



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2017-0270; Product Identifier 2016-SW-032-AD; Amendment 39-18993; AD 2017-17-03]**

**RIN 2120-AA64**

**Airworthiness Directives; MD Helicopters, Inc., Helicopters**

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

**ACTION:** Final rule.

**SUMMARY:** We are superseding Airworthiness Directive (AD) 2014-16-01 for MD Helicopters, Inc. (MDHI), Model MD900 helicopters. AD 2014-16-01 required an eddy current inspection of the main rotor upper hub assembly (upper hub) for a crack. This AD requires additional inspections and replacing the fillet seal. This AD was prompted by three additional reports of upper hub cracks. The actions of this AD are intended to prevent an 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 a certain publication 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 MD Helicopters, Inc., Attn: Customer Support Division, 4555 E. McDowell Rd., Mail Stop

M615, Mesa, AZ 85215-9734; telephone 1-800-388-3378; fax 480-346-6813; or at <http://www.mdhelicopters.com>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0270.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> in Docket No. FAA-2017-0270; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, any incorporated-by-reference information, the economic evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, 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:** Eric Schrieber, Aviation Safety Engineer, Los Angeles ACO Branch, Compliance and Airworthiness Division, FAA, 3960 Paramount Blvd., Lakewood, California 90712; telephone (562) 627-5348; email [eric.schrieber@faa.gov](mailto:eric.schrieber@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to remove AD 2014-16-01, Amendment 39-17925 (79 FR 45322, August 5, 2014) and add a new AD. AD 2014-16-01 applied to MDHI Model MD900 helicopters, serial numbers

900-00008 through 900-00140, with an upper hub part number (P/N) 900R2101006-105, -107, -109, or -111 installed. AD 2014-16-01 required eddy current inspecting the upper hub and replacing it if there is a crack. The NPRM published in the Federal Register on April 3, 2017 (82 FR 16138).

The NPRM was prompted by reports of three additional cracks found in the MD900 fleet. These cracks were not discovered by the one-time eddy current inspection required by AD 2014-16-01, but were found during regular maintenance of the upper hub. The NPRM proposed to require for MDHI MD900 helicopters with an upper hub, regardless of helicopter serial number, repetitive visual inspections of the fillet seal and the areas around the flexbeam boltholes for a crack and repetitive visual inspections of the lead leg shims and bushings for corrosion around the flexbeam boltholes. The NPRM also proposed repetitive ultrasonic eddy-current inspections of the areas adjacent to the flexbeam boltholes for a crack. If during any inspection there is corrosion or a crack, the NPRM proposed replacing the upper hub before further flight. Finally, after each inspection, the NPRM proposed installing a fillet seal to the bushing and upper hub interface.

### **Comments**

We gave the public the opportunity to participate in developing this AD, but we did not receive any comments on the NPRM.

### **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 helicopters of the same type

design and that air safety and the public interest require adopting the AD requirements as proposed.

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

MDHI has issued Service Bulletin SB900-125, dated February 19, 2016, which describes procedures for repetitive visual and eddy current inspections of the upper hub upper and lower flexbeam bolthole areas and for applying a fillet seal on the interface of the bushing and the flex beam retention bolt hole.

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.

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

The service information applies to upper hubs with 1,000 or more hours TIS. This AD applies to all upper hubs regardless of hours TIS. The service information applies to upper hub P/N 900R2101006-107 and -109; this AD also applies to upper hub P/N 900R2101006-105 and -111.

### **Costs of Compliance**

We estimate that this AD affects 23 helicopters of U.S. Registry. At an average labor rate of \$85 per hour, we estimate that operators may incur the following costs in order to comply with this AD.

Inspecting the fillet seal around the flexbeam boltholes (100 hour TIS inspection) requires about 1 work-hour, for a cost per helicopter of \$85 and a cost of \$1,955 for the fleet, per inspection cycle. Inspecting the flexbeam area and lead leg shims and bushings (annual inspection) requires about 2 work-hours, for a cost per helicopter of \$170 and a

cost of \$3,910 for the fleet, per inspection cycle. Eddy current inspecting (1,000 hour TIS inspection) the upper hub requires about 2 work-hours, for a cost per helicopter of \$170 and a cost of \$3,910 for the fleet.

If required, replacing the upper hub requires about 11 work-hours, and required parts would cost about \$15,998, for a cost per helicopter of \$16,933. If required, replacing a missing or damaged fillet seal requires about .5 work-hour, and required parts cost would be minimal, for a cost per helicopter of \$43.

### **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 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 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 a regulatory distinction is required, 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.

