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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2012-0715; Directorate Identifier 2012-SW-039-AD; Amendment 39-17122; AD 2012-14-08]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Sikorsky Aircraft Corporation Helicopters**

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

**ACTION:** Final rule; request for comments.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for Sikorsky Aircraft Corporation (Sikorsky) Model S-92A helicopters. This AD requires inspecting the main gearbox (MGB) for a crack. This AD is prompted by a crack in the cored passage of the MGB housing, which may be indicated by oil on the housing. These actions are intended to detect a crack in the MGB housing, which could result in loss of oil, failure of the MGB, and subsequent loss of control of the helicopter.

**DATES:** This AD becomes effective August 1, 2012.

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of August 1, 2012.

We must receive comments on this AD by September 17, 2012.

**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, 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, Attn: Manager, Commercial Technical Support, mailstop s581a, 6900 Main Street, Stratford, CT 06614; telephone (800) 562-4409; email address [tsslibrary@sikorsky.com](mailto: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.

**FOR FURTHER INFORMATION CONTACT:** Michael Schwetz, Aviation Safety Engineer, Boston Aircraft Certification Office, Engine & Propeller Directorate, FAA, 12 New England Executive Park, Burlington, MA 01803; telephone (718) 238-7761; email [michael.schwetz@faa.gov](mailto: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**

This AD is prompted by an incident in which a crack in the MGB housing, in the cored passage area adjacent to the scissor bracket mount, allowed a measurable amount of oil to leak from the MGB. This condition, if not corrected, could result in loss of oil, failure of the MGB 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 helicopters of the same type design.

### **Related Service Information**

Sikorsky has developed inspection procedures and issued Sikorsky S-92 Alert Service Bulletin (ASB) No. ASB 92-63-032 Basic Issue, dated December 22, 2011 (ASB 92-63-032), to detect a crack in the MGB by inspecting the area of the MGB housing, as indicated in Figure 1 of ASB 92-63-032, for the presence of oil. We reviewed ASB 92-63-032, which describes procedures to inspect the MGB for indications of oil leakage. If indications of oil leakage are found, ASB 92-63-032 specifies cleaning the inspection area, performing a ground run and confirming the source of the leakage by using a specified ultraviolet light and repeating the visual inspection using a 10X magnifying glass. If

any oil leakage is found, the ASB 92-63-032 states that the MGB is not to be used for further flight until direction is provided by Sikorsky. ASB 92-63-032 also requires a recurrent inspection for any oil leakage, and references Sikorsky Maintenance Manual Temporary Revision No. 63-50, (TR 63-50), and Temporary Revision No. 5-104 (TR 5-104), both dated December 22, 2011. TR 63-50 adds the MGB inspection procedures to the aircraft maintenance manual, and TR 5-104 adds the MGB inspection requirement to the "Before First Flight of the Day Checklist." TR 5-104 also specifies inspecting the MGB before the first flight of the day, not to exceed 10 flight hours between inspections.

Since issuing ASB 92-63-032, Sikorsky has issued S-92 ASB No. ASB 92-63-034 Basic Issue, dated March 8, 2012 (ASB 92-63-034), which describes procedures to detect cracks in the MGB main module assembly with a one-time eddy-current and fluorescent-penetrant inspection. ASB 92-63-034 also states that upon compliance with the eddy-current inspection "the daily visual inspection implemented by ASB 92-63-032 is waived."

## **AD Requirements**

This AD requires repetitively inspecting the main gearbox with a 10X magnifying glass for a crack. If there is a crack, or if any oil leakage is detected, this AD requires replacing the MGB with an airworthy MGB. This AD also provides for a one-time eddy-current inspection of the main module assembly of the MGB as an optional terminating action.

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

The ASB requires inspecting for any oil leakage, while this AD requires inspecting for a crack, which may be indicated by the presence of oil leakage. The ASB requires sending photographic documentation of any oil leakage to Sikorsky; this AD does not. The ASB also requires contacting Sikorsky for further direction if any oil leakage is confirmed; this AD requires replacing any affected MGB with an airworthy MGB.

## **Costs of Compliance**

We estimate that this AD will affect 16 helicopters of U.S. Registry. We estimate that operators may incur the following costs, at an average labor rate of \$85 per hour, in order to comply with this AD. Inspecting the MGB will require one work hour for a total cost to the operator of \$85 and a cost to the entire U.S. fleet of \$1,360 per inspection cycle. Performing the eddy-current inspection of the MGB will require 2 work hours for a total cost to the operator of \$170 and a cost to the entire U.S. fleet of \$2,720. If cracked, we estimate replacing a MGB will require 112 work hours and required parts will cost \$260,000, for a total cost to the operator of \$269,520.

## **FAA's Justification and Determination of the Effective Date**

Providing an opportunity for public comments prior to 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 prior to the adoption of this rule because the required corrective actions must be accomplished within 10 hours time-in-service, and repeated on a daily basis. These helicopters are primarily used in the offshore industry, and this is a very short compliance time for this industry.

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):



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**2012-14-08 Sikorsky Aircraft Corporation:** Amendment 39-17122; Docket No. FAA-2012-0715; Directorate Identifier 2012-SW-039-AD.

**(a) Applicability**

This AD applies to Model S-92A helicopters, serial numbers 920006 through 920155, certificated in any category.

**(b) Unsafe Condition**

This AD defines the unsafe condition as a crack in the main gearbox (MGB) housing cored oil passage. This condition could result in loss of oil, failure of the MGB, and subsequent loss of control of the helicopter.

**(c) Effective Date**

This AD becomes effective August 1, 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 10 hours time-in-service (TIS) or 15 days, whichever occurs earlier, and thereafter before the first flight of each day, not to exceed 10 hours TIS between inspections, accomplish the following:

(1) Clean and inspect, using a 10x or higher power magnifying glass, the MGB housing for a crack in the inspection area shown in Figure 1 of Sikorsky S-92 Alert Service Bulletin No. ASB 92-63-032 Basic Issue, dated December 22, 2011.

Note to paragraph (e)(1) of this AD: A crack may be indicated by the presence of oil in the inspection area of the MGB housing.

(2) If there is a crack, before further flight, replace the MGB with an airworthy MGB.

(3) Compliance with the one-time eddy-current inspection of the main module assembly of the MGB in accordance with the Accomplishment Instructions, paragraph 3.C, of Sikorsky S-92 ASB No. ASB 92-63-034 Basic Issue, dated March 8, 2012, by a technician certified to non-destructive testing Level II or greater is an optional terminating action for the inspection requirements of this AD.

**(f) Special Flight Permits**

Special flight permits will not be issued.

**(g) 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, Boston Aircraft Certification Office, Engine & Propeller Directorate, FAA, 12 New England Executive Park, Burlington, MA 01803; telephone (718) 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.

**(h) Subject**

Joint Aircraft Service Component (JASC) Code: 6320: Main Rotor Gearbox.

**(i) 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 S-92 Alert Service Bulletin No. ASB 92-63-032 Basic Issue, dated December 22, 2011;

(ii) Sikorsky S-92 Alert Service Bulletin No. ASB 92-63-034 Basic Issue, dated March 8, 2012.

(3) 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 address tsslibrary@sikorsky.com; or at <http://www.sikorsky.com>.

(4) You may review copies of this service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

(5) You may also review copies of 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/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Fort Worth, Texas, on July 2, 2012.

Kim Smith,  
Manager, Rotorcraft Directorate,  
Aircraft Certification Service.