

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2010-0060; Directorate Identifier 2010-SW-06-AD; Amendment 39-16282; AD 2010-10-03]**

**RIN 2120-AA64**

### **Airworthiness Directives; Sikorsky Aircraft Corporation (Sikorsky) Model S-92A Helicopters**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

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**SUMMARY:** This amendment adopts a new airworthiness directive (AD) for the Sikorsky Model S-92A helicopters. The AD requires replacing the main gearbox (MGB) filter bowl assembly with a two-piece MGB filter bowl assembly and replacing the existing mounting studs. The AD also requires inspecting the MGB lube system filters, the housing, the housing threads, and the locking counterbore and repairing or replacing them as necessary. This amendment is prompted by tests indicating that an existing MGB filter bowl assembly can fail under certain loading conditions including those associated with a damaged MGB filter or mounting stud resulting from high frequency maintenance tasks. Testing of the improved MGB filter bowl assembly demonstrates a significant increase in strength and durability over the existing filter bowl. The actions specified by this AD are intended to prevent failure of the MGB filter bowl assembly due to failure of the mounting studs or the filter bowl, loss of oil from the MGB, failure of the MGB, and subsequent loss of control of the helicopter.

**DATES:** Effective June 21, 2010.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of June 21, 2010.

**ADDRESSES:** You may get the service information identified in this AD from Sikorsky Aircraft Corporation, Attn: Manager, Commercial Technical Support, mailstop s581a, 6900 Main Street, Stratford, CT, telephone (203) 383-4866, e-mail address [tsslibrary@sikorsky.com](mailto:tsslibrary@sikorsky.com), or at <http://www.sikorsky.com>.

**Examining the Docket:** You may examine the docket that contains this AD, any comments, and other information on the Internet at <http://www.regulations.gov> or at the Docket Operations office, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Kirk Gustafson, Aviation Safety Engineer, Boston Aircraft Certification Office, Engine and Propeller Directorate, FAA, 12 New England Executive Park, Burlington, MA 01803, telephone (781) 238-7190, fax (781) 238-7170.

**SUPPLEMENTARY INFORMATION:** A proposal to amend 14 CFR part 39 to include an AD for the specified model helicopters was published in the Federal Register on January 27, 2010 (75 FR 4308). That action proposed to require replacing the MGB filter bowl assembly with a two-piece MGB filter bowl assembly and replacing the existing mounting studs. That action also proposed inspecting the MGB lube system filters, the housing, the housing threads, and the lockring counterbore and repairing and replacing them as necessary.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposal or the FAA's determination of the cost to the public. The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

The FAA estimates that this AD will affect 22 helicopters of U.S. registry. The required actions will take about 6 hours to inspect the existing filter bowl assembly and replace the MGB lube system filters, the mounting studs, and to install an improved filter bowl assembly at an average labor rate of \$85 per work hour. Required parts will cost about \$3,257 per helicopter. Based on these figures, the total cost impact of the AD on U.S. operators is \$82,214.

## **Regulatory Findings**

We have 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 above, I certify that the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. 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. See the AD docket to examine the economic evaluation.

## **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.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. Section 39.13 is amended by adding a new airworthiness directive to read as follows:



**2010-10-03 Sikorsky Aircraft Corporation:** Amendment 39-16282. Docket No. FAA-2010-0060; Directorate Identifier 2010-SW-06-AD.

**Applicability:** Model S-92A helicopters, with main gearbox (MGB) filter bowl assembly, part number (P/N) 92351-15802-101, installed, certificated in any category.

**Compliance:** Required as indicated, unless done previously.

To prevent failure of the MGB filter bowl assembly due to failure of the mounting studs or the filter bowl, loss of oil from the MGB, failure of the MGB, and subsequent loss of control of the helicopter, do the following:

(a) Within 60 days:

(1) Remove the MGB filter bowl assembly by following the Accomplishment Instructions, paragraphs 3.A. (1) through 3.A.(5), of Sikorsky Alert Service Bulletin No. 92-63-022A, dated December 18, 2009 (ASB).

(2) Remove the primary filter element, P/N 70351-38801-102, from the MGB lube system filter and visually inspect it for damage as depicted in Figures 1, 2, and 3 of the ASB. If the primary filter element has "wavy" pleats, internal buckling, or indented dimples, before further flight, replace it with an airworthy filter element.

(3) Visually inspect the secondary filter element, P/N 70351-38801-103, for damage as depicted in Figures 4 and 5 of the ASB. If the secondary filter element has "wavy" pleats or an elongated cup, before further flight, replace it with an airworthy filter element.

(4) Replace the MGB lube system filter assembly mounting studs:

(i) Remove the studs by following the Accomplishment Instructions, paragraphs 3.B.(1) through 3.B.(4) of the ASB. Visually inspect the tapped holes for any damage to the threads. Serrations on the entire counter bore (360 degrees) are acceptable. Serrations in the housing must be intact, and mating serrations on the lock ring must line up with serrations on the housing. Visually inspect the housing to determine that the housing threads are free from damage and corrosion. Visually inspect housing lockring counterbore to determine if the housing is airworthy.

(ii) If you find damage or corrosion to the housing threads, the housing, or the lockring counterbore, stop work and contact Kirk Gustafson, Aviation Safety Engineer, Boston Aircraft Certification Office, Engine and Propeller Directorate, FAA, 12 New England Executive Park, Burlington, MA 01803, telephone (781) 238-7190, fax (781) 238-7170.

(iii) If you do not find damage to the housing threads, the housing, or the lockring counterbore that requires repair, replace the mounting studs by following the Accomplishment Instructions, paragraphs 3.B.(7) through 3.B.(15) of the ASB.

(5) Install an airworthy, two-piece MGB filter bowl assembly modification kit, P/N 92070-35005-011, as depicted in Figures 8 and 9 of the ASB and by following the Accomplishment Instructions, paragraphs 3.C.(1) through 3.C.(20), of the ASB.

(b) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Contact the Manager, Boston Aircraft Certification Office, Attn: Kirk Gustafson, Aviation Safety Engineer, Boston Aircraft Certification Office, Engine and Propeller Directorate, FAA, 12 New England Executive Park, Burlington, MA 01803, telephone

(781) 238-7190, fax (781) 238-7170, for information about previously approved alternative methods of compliance.

(c) The Joint Aircraft System/Component (JASC) Code is 6320: Main Rotor Gearbox.

(d) Inspecting and replacing the MGB filter bowl assembly shall be done by following the specified portions of Sikorsky Alert Service Bulletin No. 92-63-022A, dated December 18, 2009. The Director of the Federal Register approved this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Sikorsky Aircraft Corporation, Attn: Manager, Commercial Technical Support, mailstop s581a, 6900 Main Street, Stratford, CT, telephone (203) 383-4866, e-mail address [tsslibrary@sikorsky.com](mailto:tsslibrary@sikorsky.com), or at <http://www.sikorsky.com>. Copies may be inspected at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas, 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](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

(e) This amendment becomes effective on June 21, 2010.

Issued in Fort Worth, Texas, on April 27, 2010.

Mark R. Schilling,  
Acting Manager, Rotorcraft Directorate,  
Aircraft Certification Service.