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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

[Docket No. FAA-2013-0401; Directorate Identifier 2012-SW-047-AD; Amendment 39-17606; AD 2013-19-24]

#### **RIN 2120-AA64**

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

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

**ACTION:** Final rule.

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**SUMMARY:** We are superseding Airworthiness Directive (AD) 2003-08-51 for MD Helicopters, Inc. (MDHI), Model 369A, 369D, 369E, 369H, 369HE, 369HM, 369HS, 369F and 369FF helicopters with certain MDHI or Helicopter Technology Company (HTC) tail rotor blades installed. AD 2003-08-51 required reducing the retirement life of each tail rotor blade (blade), performing a one-time visual inspection of each blade's pitch horn (pitch horn) for a crack or corrosion, and replacing any cracked blade or any blade that has exceeded its retirement life with an airworthy blade. AD 2003-08-51 also required reporting information to the FAA within 24 hours following the one-time inspection. Since we issued AD 2003-08-51, an accident in England prompted an investigation that showed corrosion on the blade's pitch horn that had not been detected under the paint. This new AD retains some of the requirements of AD 2003-08-51 and also requires paint removal for all pitch horn inspections, inspecting for pitting and the shot peen surface's condition in addition to cracks and corrosion, and adds certain part-numbered blades to the applicability. These actions are intended to prevent a pitch horn from cracking, leading to vibration, loss of tail rotor pitch control, and subsequent loss of tail rotor and helicopter control.

**DATES:** This AD is effective December 5, 2013.

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of December 5, 2013.

**ADDRESSES:** For 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; email [serviceengineering@mdhelicopters.com](mailto:serviceengineering@mdhelicopters.com); Web site <http://www.mdhelicopters.com> or contact Helicopter Technology Company, 12923 South Spring Street, Los Angeles, CA 90061; telephone 310-523-2750; email [gburdorf@helicoptertech.com](mailto:gburdorf@helicoptertech.com); Web site [www.helicoptertech.com](http://www.helicoptertech.com).

### **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:** Fred Guerin, Aviation Safety Engineer, Los Angeles Aircraft Certification Office, Transport Airplane Directorate, FAA, 3960 Paramount Blvd., Lakewood, California 90712; telephone (562) 627-5232; email fred.guerin@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

On May 13, 2013, at 78 FR 27867, the Federal Register published our notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 by removing AD No. 2003-08-51 (68 FR 39449, July 2, 2003; corrected 68 FR 47447, August 11, 2003) and by adding an AD that would apply to MDHI Model 369A, 369D, 369E, 369H, 369HE, 369HM, 369HS, 369F and 369FF helicopters with a tail rotor blade (blade) part number (P/N) 369D21640-501, 369D21640-503, 369D21641-501, 369D21641-503, 369D21642-501, 369D21642-503, 369D21643-501, or 369D21643-503 installed, or with an HTC blade P/N 500P3100-101, 500P3100-301, 500P3300-501, or 500P3500-701 installed. AD No. 2003-08-51 required reducing the retirement life of the blade, performing a one-time visual inspection of each pitch horn for a crack or corrosion, and replacing any cracked blade or any blade that has exceeded its retirement life. AD No. 2003-08-51 was prompted by two reports of cracked pitch horns that failed during flight. The cracks developed before the blades reached their retirement lives.

### **Actions Since AD 2003-08-51 Was Issued**

Since we published AD No. 2003-08-51, investigation of an accident in England found corrosion on the pitch horn that was not detected under the paint. The corrosion compromised the shot peen surface, which caused premature fatigue failure.

As a result, the NPRM (78 FR 27867, May 13, 2013) proposed to require establishing a retirement life for new applicable blades of 400 hours time-in-service (TIS), replacing within 10 hours TIS any installed blades with 390 to 700 hours TIS, and replacing before further flight any blades with more than 700 hours TIS. Within 60 days and thereafter at intervals not to exceed one year, the NPRM proposed to inspect all other blades with a 10X or higher power magnifying glass for a crack, pitting, corrosion, and the condition of the dimpled shot peen surface. If there is a crack, pitting, corrosion, or a nonconforming shot peen surface, the NPRM proposed to require replacement of the blade with an airworthy blade. The proposed requirements were intended to prevent a pitch horn from cracking and separating from the blade, leading to an unbalanced condition, vibration, loss of tail rotor pitch control, and loss of directional 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 (78 FR 27867, May 13, 2013).

### **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 these same type designs and that air safety and the public interest require adopting the AD requirements as proposed.

### **Related Service Information**

We reviewed MDHI Service Bulletins SB369D-210, SB369E-105, SB369F-091, and SB369H-252, all dated November 21, 2011, and HTC Mandatory Service Bulletin No. 3100-5, dated August 25, 2011 (service bulletins). The service bulletins specify removing the paint from the pitch horn, performing an inspection of

the blade using a 10x magnifying glass and a bright light, repainting the pitch horn area, and repeating the inspection annually. The service bulletins state that no corrosion, pitting, or cracking is acceptable. The MDHI service bulletins adds that a lack, removal, or blending of the shot peen surface is unacceptable.

