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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-SW-50-AD; Amendment 39-12975; AD 2002-22-51]

RIN 2120-AA64

Airworthiness Directives; MD Helicopters, Inc. Model MD900 Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This document publishes in the Federal Register an amendment adopting Airworthiness Directive (AD) 2002-22-51, which was sent previously to all known U.S. owners and operators of MD Helicopters, Inc. (MDHI) Model MD900 helicopters by individual letters. This AD requires, before further flight, certain procedures and inspections of the main rotor support static mast (mast) and the mast threads for any crack or pitting. If any crack or pitting is found, this AD requires removing the mast from service. The actions specified by this AD are intended to detect any crack or pitting in the mast that could result in failure of the mast, separation of the main rotor, and subsequent loss of control of the helicopter.

DATES: Effective December 26, 2002, to all persons except those persons to whom it was made immediately effective by Emergency AD 2002-22-51, issued on October 23, 2002, which contained the requirements of this amendment.

Comments for inclusion in the Rules Docket must be received on or before February 10, 2003.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Office of the Regional Counsel, Southwest Region, Attention: Rules Docket No. 2002-SW-50-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. You may also send comments electronically to the Rules Docket at the following address: 9-asw-adcomments@faa.gov.

FOR FURTHER INFORMATION CONTACT: Jon Mowery, Aviation Safety Engineer, FAA, Los Angeles Aircraft Certification Office, Airframe Branch, 3960 Paramount Blvd., Lakewood, California 90712, telephone (562) 627-5322, fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: On October 23, 2002, the FAA issued Emergency AD 2002-22-51 for the specified MDHI model helicopters, which requires, before further flight, removing the main rotor drive shaft to inspect the mast, removing the main rotor hub assembly to

inspect the mast threads, and if a flaw is found in the mast threads, magnetic particle inspecting the mast threads for any crack or pitting. If any crack or pitting is found, the AD requires removing the mast from service. The cause of the cracking is under investigation, but preliminary analysis shows that lack of torque in the 12 bolts on the main rotor hub retention nut (nut) results in loss of preload in the mast. Without preload, the mast will incur alternating stresses that can lead to crack initiation. In the four reported cases, cracks were found in the mast less than 1 inch from the top. In at least one case, pitting was also found in this area. All of these cracks penetrated through the wall thickness. This condition, if not detected, can result in failure of the mast, separation of the main rotor, and subsequent loss of control of the helicopter.

The FAA has reviewed MDHI Service Bulletin No. SB900-089R1, dated October 22, 2002, which describes procedures for checking the torque in the 12 bolts of the nut, inspecting the mast for a crack, and removing the mast from service if necessary.

Since the unsafe condition described is likely to exist or develop on other specified helicopters of the same type design, the FAA issued Emergency AD 2002-22-51 to detect any crack or pitting that could result in failure of the mast, separation of the main rotor, and subsequent loss of control of the helicopter. The AD requires, before further flight, for MDHI Model MD900 helicopters, serial numbers 900-00008 through 900-00110, with mast, part number 900F2401021-101, removing the main rotor drive shaft and inspecting the mast for any crack or pitting. The AD also requires removing the main rotor hub assembly and inspecting the mast threads for a crack. If a flaw is found in the thread root area and you cannot determine if it is a crack, the AD also requires a magnetic particle inspection (wet fluorescent) for a crack. If any crack or pitting is found, the AD requires removing the mast from service.

The short compliance time involved is required because the previously described critical unsafe condition can adversely affect the structural integrity of the helicopter. Therefore, conducting the specified inspections of the mast and mast threads for any crack or pitting are required, and removing the mast from service if any crack or pitting is found in any of the inspections is required before further flight, and this AD must be issued immediately.

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment thereon were impracticable and contrary to the public interest, and good cause existed to make the AD effective immediately by individual letters issued on October 23, 2002, to all known U.S. owners and operators of MDHI Model MD900 helicopters. These conditions still exist, and the AD is hereby published in the Federal Register as an amendment to 14 CFR 39.13 to make it effective to all persons.

The FAA estimates that this AD will affect 32 helicopters of U.S. registry, that it will take approximately 6 work hours to inspect and 8 work hours to replace a mast, and that the average labor rate is \$60 per work hour. Required parts will cost approximately \$45,000 per helicopter to replace a mast. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$193,440, assuming that the inspections are performed on each helicopter and that the mast is replaced on 4 helicopters.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their mailed comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 2002-SW-50-AD." The postcard will be date stamped and returned to the commenter.

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, 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:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-22-51 MD Helicopters, Inc.: Amendment 39-12975. Docket No. 2002-SW-50-AD.

Applicability: MD-900 helicopters, serial numbers 900-00008 through 900-00110, with a main rotor support static mast (mast), part number 900F2401021-101, installed, certificated in any category.

Note 1: This AD applies to each helicopter identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For helicopters that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required before further flight, unless accomplished previously.

To detect cracks and pitting in the mast that could result in failure of the mast, separation of the main rotor, and subsequent loss of control of the helicopter, accomplish the following:

(a) Remove the main rotor drive shaft.

Note 2: MD Helicopters, Inc. Service Bulletin No. SB900-089R1, dated October 22, 2002, pertains to the subject of this AD and has a Figure 1 depicting the inspection areas of the mast.

(b) Remove 1 inch of primer from the top inside diameter of the mast. During paint removal, wipe the area clean. Do not scrub or flush the area. Do not allow paint stripper to run down the inside or outside surfaces of the mast below the work area or enter into the transmission. Inspect the top 1 inch of the inside diameter of the mast for a crack or pitting using a bright light and a 10x or higher magnifying glass. If you find any crack or pitting, remove the mast from service.

(c) Remove the main rotor hub assembly. Clean the threads of the mast thoroughly with solvent. Inspect the mast threads for a crack using a bright light and a 20x or higher magnifying glass. Pay particular attention to the thread root area. If you see a flaw in the thread area and cannot determine if it is a crack, perform a magnetic particle inspection (wet fluorescent) per ASTM E 1444-01 using an electromagnetic yoke or coil. If you find any crack or pitting, remove the mast from service.

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office, FAA. Operators shall submit their requests through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, Los Angeles Aircraft Certification Office.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles Aircraft Certification Office.

(e) Special flight permits will not be issued.

(f) This amendment becomes effective on December 26, 2002, to all persons except those persons to whom it was made immediately effective by Emergency AD 2002-22-51, issued October 23, 2002, which contained the requirements of this amendment.

Issued in Fort Worth, Texas, on November 25, 2002.

Eric Bries,

Acting Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. 02-31176 Filed 12-10-02; 8:45 am]

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