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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2026-4666; Project Identifier AD-2025-01677-R; Amendment 39-23494; AD 2026-21-05]

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 369D, 369E, 369F, 369FF, 369H, and 500N helicopters. This AD was prompted by a report of mechanical damage to the main transmission drive shaft coupling (coupling). This AD requires a one-time visual inspection of the couplings for cracks of the splines and, depending on the results, replacement of the couplings. The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective November 27, 2026.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA-2026-4666; 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:

Binod Singh, Aviation Safety Engineer, FAA, 3960 Paramount Boulevard, Lakewood, CA 90712; phone: (562) 627-5228; email: *binod.singh@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 certain MDHI Model 369D, 369E, 369F, 369FF, 369H, and 500N helicopters. The NPRM was published in the **Federal Register** on July 1, 2026 (91 FR 39903). The NPRM was prompted by a report that couplings having part number (P/N) 369H5660 were found with mechanical damage to the root fillets, spline faces, and the major diameter. It was also reported that a new vendor improperly manufactured certain couplings having P/N 369H5660, with a total of 148 shipped to customers between June 3, 2020, and May 1, 2022. The manufacturer reported that 86 affected couplings have been recovered, with the remaining 62 affected couplings at unknown locations.

In the NPRM, the FAA proposed to require a one-time visual inspection of the couplings for cracks of the splines and, depending on the results, replacement of the couplings. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received one comment from an anonymous commenter. The following presents the comment received on the NPRM and the FAA's response to the comment.

Request for Clarification of the Determination for the One-Time Visual Inspection

An anonymous commenter requested that the FAA clarify the determination for a one-time visual inspection. The commenter stated that the NPRM proposed to require a one-time visual inspection for spline cracking. The commenter specified that if spline cracking is caused by fatigue, alignment wear, or operational vibration, then a single inspection only catches existing cracks but fails to protect against future fatigue failures occurring hundreds of flight hours later. The commenter asked what data or modeling was evaluated in making the determination that a one-time visual inspection is safer than a recurring inspection interval or a time-in-service replacement requirement. In addition, the commenter asked whether data was gathered from different agencies or incident logs to further back up the analysis and could be used to monitor the unsafe condition for recurrence.

The FAA agrees to clarify. This AD addresses a manufacturing defect that could lead to fatigue cracking during normal helicopter operation. The one-time visual inspection is to determine whether a crack is present in the defective part and require immediate replacement if cracked. If the defective part is not

cracked, the compliance time for replacement is set significantly earlier than the calculated critical crack propagation threshold, which ensures that all defective parts are replaced before any fatigue crack reaches a critical failure point. Therefore, recurring inspections are unnecessary. The FAA did not change this AD as a result of this comment.

Additional Changes to This AD

In the NPRM, the FAA inadvertently included multiple references related to material incorporated by reference (IBR). However, no IBR material was necessary for the NPRM or this AD. Therefore, the FAA has removed all IBR references from this AD. In addition, paragraph (j) "Material Incorporated by Reference" of this AD has been changed to state "None."

Conclusion

The FAA reviewed the relevant data, considered any comments received, 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, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Costs of Compliance

The FAA estimates that this AD affects 568 helicopters of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Visually inspect couplings	1 work-hour × $85 per hour = $85	$0	$85	$48,280

The FAA estimates the following costs to do any replacement that would be required based on the results of the inspection. The agency has no way of determining the number of helicopters that might need this replacement:

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Replace coupling	2 work-hours × $85 per hour = $170	$1,681 (per coupling)	Up to $3,532.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

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:

2026-21-05 MD Helicopters, LLC: Amendment 39-23494; Docket No. FAA-2026-4666; Project Identifier AD-2025-01677-R.

(a) Effective Date

This airworthiness directive (AD) is effective November 27, 2026.

(b) Affected ADs

None.

(c) Applicability

This AD applies to MD Helicopters, LLC (MDHI) Model 369D, 369E, 369F, 369FF, 369H, and 500N helicopters, certificated in any category, with an installed main transmission drive shaft coupling (coupling) part number 369H5660 with serial numbers 8564-0001 through 8564-0308.

(d) Subject

Joint Aircraft System Component (JASC) Code 6310, Engine/transmission coupling.

(e) Unsafe Condition

This AD was prompted by a report of mechanical damage to the coupling. The FAA is issuing this AD to detect and address couplings with damage to the root fillets, spline faces, and major diameter. The unsafe condition, if not addressed, could result in fatigue cracks that grow from the damaged root fillets and spline faces, which could lead to failure of the coupling with consequent loss of power to the main rotor blades and possible emergency autorotational landing.

(f) Compliance

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

(g) Required Actions

Within 50 hours time-in-service (TIS) or 6 months after the effective date of this AD, whichever occurs first, using a bright light and 10X magnification, visually inspect each coupling for cracks to the spline.

Note 1 to paragraph (g): Examples of acceptable couplings with standard broaching tool marks and mechanical damage may be found in Figure 1 and Figure 2, as applicable, of MD Helicopters Service Bulletin SB369H-264R1, SB369D-230R1, SB369E-130R1, SB369F-121R1, and SB500N-067R1, dated May 26, 2023 (co-published as one document).

(1) If any cracks are found on any coupling, before further flight, remove the affected coupling from service and replace with a serviceable coupling.

(2) If there are no cracks on any coupling, within 300 hours TIS after the effective date of this AD, replace the affected coupling with a serviceable coupling.

(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 local Flight Standards District 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 and email 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 Binod Singh, Aviation Safety Engineer, FAA, 3960 Paramount Boulevard, Lakewood, CA 90712; phone: (562) 627-5228; email: *binod.singh@faa.gov*.

(j) Material Incorporated by Reference

None.

Issued on October 20, 2026.

Steven W. Thompson,

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

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