### **Costs of Compliance**

We estimate that this AD will affect 827 helicopters of U.S. Registry and that labor costs will average \$85 a work-hour. Based on these estimates, we expect the following costs:

- The inspection will require 4.5 work hours, and parts will cost \$20 for a total cost of about \$403 per helicopter and \$333,281 for the U.S. fleet.
- Replacing a tail rotor blade, if needed, would require 1 work hour. Parts would cost \$15,951, for a total cost of \$16,036 per helicopter.
- The cost is negligible to revise the Airworthiness Limitations section of the maintenance manual to reflect a blade's new retirement life.

### **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 removing Airworthiness Directive (AD) 2003-08-51, Amendment 39-13215 (68 FR 39449, August 11, 2003; correction 68 FR 47447, August 11, 2003), and adding the following new (AD):



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**2013-19-24 MD Helicopters, Inc.:** Amendment 39-17606; Docket No. FAA-2013-0401; Directorate Identifier 2012-SW-047-AD.

**(a) Applicability**

This AD applies to MD Helicopters, Inc. (MDHI), Model 369A, 369D, 369E, 369H, 369HE, 369HM, 369HS, 369F and 369FF helicopters with a tail rotor blade (blade) part number (P/N) 369D21640-501, 369D21640-503, 369D21641-501, 369D21641-503, 369D21642-501, 369D21642-503, 369D21643-501, or 369D21643-503 installed, or with a Helicopter Technology Company blade P/N 500P3100-101, 500P3100-301, 500P3300-501, or 500P3500-701 installed, certificated in any category.

**(b) Unsafe Condition**

This AD defines the unsafe condition as the tail rotor blade pitch horn (pitch horn) separating from the tail rotor blade, leading to an unbalanced condition, vibration, loss of tail rotor pitch control and loss of directional control of the helicopter.

**(c) Affected ADs**

This AD supersedes AD No. 2003-08-51, Amendment 39-13215 (68 FR 39449, July 2, 2003; correction 68 FR 47447, August 11, 2003).

**(d) Effective Date**

This AD becomes effective December 5, 2013.

**(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) Before further flight, for each applicable blade, revise the Airworthiness Limitations section of the maintenance manual to reflect that the blade has a retirement life of 400 hours time-in-service (TIS).

(2) For helicopters with an applicable blade installed that has 390 through 700 hours TIS, within 10 hours TIS, replace the blade with an airworthy blade.

(3) For all other applicable helicopters, within 60 days, and thereafter at intervals not to exceed one year, remove the paint from the blade pitch control arm in accordance with the Accomplishment Instructions, Section 2.A.(1) through 2.A.(3), of MDHI Service Bulletins SB369D-210, SB369E-105, SB369F-091, and SB369H-252, all dated November 21, 2011, as applicable to your model helicopter.

(i) Using a 10X or higher power magnifying glass, inspect all four sides and the pocket of the blade pitch control arm for a crack, pitting, or corrosion and for the condition of the dimpled shot peen surface by referring to Figure 1 of MDHI Service Bulletins SB369D-210, SB369E-105, SB369F-091, and SB369H-252, as applicable to your model helicopter, and by reviewing the rotorcraft maintenance records to determine whether rework was done in this area.

(ii) If there is pitting, corrosion, a crack, blending or removal of any of the dimpled shot peen surface, or any indication that the shot peen has not been done, replace the blade with an airworthy blade.

(iii) If there is no pitting, corrosion, cracks, or blending or removal of any of the dimpled shot peen surface, refinish the stripped pitch control arm in accordance with the Accomplishment Instructions, Section 2.A.(6) through 2.A.(7), of MDHI Service Bulletins SB369D-210, SB369E-105, SB369F-091, and SB369H-252, as applicable to your model helicopter.

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

(1) The Manager, Los Angeles Aircraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Fred Guerin, Aviation Safety Engineer, Los Angeles Aircraft Certification Office, Transport Airplane Directorate, FAA, 3960 Paramount Blvd., Lakewood, California 90712; telephone (562) 627-5232; email fred.guerin@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.

(3) AMOCs approved previously in accordance with AD No. 2003-08-51 (68 FR 39449, July 2, 2003; correction 68 FR 47447, August 11, 2003) are approved as AMOCs for the corresponding requirements in this AD.

**(h) Additional Information**

MD Helicopters, Inc., maintenance manuals CSP-HMI2, TR12-001, CHP-H-4, and TR12-001, which are not incorporated by reference, contain additional information about the subject of this AD. For 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; email serviceengineering@mdhelicopters.com; Web site <http://www.mdhelicopters.com> or contact Helicopter Technology Company, 12923 South Spring Street, Los Angeles, CA 90061; telephone 310-523-2750; email gburdorf@helicoptertech.com; Web site [www.helicoptertech.com](http://www.helicoptertech.com). You may review a copy of this information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

**(i) Subject**

Joint Aircraft Service Component (JASC) Code: 6410, Tail Rotor Blades.

**(j) 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) MD Helicopters Service Bulletin SB369D-210, dated November 21, 2011.

(ii) MD Helicopters Service Bulletin SB369E-105, dated November 21, 2011.

(iii) MD Helicopters Service Bulletin SB369F-091, dated November 21, 2011.

(iv) MD Helicopters Service Bulletin SB369H-252, dated November 21, 2011.

Note 1 to paragraph (j)(2): MD Helicopters Service Bulletins SB369D-210, SB369E-105, SB369F-091, and SB369H-252, all dated November 21, 2011, are co-published as one document.

(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; email serviceengineering@mdhelicopters.com; Web site <http://www.mdhelicopters.com>.

(4) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may also 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 September 18, 2013.

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