#### **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 removing Airworthiness Directive (AD) 2014-16-01, Amendment 39-17925 (79 FR 45322, August 5, 2014), and adding the following new AD:

2017-17-03 **MD Helicopters, Inc. (MDHI)**: Amendment 39-18993; Docket No. FAA-

2017-0270; Product Identifier 2016-SW-032-AD.

**(a) Applicability**

This AD applies to Model MD900 helicopters with main rotor upper hub assembly (upper hub) part number 900R2101006-105, -107, -109, or -111 installed, certificated in any category.

**(b) Unsafe Condition**

This AD defines the unsafe condition as a cracked upper hub. This condition could result in failure of the upper hub and subsequent loss of control of the helicopter.

**(c) Affected ADs**

This AD supersedes AD 2014-16-01, Amendment 39-17925 (79 FR 45322, August 5, 2014).

**(d) Effective Date**

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

**(e) 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.

**(f) Required Actions**

(1) Within 100 hours time-in-service (TIS), and thereafter at intervals not to exceed 100 hours TIS:

(i) Inspect the fillet seal around each flexbeam bolthole to determine whether it adheres properly to the hub or bushing or is missing. Indications of an improperly adhered seal include lifting, bubbling, peeling away, drying out, or cracking. If the fillet

seal is not properly adhered or is missing, before further flight, replace the fillet seal with sealant C232 or equivalent by following the Accomplishment Instructions, paragraphs 2.D.(2) through 2.D.(5) and Figure 1, of MD Helicopters Service Bulletin SB900-125, dated February 19, 2016 (SB900-125).

(ii) Using a light and a 10X or higher power magnifying glass, inspect the area outside of the fillet seal around each flexbeam bolthole on the top of the upper hub assembly for a crack. If there is a crack, before further flight, replace the upper hub assembly.

(2) Within 12 months, and thereafter at intervals not to exceed 12 months:

(i) Remove the paint and primer from the area around each flexbeam bolthole on top of the upper hub. Remove the fillet seal from the mating surface of each bushing and the top of the upper hub.

(ii) Using a light and a 10X or higher power magnifying glass, inspect the area around each flexbeam bolthole for a crack. If there is a crack, before further flight, replace the upper hub assembly.

(iii) Inspect each lead leg shim and bushing for corrosion around the flexbeam boltholes on the bottom of the upper hub in the flexbeam pockets. If there is corrosion, before further flight:

(A) Remove the lead leg shim from the flexbeam pocket and clean the area adjacent to the flexbeam bolthole to remove any corrosion within maximum repair damage limits. If the corrosion exceeds maximum repair damage limits, replace the upper hub assembly.

(B) Using a light and a 10X or higher power magnifying glass, inspect the area around the flexbeam bolthole for a crack. If there is a crack, before further flight, replace the upper hub assembly.

(iv) Replace the fillet seal as described in paragraph (f)(1)(i) of this AD.

(3) Within 1,000 hours TIS, and thereafter at intervals not to exceed 1,000 hours TIS:

(i) Eddy current inspect the areas adjacent to each flexbeam bolthole, top and bottom, for a crack. This eddy current inspection must be performed by a Level II or higher technician with the American Society for Nondestructive Testing ASNT-TC-1A, European Committee for Standardization CEN EN 4179, Military Standard MIL-STD-410, National Aerospace Standard NAS410, or equivalent certification who has performed an eddy current inspection within the last 12 months. If there is a crack, before further flight, replace the upper hub assembly.

(ii) Replace the fillet seal as described in paragraph (f)(1)(i) of this AD.

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

(1) The Manager, Los Angeles ACO Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Eric Schrieber, Aviation Safety Engineer, Los Angeles ACO Branch, Compliance and Airworthiness Division, FAA, 3960 Paramount Blvd., Lakewood, California 90712; telephone (562) 627-5348; email 9-ANM-LAACO-AMOC-REQUESTS@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: 6220, Main Rotor Head.

**(i) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference 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) MD Helicopters Service Bulletin SB900-125, dated February 19, 2016.

(ii) Reserved.

(3) For MD Helicopters service information identified in this AD, contact MD Helicopters, Inc., Attn: Customer Support Division, 4555 E. McDowell Rd., Mail Stop M615, Mesa, AZ 85215-9734; telephone 1-800-388-3378; fax 480-346-6813; or at <http://www.mdhelicopters.com>.

(4) You may view this service information at 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, call (202) 741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Fort Worth, Texas, on August 7, 2017.

Scott A. Horn,

Deputy Director for Regulatory Operations,

Compliance & Airworthiness Division,

Aircraft Certification Service.

[FR Doc. 2017-17085 Filed: 8/18/2017 8:45 am; Publication Date: 8/21/2017]