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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-2011; Project Identifier AD-2023-01121-R; Amendment 39-22885; AD 2024-23-06]

RIN 2120-AA64

Airworthiness Directives; MD Helicopters, LLC, Helicopters

AGENCY:

Federal Aviation Administration (FAA), DOT.

ACTION:

Final rule.

SUMMARY:

The FAA is adopting a new airworthiness directive (AD) for certain MD Helicopters, LLC (MDHI), Model 369, 369A, 369D, 369E, 369F, 369FF, 369H, 369HE, 369HM, 369HS, 500N, and 600N helicopters. This AD was prompted by a report of a seized and damaged roller bearing in the pilot interconnecting cyclic torque tube (torque tube) assembly. This AD requires repetitively inspecting the torque tube assembly and roller bearings, and depending on the results, replacing parts, or accomplishing additional inspections. The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective December 24, 2024.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA-2024-2011; 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:

Eduardo Orozco-Duran, Aviation Safety Engineer, FAA, 3960 Paramount Boulevard, Lakewood, CA 90712; phone: (562) 627-5264; email: eduardo.orozco-duran@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend [14 CFR part 39](#) by adding an AD that would apply to MDHI Model 369, 369A, 369D, 369E, 369F, 369FF, 369H, 369HE, 369HM, 369HS, 500N, and 600N helicopters with a torque tube part number 369H7133-7 installed. The NPRM published in the **Federal Register** on August 8, 2024 ([89 FR 64834](#)). The NPRM was prompted by a report of a seized and damaged roller bearing assembly in the torque tube assembly of an MDHI Model MD369E helicopter. Since MDHI Model 369, 369A, 369D, 369F, 369FF, 369H, 369HE, 369HM, 369HS, 500N, and 600N helicopters have the same torque tube assembly installed, they are also affected by this unsafe condition. In the NPRM, the FAA proposed to require repetitively visually inspecting the torque tube for corrosion and cracks, repetitively visually inspecting the roller bearings for corrosion and degradation, performing a repetitive freedom-of-movement inspection of the torque tube assembly for binding or ratcheting, and corrective or additional action as necessary. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes and clarifying two paragraph cross-references in the Required Actions section of this AD, paragraphs (g)(2)(iii)(A) and (g)(2)(iv), by replacing the text “paragraph (g)(2)(iii) of this AD” with “the introductory text of paragraph (g)(2)(iii) of this AD,” this AD is adopted as proposed in the NPRM.

Costs of Compliance

The FAA estimates that this AD affects 353 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.

Visually inspecting the torque tube and roller bearings will take 1 work-hour for an estimated cost of \$85 per helicopter and \$30,005 for the U.S. fleet, per inspection cycle. Inspecting the torque tube

assembly for freedom of movement will take 0.75 work-hour for an estimated cost of \$64 per helicopter and \$22,595 for U.S. fleet cost, per inspection cycle. If required, a more in-depth inspection of the roller bearings will take 0.25 work-hour for an estimated cost of \$21 per helicopter, per instance.

If required, replacing a torque tube will take 6 work-hours and parts will cost \$4,773 for an estimated cost of \$5,283 per torque tube replacement. Replacing a roller bearing will take 6 work-hours and parts will cost \$210 for an estimated cost of \$720 per roller bearing replacement.

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

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:

2024-23-06 MD Helicopters, LLC: Amendment 39-22885; Docket No. FAA-2024-2011; Project Identifier AD-2023-01121-R.

(a) Effective Date

This airworthiness directive (AD) is effective December 24, 2024.

(b) Affected ADs

None.

(c) Applicability

This AD applies to MD Helicopters, LLC, Model 369, 369A, 369D, 369E, 369F, 369FF, 369H, 369HE, 369HM, 369HS, 500N, and 600N helicopters, certificated in any category, with a pilot interconnecting cyclic torque tube (torque tube) part number 369H7133-7 installed.

(d) Subject

Joint Aircraft System Component (JASC) Code: 6700, Rotorcraft Flight Control.

