



DATE: September 14, 2015

AD #: 2015-19-51

This emergency airworthiness directive (EAD) 2015-19-51 is being sent to owners and operators of Sikorsky Aircraft Corporation Model S-76A, S-76B, S-76C, and S-76D helicopters.

Background

This EAD was prompted by an accident of a Sikorsky Aircraft Corporation Model S-76C helicopter. During preliminary investigation, a failed servo input control pushrod (pushrod) assembly was identified. Separation of the pushrod tube and the control rod end with bearing was found. This EAD requires inspecting the main rotor (M/R) forward, aft, and lateral pushrod assemblies, the tail rotor (T/R) pushrod assembly, and the jamnuts, and applying slippage marks across the pushrod tubes and jamnuts. These EAD actions are intended to prevent loss of M/R or T/R flight control and subsequent loss of control of the helicopter.

FAA's Determination

We are issuing this EAD 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

Sikorsky issued Alert Service Bulletin No. 76-67-57, Basic Issue, dated September 10, 2015 (ASB), which specifies a one-time inspection of the M/R forward, aft, and lateral pushrod assemblies, the T/R pushrod assembly, and the jamnuts for proper installation, condition, and security. If a pushrod or jamnut does not meet criteria specified in the inspection, the ASB specifies replacing the assembly. The ASB also specifies applying two slippage marks across each M/R and T/R pushrod tube and jamnut. Further, the ASB references the applicable maintenance manual for a new recurring inspection of the slippage marks.

EAD Requirements

This EAD requires, within five hours time-in-service, inspecting each M/R and T/R pushrod assembly by inspecting the position of the control rod end in the pushrod tube. If the lockwire passes through the inspection hole, this EAD requires replacing the pushrod assembly. If the lockwire does not pass through the inspection hole, this EAD requires inspecting the jamnut to determine seating position against the pushrod and whether the jamnut can be turned with finger pressure. If the jamnut is not seated against the pushrod or is loose, this EAD requires replacing the pushrod assembly. This EAD also requires, both for those pushrod assemblies that are replaced and for those that pass the inspections, applying two slippage marks across each M/R and T/R pushrod tube and jamnut.

Interim Action

We consider this EAD interim action as the accident investigation is ongoing. If additional action is later identified, we might consider further rulemaking.

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.

Adoption of the Emergency Airworthiness Directive (EAD)

We are issuing this EAD under 49 U.S.C. Sections 106(g), 40113, and 44701 according to the authority delegated to me by the Administrator.

2015-19-51 **Sikorsky Aircraft Corporation:** Directorate Identifier 2015-SW-065-AD.

(a) Applicability

This EAD applies to Model S-76A, S-76B, S-76C, and S-76D helicopters with main rotor (M/R) servo input control pushrod (pushrod) assembly part number (P/N) 76400-00034-059 or tail rotor (T/R) pushrod assembly P/N 76400-00014-071 installed, certificated in any category.

(b) Unsafe Condition

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

(c) Effective Date

This EAD is effective upon receipt.

(d) Compliance

You are responsible for performing each action required by this EAD within the specified compliance time unless it has already been accomplished prior to that time.

(e) Required Actions

Within five hours time-in-service:

(1) Inspect each pushrod end to determine whether a 0.020 inch diameter lockwire can pass through the inspection hole.

(i) If the lockwire passes through the inspection hole, 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 pushrod and whether it can be turned with finger pressure. If the jamnut is not seated against the pushrod or can be turned with finger pressure, replace the pushrod assembly.

(2) Apply two slippage marks across each pushrod tube and jamnut as follows:

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

(ii) Apply two slippage marks across the pushrod tube and jamnut, parallel and on opposite sides of each other. Each slippage mark must extend at least 0.5 inch onto the pushrod tube and must not cover the inspection hole. Figures 2 and 4 of Sikorsky Alert Service Bulletin No. 76-67-57, Basic Issue, dated September 10, 2015, illustrate slippage marks across a pushrod tube and jamnut.

(f) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Boston Aircraft Certification Office, FAA, may approve AMOCs for this EAD. Send your proposal to: Blaine Williams, Aerospace Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, Massachusetts 01803; telephone (781) 238-7161; email 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 EAD through an AMOC.

(g) Additional Information

(1) For further information contact: Blaine Williams, Aerospace Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, Massachusetts 01803; telephone (781) 238-7161; email blaine.williams@faa.gov.

(2) For a copy of the service information referenced 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.

(h) Subject

Joint Aircraft Service Component (JASC) Code: 2700, Flight Control System.

Issued in Fort Worth, Texas, on September 14, 2015.

James A. Grigg,
Acting Directorate Manager, Rotorcraft Directorate,
Aircraft Certification Service.