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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-1113; Directorate Identifier 2009-SW-53-AD; Amendment 39-17005; AD 2012-06-24]

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-92A helicopters. This AD was prompted by the discovery of tail rotor blade assemblies (blades) manufactured with mislocated aluminum wire mesh, leaving portions of the graphite torque tube (spar) region unprotected from a lightning strike. The actions are intended to detect mislocated blade wire mesh and to prevent spar delamination, loss of the blade tip cap during a lightning strike, blade imbalance, loss of a blade, and subsequent loss of control of the helicopter.

DATES: This AD is effective May 15, 2012.

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of May 15, 2012.

ADDRESSES: For service information identified in this AD, contact Sikorsky Aircraft Corporation, Attn: Manager, Commercial Technical Support, mailstop s581a, 6900 Main Street, Stratford, CT 06614; telephone (800) 562-4409; email tsslibrary@sikorsky.com; or at http://www.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, any incorporated-by-reference service information, 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: Nicholas Faust, Aviation Safety Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; telephone (781) 238-7763; email nicholas.faust@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On October 26, 2011, at 76 FR 66209, the Federal Register published our Notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 to include an AD that would apply to Sikorsky Model S-92A helicopters with a tail rotor blade assembly (blade) part numbers (P/N) 92170-11000-044, -045, and -046, with a serial number with a prefix of "A111" and a number equal to or less than "-00585," installed, certificated in any category. That NPRM proposed to require inspecting each blade to determine if the wire mesh is mislocated and replacing the blade with an airworthy blade if the wire mesh is mislocated. The proposed requirements were intended to detect mislocated blade wire mesh and to prevent spar delamination, loss of the blade tip cap during a lightning strike, blade imbalance, loss of a blade, 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.

Related Service Information

Sikorsky issued Special Service Instructions SSI No. 92-021A, Revision A, dated October 21, 2009 (SSI), which specifies inspecting the blade for mislocated blade wire mesh. Two options are identified in the SSI. One option is to conduct an eddy current inspection and the other option is to conduct a visual inspection after sanding to determine if there is mislocated wire mesh.

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 the same type design and that air safety and the public interest require adopting the AD requirements as proposed except for formatting changes. These formatting changes will not increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

We estimate that this AD will affect 44 helicopters of U.S. Registry. There are 486 suspect blades worldwide and we assume 29 percent (141) of those blades may be on helicopters of U.S. registry.

We estimate that operators may incur the following costs in order to comply with this AD. We estimate that inspecting a blade for mislocated wire mesh will take about 4 work-hours per blade, assuming all operators opt to do the blade sanding inspection rather than the eddy current inspection, at an average labor rate of $85 per work-hour. Required parts will cost about $13,000 for each blade repaired by the manufacturer or $180,000 for each new blade. The total cost of the AD for U.S. operators is $3,215,940, assuming 51 blades are found with mislocated wire mesh, and assuming 36 of those blades are replaced with blades repaired by the manufacturer and 15 blades are replaced with new blades.

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):

2012-06-24 Sikorsky Aircraft Corporation: Amendment 39-17005; Docket No. FAA-2011-1113; Directorate Identifier 2009-SW-53-AD.

(a) Applicability

This AD applies to Sikorsky Aircraft Corporation (Sikorsky) Model S-92A helicopters with a tail rotor blade assembly (blade), part number (P/N) 92170-11000-044, -045, and -046, with a serial number with a prefix of "A111" and a number equal to or less than "-00585," installed, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as mislocated aluminum wire mesh in the blade skin which leaves portions of the graphite torque tube (spar) region unprotected from a lightning strike. This condition could result in spar delamination, loss of the blade tip cap during a lightning strike, blade imbalance, loss of a blade, and subsequent loss of control of the helicopter.

(c) Effective Date

This AD becomes effective May 15, 2012.

(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 60 days, inspect the upper and lower airfoils of each tail rotor blade to determine if the wire mesh is mislocated.

(1) Inspect by using either an eddy current inspection in accordance with paragraphs B.(1)(a) through B.(1)(o) or using the hand-sanding method and visually inspecting in accordance with paragraphs B.(2)(a) through B.(2)(d) of Sikorsky Special Service Instructions SSI No. 92-021A, Revision A, dated October 21, 2009, except you are not required to contact or report nonconforming blades to the manufacturer. If you sand and visually inspect and confirm the correct location of the wire mesh, touch-up and repaint the sanded area.

(2) If there is a blade with a mislocated wire mesh, before further flight, replace the blade with an airworthy blade.

(f) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Boston Aircraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Nicholas Faust, Aviation Safety Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; telephone (781) 238-7763; email nicholas.faust@faa.gov.

(2) For operations conducted under a Part 119 operating certificate or under 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: 6410, Tail Rotor Blades.

(h) Material Incorporated by Reference

(1) You must use the specified portions of Sikorsky Special Service Instructions SSI No. 92-021A, Revision A, dated October 21, 2009, to do the specified actions required by this AD. The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Sikorsky Aircraft Corporation, Attn: Manager, Commercial Technical Support, mailstop s581a, 6900 Main Street, Stratford, CT 06614; telephone (800) 562-4409; email tsslibrary@sikorsky.com; or at http://www.sikorsky.com.

(3) 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 or 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/code_of_federal_regulations/ibr_locations.html.

Issued in Fort Worth, Texas, on March 20, 2012.
Kim Smith,
Manager, Rotorcraft Directorate,
Aircraft Certification Service.