DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration


Docket No. 96-SW-30-AD; Amendment 39-10149; AD 97-20-12

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Helicopter Systems Model MD-900 Helicopters

PDF Copy (If Available):

AGENCY: Federal Aviation Administration, DOT

ACTION: Final rule

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to McDonnell Douglas Helicopter Systems (MDHS) Model MD-900 helicopters, that requires removing certain serial-numbered main rotor swashplate bearings (bearings) and replacing them with airworthy bearings. This amendment is prompted by reports that inspections of several helicopters revealed that the outer bearing race had been rotating relative to the swashplate assembly, which was evidenced by wear marks in the rotating swashplate. The actions specified by this AD are intended to prevent possible heat accumulation and resulting damage to the bearing caused by the bearing races rotating relative to the bearing seat, which could result in degraded helicopter response to pilot control input and possible loss of control of the helicopter.

DATES: Effective November 6, 1997.

FOR FURTHER INFORMATION CONTACT: Mr. Greg DiLibero, Aerospace Engineer, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Blvd., Lakewood, California 90712, telephone (310) 627-5231, fax (310) 627-5210.

SUPPLEMENTARY INFORMATION:


Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposal or the FAA's determination of the cost to the public. The FAA has determined that air safety and the public interest require the adoption of the rule as proposed, with two changes. The FAA has determined that special
flight permits may be issued to operate the helicopter to a location where the requirements of this AD can be accomplished. This is now stated in paragraph (i) of the AD. Also, the FAA has determined that this AD should only apply to the Model MD-900 helicopters, not the Model MD-900 "series" helicopters. Therefore, the word "series" is removed from the applicability paragraph of this AD. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

The FAA estimates that 20 helicopters of U.S. registry will be affected by this AD, that it will take approximately 1.5 work hours per helicopter to determine the bearing’s S/N, 12 work hours per helicopter to remove and replace a bearing, and that the average labor rate is $60 per work hour. Replacement bearings would cost $8,765 per helicopter, however, replacement bearings are covered by a manufacturer’s warranty. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be $5,400, assuming five helicopters will require removal and replacement of the bearing.

The regulations adopted herein will not have substantial direct effects 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, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (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); 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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it 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 USC 106(g), 40113, 44701.

§ 39.13 - [Amended]
2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

97-20-12 MCDONNELL DOUGLAS HELICOPTER SYSTEMS: Amendment 39-10149. Docket No. 96-SW-30-AD.

Applicability: Model MD-900 helicopters, certificated in any category.

NOTE 1: This AD applies to each helicopter identified in the preceding applicability
provision, regardless of whether it has been 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 use the authority provided in paragraph (h) to request approval from the FAA. This approval may address either no action, if the current configuration eliminates the unsafe condition, or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any helicopter from the applicability of this AD.

Compliance: Required before further flight, unless accomplished previously.

To prevent possible heat accumulation and resulting damage to the main rotor swashplate bearing (bearing) caused by the bearing races rotating relative to the bearing seat, which could result in degraded helicopter response to pilot control input and possible loss of control of the helicopter, accomplish the following:

(a) Disconnect the lower end of the main rotor pitch links. Disconnecting the drive link may make the inspection easier.

(b) Cut the safety wire and remove the inner and outer labyrinth seals, part number (P/N) 900C2010194-101 and P/N 900C201190-101, respectively, and the inner and outer bearing retaining rings.


NOTE 2: S/N's similar to those above were produced without the character "E" in the number. This AD is only concerned with those that contain the character "E".

(d) Enter into the helicopter Log Book the bearing S/N.

(e) If a bearing having one of the S/N's stated in paragraph (c) of this AD is installed on the helicopter, remove the bearing and replace it with an airworthy bearing prior to further flight.

(f) Prior to the installation of a swashplate assembly, inspect the bearing in accordance with the requirements of this AD.

(g) Report the results of all inspections required by this AD within 72 hours to the Manager, Los Angeles Aircraft Certification Office, 3960 Paramount Blvd., Lakewood, California 90712. Reporting requirements have been approved by the Office of Management and Budget and assigned OMB control number 2120-0056.

(h) 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
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.

(i) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the helicopter to a location where the requirements of this AD can be accomplished.

(j) This amendment becomes effective on November 6, 1997.