(e) Unsafe Condition

This AD was prompted by a report of a seized and damaged roller bearing in the torque tube assembly. The FAA is issuing this AD to prevent failure of the torque tube assembly. The unsafe condition, if not addressed, could result in reduced controllability and subsequent loss of control of the helicopter.

(f) Compliance

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

(g) Required Actions

(1) Within 100 hours time-in-service (TIS) or within one year after the effective date of this AD, whichever occurs first, and thereafter at intervals not to exceed 100 hours TIS, accomplish the actions required by paragraphs (g)(1)(i) and (ii) of this AD.

(i) Using a flashlight and mirror, visually inspect the torque tube for corrosion and cracks. If there is any corrosion or a crack, before further flight, remove the torque tube from service and install an

airworthy torque tube.

(ii) Visually inspect each roller bearing (number 5) as depicted in Figure 1 to paragraph (g)(1) of this AD for corrosion and degradation. If a roller bearing has any corrosion or degradation, before further flight, remove the roller bearing from service and install an airworthy roller bearing.

Figure 1 to Paragraph (g)(1)—Torque Tube Assembly



(2) Before the helicopter accumulates 3,000 total hours TIS or within 100 hours TIS after the effective date of this AD, whichever occurs later, and thereafter at intervals not to exceed 100 hours TIS, perform a freedom-of-movement inspection on the torque tube assembly by accomplishing the actions required by paragraphs (g)(2)(i) through (v) of this AD.

(i) Disconnect the one-way lock (number 6) of the torque tube by removing the cotter pin (number 7), nut (number 8), bolt (number 9), washers (number 10), and slotted bushing (number 11) from the torque tube assembly as depicted in Figure 1 to paragraph (g)(1) of this AD.

(ii) Loosen the longitudinal cyclic friction knob (number 12 or 13) of the torque tube assembly as depicted in Figure 1 to paragraph (g)(1) of this AD.

(iii) While moving the cyclic control forward and aft to allow the torque tube assembly to rotate through its full range of motion, inspect the torque tube assembly for binding and ratcheting.

(A) If there is any binding or ratcheting as a result of the action required by the introductory text of paragraph (g)(2)(iii) of this AD, before further flight, inspect each roller bearing (number 5) as depicted in Figure 1 to paragraph (g)(1) of this AD for damage. For the purposes of this inspection, damage may be indicated by corrosion, lack of lubrication (dry exterior surface), or material degradation.

(B) If any roller bearing (number 5) as depicted in Figure 1 to paragraph (g)(1) of this AD has any damage, before further flight, remove the roller bearing from service and install an airworthy roller bearing.

(iv) If there is not any binding or ratcheting as a result of the action required by the introductory text of paragraph (g)(2)(iii) of this AD or after accomplishing the action required by paragraph (g)(2)(iii) (B) of this AD, as applicable, tighten the cyclic friction knob (number 12 or 13) as depicted in Figure 1 to paragraph (g)(1) of this AD.

(v) Connect the one-way lock (number 6) as depicted in Figure 1 to paragraph (g)(1) of this AD by accomplishing the actions required by paragraphs (g)(2)(v)(A) and (B).

(A) Install the slotted bushing (number 11), washers (number 10), bolt (number 9), nut (number 8), and new (zero total hours TIS) cotter pin (number 7) as depicted in Figure 1 to paragraph (g)(1) of this AD.

(B) Ensure the edge of the slotted bushing (number 11) protrudes 0.010 to 0.080 inch (0.25 to 2.03 mm) above the surface of the cyclic torque tube after the nut is tightened.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, West Certification 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 responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the West Certification Branch, send it to the attention of the person identified in paragraph (i) of this AD. Information may be emailed to: AMOC@faa.gov.

(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.

(i) Additional Information

For more information about this AD, contact Eduardo Orozco-Duran, Aviation Safety Engineer, FAA, 3960 Paramount Boulevard, Lakewood, CA 90712; phone: (562) 627-5264; email: eduardo.orozco-duran@faa.gov.

(j) Material Incorporated by Reference

None.

Issued on November 12, 2024.

Victor Wicklund,

Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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