



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2019-1115; Project Identifier 2018-SW-065-AD; Amendment 39-21203; AD 2020-16-19]**

**RIN 2120-AA64**

**Airworthiness Directives; Sikorsky Aircraft Corporation Helicopters**

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

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Sikorsky Aircraft Corporation (Sikorsky) Model S-92A helicopters. This AD was prompted by two incidents of erroneous low oil pressure caution cockpit indications and unintended actuation of the main gearbox (MGB) auto bypass valve. This AD requires installing auxiliary circuit breaker modification (MOD) kits and inserting a Rotorcraft Flight Manual (RFM) Supplement into the existing RFM for your helicopter. The FAA is issuing this AD to address the unsafe condition on these products.

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

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact your local

Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-946-4337 (1-800-Winged-S); email [wcs\\_cust\\_service\\_eng.gr-sik@lmco.com](mailto:wcs_cust_service_eng.gr-sik@lmco.com). Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110. It is also available on the internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-1115.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-1115; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Michael Schwetz, Aviation Safety Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; telephone 781-238-7761; email [michael.schwetz@faa.gov](mailto:michael.schwetz@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part

39 by adding an AD that would apply to Sikorsky Model S-92A helicopters, serial number (S/N) 920006 through 920304 inclusive and S/N 920311 through 920314 inclusive. The NPRM published in the *Federal Register* on February 18, 2020 (85 FR 8771). The NPRM was prompted by two incidents of erroneous low oil pressure caution cockpit indications and unintended actuation of the MGB auto bypass valve caused by unintended popping of the M XMSN OIL WARN circuit breaker during flight. The root cause of this circuit breaker popping is unknown. When this circuit breaker trips, the following cautions will display “MGB PUMP 1 FAIL, MGB PUMP 2 FAIL, MGB OIL HOT, MGB MAN COOL, MGB OIL PRES.” With the MGB auto bypass valve actuated, the MGB BYPASS caution will not annunciate. For the given conditions, the appropriate action for the crew is “land as soon as possible” in accordance with the RFM Emergency Procedures. The erroneous indications conflicting with correct gauge readings may overwhelm the flight crew, resulting in a forced landing of the helicopter.

To address this unsafe condition, Sikorsky developed MOD kits based on helicopter S/N to introduce a separate circuit breaker for the MGB last jet pressure switch. These MOD kits specify reworking the overhead panel to install new clips and brackets, circuit breaker wiring harnesses, wiring MODs, the auxiliary circuit breaker panel, and the M XMSN PRESS SWITCH circuit breaker. Accordingly, the NPRM proposed to require installing MOD kits and inserting an RFM Supplement into the existing RFM for your helicopter. The FAA is issuing this AD to address the unsafe condition on these products.

## **Comments**

The FAA gave the public the opportunity to participate in developing this final

rule. The FAA received comments from one commenter. The following presents the comments received on the NPRM and the FAA's response to the comments.

### **Request**

The commenter expressed concern about the compliance time of 400 hours time-in-service (TIS), described it as a substantial amount of time, and suggested operators fix the problem immediately. The commenter did not provide a technical rationale for the FAA to review.

The FAA disagrees that a shorter compliance time is required to correct the unsafe condition. In determining that a compliance time of 400 hours TIS mitigates the risk to an acceptable level, the FAA considered factors including Sikorsky service information, the scope of the required actions in this AD, and the scheduled maintenance for Sikorsky Model S-92A helicopters.

### **Conclusion**

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule as proposed.

### **Related Service Information under 1 CFR part 51**

The FAA reviewed Sikorsky Special Service Instructions No. 92-121, dated October 26, 2017 (SSI 92-121). This service information describes procedures for installing an auxiliary circuit breaker panel MOD kit and M XMSN PRESS SWITCH circuit breaker MOD kit based on helicopter S/N.

The FAA also reviewed RFM Supplement No. 45, Revision No. 2, Sikorsky Model S-92A, Part 1, dated April 27, 2017 (S-92A RFMS 45, Part 1, Revision 2). This

service information specifies operating limitations, preflight checks, normal and emergency procedures, and malfunction information for helicopters with Avionics Management System version 7.1 or 8.0 with the MGB OIL OUT warning activated, pump failure indicating system, MGB auto bypass, and M XMSN PRESS SWITCH circuit breaker installed.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

#### **Other Related Service Information**

The FAA reviewed Sikorsky S-92 Helicopter Alert Service Bulletin 92-63-037, Revision A, dated March 1, 2018. This service information contains planning information pertaining to the auxiliary circuit breaker panel and M XMSN PRESS SWITCH circuit breaker MOD kits, accomplishing SSI 92-121, and inserting S-92A RFMS 45, Part 1, Revision 2 into the helicopter cockpit.

#### **Costs of Compliance**

The FAA estimates that this AD affects 36 helicopters of U.S. registry. Labor costs are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Modifying helicopters S/N 920006 through 920296 inclusive will take about 48 work-hours and parts will cost about \$1,618 for an estimated cost of \$5,698 per helicopter and \$182,336 for the U.S. fleet size of 32 helicopters.

