work-hours for an estimated cost of \$187 per helicopter and \$37,026 for the U.S. fleet. Replacing an M/R pushrod assembly takes about 2 work-hours for a labor cost of \$170. Parts to replace M/R pushrod assembly P/N 76400-00034-059 cost about \$2,411 for a total estimated replacement cost of \$2,581. Parts to replace M/R pushrod assembly P/N 76400-00014-074 cost about \$2,224 for a total estimated replacement cost of \$2,394. Parts to replace M/R pushrod assembly P/N 76400-00014-076 cost about \$2,488 for a total estimated replacement cost of \$2,658. Parts to replace M/R pushrod assembly P/N 76400-00014-077 cost about \$2,414 for a total estimated

replacement cost of \$2,584. It takes a minimal amount of time to apply the slippage marks for a negligible cost.

### **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.

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):

2017-19-01 **Sikorsky Aircraft Corporation:** Amendment 39-19031; Docket No. FAA-2017-0491; Product Identifier 2016-SW-020-AD.

#### **(a) Applicability**

This AD applies to Model S-76A, S-76B, S-76C, and S-76D helicopters, serial numbers up to and including 761075, with a main rotor (M/R) servo pushrod (pushrod)

assembly part number (P/N) 76400-00034-059, 76400-00014-074, 76400-00014-076, or 76400-00014-077 installed, certificated in any category.

Note 1 to paragraph (a) of this AD: M/R pushrod P/N 76400-00034-059 is included in the Applicability section of AD 2015-19-51, Amendment 39-18300 (80 FR 65128, October 26, 2015). This AD does not affect AD 2015-19-51.

**(b) Unsafe Condition**

This AD defines the unsafe condition as a loose jamnut. This condition could result in failure of a pushrod assembly, loss of M/R flight control, and subsequent loss of control of the helicopter.

**(c) Effective Date**

This AD becomes effective [INSERT DATE 35 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 300 hours time-in-service:

(1) Inspect the control rod of each pushrod assembly (control rod) to determine whether 0.020 inch diameter lockwire can pass through the inspection hole.

(i) If the lockwire passes through the inspection hole, before further flight, replace the pushrod assembly.

(ii) If the lockwire does not pass through the inspection hole, inspect the jamnut to determine whether it is seated against the control rod and whether it can be turned with finger pressure.

(A) If the jamnut is not seated against the control rod or can be turned with finger pressure, before further flight, replace the pushrod assembly.

(B) If the jamnut is seated against the control rod and cannot be turned with finger pressure, using a pushrod tool, apply 140 inch-pounds of torque to the jamnut.

(2) Apply two slippage marks across each control rod and jamnut as follows:

(i) Clean the area where a slippage mark is to be applied.

(ii) Apply two slippage marks across the control rod and jamnut, parallel and on opposite sides of each other. Each slippage mark must extend at least 0.5 inch onto the control rod and must not cover the inspection hole. Figure 1 (Sheet 2) of Sikorsky S-76 Helicopter Alert Service Bulletin 76-67-58, Basic Issue, dated November 19, 2015, illustrates a slippage mark across a control rod and jamnut.

**(f) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Boston ACO Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Blaine Williams, Aerospace Engineer, Boston ACO Branch, Compliance and Airworthiness Division, 1200 District Avenue, Burlington, Massachusetts 01803; telephone (781) 238-7161; email [blaine.williams@faa.gov](mailto:blaine.williams@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**

Sikorsky S-76 Helicopter Alert Service Bulletin 76-67-58, Basic Issue, dated November 19, 2015, which is not incorporated by reference, contains additional information about the subject of this AD. 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: wcs\_cust\_service\_eng.gr-sik@lmco.com. You may review a copy of this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

**(h) Subject**

Joint Aircraft Service Component (JASC) Code: 6700, Rotorcraft Flight Control.

Issued in Fort Worth, Texas, on November 17, 2017.

Scott A. Horn,

Deputy Director for Regulatory Operations,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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