



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2017-1125; Product Identifier 2017-SW-078-AD; Amendment 39-19880; AD 2020-06-11]**

**RIN 2120-AA64**

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

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

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for MD Helicopters Inc. (MDHI) Model 600N helicopters. This AD requires establishing a life limit for the main rotor (M/R) blade upper control collective/longitudinal link assembly (link assembly). This AD was prompted by the discovery that the life limit was omitted from the maintenance manual. 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].

**ADDRESSES:** For service information related to 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 <https://www.mdhelicopters.com>. You may review this service information at the 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.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2017-1125; 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 AD, any comments received, and other information. The street 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:** Payman Soltani, Aerospace Engineer, Airframe Section, Los Angeles ACO Branch, Compliance and Airworthiness Division, FAA, 3960 Paramount Blvd., Lakewood, California 90712; telephone 562-627-5313; email [payman.soltani@faa.gov](mailto:payman.soltani@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

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 600N helicopters with a yaw stability augmentation system and with an M/R link assembly part number (P/N) 600N7617-1 installed. The NPRM published in the *Federal Register* on September 10, 2018 (83 FR 45580). The NPRM was prompted by a report from MDHI that during a review of the Airworthiness Limitations section of the applicable maintenance manual, MDHI discovered that it did not include a life limit for link assemblies installed on

MDHI Model 600N helicopters with a yaw stability augmentation system. Link assembly P/N 600N7617-1, which is made of aluminum, is a life-limited part with a life limit of 15,000 hours time-in-service (TIS). MDHI subsequently revised the Airworthiness Limitations section of the maintenance manual to include the life limit. The NPRM proposed to require creating a component history card or equivalent record for each affected link assembly, if one does not exist, and recording a life limit of 15,000 hours TIS. This NPRM also proposed to require determining the hours TIS of the link assembly and removing the link assembly from service according to the new life limit. The proposed requirements were intended to prevent a link assembly remaining in service beyond its life limit, which could result in fatigue failure, loss of M/R blade pitch control, and subsequent loss of helicopter control.

### **Comments**

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

### **Request**

MDHI expressed concern that the requirements proposed by the NPRM do not definitively eliminate the risk of a life limit being exceeded.

MDHI stated that link assembly P/N 600N7617-1 is not serialized and is aware that link assemblies have been installed on aircraft with multiple serial numbers, possibly indicating that link assemblies P/N 600N7617-1 may not have a reliable TIS record. MDHI also stated if the TIS is unknown, arbitrarily setting the TIS to the aircraft hours may not adequately reflect the actual TIS of link assembly P/N 600N7617-1.

**FAA Response**

The FAA acknowledges link assembly P/N 600N7617-1 is not serialized and the possibility of cross-installation on multiple aircraft. However, the FAA has determined that using the hours TIS of the helicopter mitigates the risk to an acceptable level because there is a small number of link assemblies P/N 600N7617-1 in-service, the usage rate for MDHI Model 600N helicopters is similar throughout the fleet, and the 15,000 hours TIS life limit includes a built-in life reduction for different variabilities.

**Request**

MDHI requested the FAA mandate the replacement of link assembly P/N 600N7617-1 with link assembly P/N 600N7617-5. MDHI explained that installation of link assembly P/N 600N7617-5 is consistent with production and field modification installations of the yaw stability augmentation system (YSAS), which requires installation of link assembly P/N 600N7617-5, and that link assembly P/N 600N7617-5 is not subject to life-limiting fatigue, therefore eliminating this potential safety risk.

**FAA Response**

The FAA agrees that replacing link assembly P/N 600N7617-1 with link assembly P/N 600N7617-5 is beneficial but disagrees that the replacement is required for airworthiness. Link assembly P/N 600N7617-5 is an upgraded part made of steel and is not subject to a life limit. The FAA disagrees with requiring replacement of link assembly P/N 600N7617-1 with link assembly P/N 600N7617-5 because link assembly P/N 600N7617-1 is airworthy within the life limit of 15,000 TIS. The FAA provided additional information about this response, which can be found in the AD docket. The FAA has added an optional terminating action to the requirements of this AD that

specifies removing link assembly P/N 600N7617-1 from service and installing link assembly P/N 600N7617-5 instead.

### **FAA's Determination**

The FAA has reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule as proposed except for the changes described previously. These changes are consistent with the intent that was proposed in the NPRM to address the unsafe condition and do not add any additional burden upon the public to that already proposed in the NPRM. The FAA has also determined that these changes will neither increase the economic burden on any operator nor increase the scope of this final rule.

### **Related Service Information**

The FAA reviewed MDHI CSP-HMI-2 MDHI Maintenance Manual, Chapter 04, Airworthiness Limitations, Revision 47, dated September 30, 2016. This service information specifies a 15,000 hour TIS life limit for link assembly P/N 600N7617-1 for helicopters with a yaw stability augmentation system.

### **Costs of Compliance**

The FAA estimates that this AD affects 26 helicopters of U.S. Registry. The FAA estimates that operators may incur the following costs in order to comply with this AD. Labor costs are estimated at \$85 per work-hour.

Determining the hours TIS of each link assembly and updating the aircraft records takes about 30 minutes, for a cost of \$43 per helicopter and \$1,118 for the U.S. fleet.

Replacing a link assembly, if needed, takes about 2 work-hours, and parts cost about \$984 for an estimated replacement cost of \$1,154 per link per helicopter.

## **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.

### **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 adding the following new airworthiness directive (AD):

2020-06-11 **MD Helicopters Inc.:** Amendment 39-19880; Docket No. FAA-2017-1125; Product Identifier 2017-SW-078-AD.

#### **(a) Applicability**

This AD applies to MD Helicopters Inc. (MDHI) Model 600N helicopters, certified in any category, with a yaw stability augmentation system and with a main rotor (M/R) blade upper control collective/longitudinal link assembly (link assembly) part number (P/N) 600N7617-1 installed.

#### **(b) Unsafe Condition**

This AD defines the unsafe condition as a link assembly remaining in service beyond its fatigue life. This condition could result in failure of the link assembly, failure of M/R blade pitch control, and subsequent loss of helicopter control.

**(c) Effective Date**

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

**(d) 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.

**(e) Required Actions**

Within 100 hours time-in-service (TIS):

(1) Determine the total hours TIS of each link assembly P/N 600N7617-1. If the hours TIS are unknown, use the hours TIS of the helicopter. Remove from service any link assembly that has 15,000 or more hours TIS. Thereafter, remove from service any link assembly before accumulating 15,000 hours TIS.

(2) Create a component history card or equivalent record for each link assembly P/N 600N7617-1 and record a life limit of 15,000 hours TIS.

(3) As an optional terminating action to the requirements of paragraphs (e)(1) and (2) of this AD, you may remove from service link assembly P/N 600N7617-1 and install link assembly P/N 600N7617-5.

**(f) Special Flight Permits**

Special flight permits are prohibited.

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

(1) The Manager, Los Angeles ACO Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Payman Soltani, Aerospace Engineer, Airframe Section, Los Angeles ACO Branch, Compliance and Airworthiness Division, FAA, 3960 Paramount

Blvd., Lakewood, California 90712; telephone 562-627-5313; 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, the FAA suggests 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) Additional Information**

For service information related to 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 <https://www.mdhelicopters.com>. You may review a copy of this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

**(i) Subject**

Joint Aircraft Service Component (JASC) Code: 6710, Main Rotor Control.

Issued on March 17, 2020.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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