Modifying helicopters S/N 920297 through 920304 inclusive and S/N 920311 through 920314 inclusive will take about 2 work-hours and parts will cost about \$65 for

an estimated cost of \$235 per helicopter and \$940 for the U.S. fleet size of 4 helicopters.

Revising the RFM will take about 0.5 work-hour for an estimated cost of \$43 per helicopter and \$1,548 for the U.S. fleet.

### **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.

The FAA is 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) Will not affect intrastate aviation in Alaska, 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.

**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):

**2020-16-19 Sikorsky Aircraft Corporation:** Amendment 39-21203; Docket No. FAA-2019-1115; Project Identifier 2018-SW-065-AD.

**(a) Effective Date**

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

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Sikorsky Aircraft Corporation Model S-92A helicopters, serial number (S/N) 920006 through 920304 inclusive and S/N 920311 through 920314

inclusive, certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC) Code: 6340, Rotor Drive Indicating System.

**(e) Unsafe Condition**

This AD was prompted by two incidents of erroneous low oil pressure caution cockpit indications and unintended actuation of the main gearbox (MGB) auto bypass valve. The FAA is issuing this AD to prevent the M XMSM OIL WARN circuit breaker from presenting erroneous cautions when tripped. The unsafe condition, if not addressed, could result in erroneous low oil pressure caution cockpit indication, unintended actuation of the MGB auto bypass valve, increased oil temperature, conflicting indications, and forced landing of the helicopter.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

Within 400 hours time-in-service:

(1) For helicopters S/N 920006 through 920296 inclusive:

(i) Install Modification (MOD) Kit Clips and Brackets part number (P/N) 92070-20115-015 by following the Instructions, paragraph B. of Sikorsky Special Service Instructions No. 92-121, dated October 26, 2017 (SSI 92-121).

(ii) Install the first portion of MOD Kit Auxiliary Circuit Breaker Panel P/N 92070-55075-011 by following the Instructions, paragraph C. of Sikorsky SSI 92-121.

(iii) Install MOD Kit Left Hand (LH) Cockpit Auxiliary Power Unit P/N 92070-

55096-012 by following the Instructions, paragraph D. of Sikorsky SSI 92-121.

(iv) Install MOD Kit LH Cabin Auxiliary Power Unit P/N 92070-55096-013 by following the Instructions, paragraph E. of Sikorsky SSI 92-121.

(v) Install MOD Kit LH Top Deck FLD P/N 92070-55096-016 by following the Instructions, paragraph F. of Sikorsky SSI 92-121.

(vi) Install MOD Kit MGB XMSN P/N 92070-55096-017 by following the Instructions, paragraph G. of Sikorsky SSI 92-121.

(vii) Install the completion portion of MOD Kit Auxiliary Circuit Break Panel P/N 92070-55075-011 by following the Instructions, paragraph H. of Sikorsky SSI 92-121.

(viii) Install MOD Kit Auxiliary Cabin Panel Faceplate P/N 92070-55075-012 by following the Instructions, paragraph J. of Sikorsky SSI 92-121.

(2) For helicopters S/N 920297 through 920304 inclusive and S/N 920311 through 920314 inclusive:

(i) Modify the auxiliary circuit breaker panel and transmission harness by following the Instructions, paragraph I. of Sikorsky SSI 92-121.

(ii) Install MOD Kit Auxiliary Cabin Panel Faceplate P/N 92070-55075-012 by following the Instructions, paragraph J. of Sikorsky SSI 92-121.

(3) Insert a copy of the Rotorcraft Flight Manual (RFM) Supplement No. 45, Revision No. 2, Sikorsky Model S-92A, Part 1, dated April 27, 2017, into the existing RFM for your helicopter.

#### **(h) Credit for Previous Actions**

Completion of the Accomplishment Instructions of Sikorsky S-92 Helicopter

Alert Service Bulletin 92-63-037, Revision A, dated March 1, 2018, before the effective date of this AD is considered acceptable for compliance with the actions required by paragraph (g) of this AD.

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

(1) The Manager, Boston ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(j) Related Information**

For more information about this AD, contact Michael Schwetz, Aviation Safety Engineer, Boston ACO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; telephone 781-238-7761; email [michael.schwetz@faa.gov](mailto:michael.schwetz@faa.gov).

**(k) 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 Special Service Instructions No. 92-121, dated October 26, 2017.

(ii) Rotorcraft Flight Manual Supplement No. 45, Revision No. 2, Sikorsky Model S-92A, Part 1, dated April 27, 2017.

(3) For Sikorsky Aircraft Corporation service information identified in this AD, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; telephone 1-800-946-4337 (1-800-Winged-S); email [wcs\\_cust\\_service\\_eng.gr-sik@lmco.com](mailto:wcs_cust_service_eng.gr-sik@lmco.com). Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110.

(5) You may view 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, email [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on July 30, 2020.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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