

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-SW-45-AD; Amendment 39-13053; AD 2003-04-05]

RIN 2120-AA64

Airworthiness Directives; Robinson Helicopter Company Model R44 Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) for Robinson Helicopter Company (RHC) Model R44 helicopters that requires inspecting the tail rotor pitch control assembly for roughness or binding of the pitch control bearings (bearings) by hand-rotating the pitch control bearing housing (housing). If the housing does not rotate freely, the AD requires replacing the unairworthy pitch control assembly with an airworthy unit. This amendment is prompted by reports of failure of the tail rotor pitch control assembly due to improperly lubricated bearings on the RHC Model R22 helicopters. Although there have been no reported failures on the RHC Model R44 helicopters, the design of the tail rotor pitch control assembly makes it susceptible to the same failures as have occurred on the Model R22 helicopters. The actions specified by this AD are intended to detect corrosion of the bearings and to prevent bearing failure and subsequent loss of directional control of the helicopter.

DATES: Effective March 26, 2003.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of March 26, 2003.

ADDRESSES: The service information referenced in this AD may be obtained from Robinson Helicopter Company, 2901 Airport Drive, Torrance, California 90505, telephone (310) 539-0508, fax (310) 539-5198. This information may be examined at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Fred Guerin, Aviation Safety Engineer, FAA, Los Angeles Aircraft Certification Office, Airframe Branch, 3960 Paramount Blvd., Lakewood, California 90712, telephone (562) 627-5232, fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: A proposal to amend 14 CFR part 39 to include an AD for the specified helicopters was published in the Federal Register on September 10, 2002 (67 FR 57351). That action proposed inspecting the pitch control assembly for roughness or binding of the bearings by hand-rotating the housing and if the housing does not rotate freely, replacing each unairworthy pitch control assembly with an airworthy unit.

The FAA has reviewed RHC Service Bulletin SB-43A, Revision A, dated June 10, 2002 (SB), which describes procedures for inspecting the pitch control assembly for roughness or binding of the bearings by hand-rotating the housing. If the housing does not rotate freely, the SB specifies replacing each unairworthy pitch control assembly, part number (P/N) A031-1, with an airworthy unit in accordance with the maintenance manual.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

One commenter, the manufacturer, requests a change to the summary information to indicate that bearing failures have been reported only on RHC Model R22 helicopters, and there are no reports of failed bearings on Model R44 helicopters. The FAA agrees and has changed the preamble information to indicate that the bearing failures have occurred on the RHC Model R22 helicopters only.

The same commenter requests a change to the summary and the discussion sections to revise the failure sequence to indicate that bearing failure could result in loss of tail rotor thrust requiring a power-off landing. The commenter states that in all three of the bearing failures, the failed bearing caused the pitch control linkage to fail and the tail rotor to go to flat pitch but none of the failures resulted in an accident. The commenter also states that there was no breakup of the tail rotor assembly, no tail rotor contact of the tailboom, and no loss of control resulting in an accident. The FAA agrees that the failed bearing has not resulted in breakup of the tail rotor assembly and contact with the tailboom, and the likelihood of such a breakup and contact with the tailboom may be remote. Therefore, we have removed the reference to the breakup of the tail rotor assembly and contact with the tailboom from the failure sequence. We do not agree that the failure sequence should state that bearing failure could result in loss of tail rotor thrust requiring a power-off landing. The loss of directional control associated with this type of failure could result in loss of control of the helicopter, and a successful power-off landing may not be possible. The term "loss of control of the helicopter", however, may be understood to mean an almost certain catastrophic event, such as loss of cyclic or pitch control. That is not our intent when we use the failure sequence in our AD's. That sequence states what could happen not necessarily what will happen. Our intent is to convey the sequence of events that we intend to prevent by issuing the AD to correct the unsafe condition. Therefore, we have changed the failure sequence to state that loss of "directional" control can result.

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed with the changes described previously. 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 this AD will affect 440 helicopters of U.S. registry, that it will take approximately 2.3 work hours per helicopter to inspect and replace each pitch control assembly, and that the average labor rate is \$60 per work hour. Required parts will cost approximately \$1145 per helicopter. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$564,520, assuming the pitch control assembly is replaced on the entire fleet.

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.

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, Incorporation by reference, 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.faa.gov"

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).

2003-04-05 Robinson Helicopter Company: Amendment 39-13053. Docket No. 2001-SW-45-AD.

Applicability: Model R44 helicopters, up to and including serial number 1208, except serial numbers 1143, 1165, 1183, 1189, 1192, 1196, 1197, 1198, 1200, 1203, and 1204, with pitch control assembly, part number (P/N) C031-1, Revision G or prior, 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 (b) 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 as indicated, unless accomplished previously.

To detect corrosion of a tail rotor pitch control bearing (bearing) and to prevent bearing failure and subsequent loss of directional control of the helicopter, accomplish the following:

(a) Within 20 hours time-in-service (TIS) and thereafter at intervals not to exceed 300 hours TIS or 12 months, whichever occurs first, inspect the pitch control assembly for roughness or binding of the pitch control bearings by hand rotating the pitch control bearing housing (housing) in accordance with Robinson Helicopter Company Service Bulletin SB-43A, Revision A, dated June 10, 2002. If the housing does not rotate freely, before further flight, replace the unairworthy pitch control assembly with an airworthy unit.

(b) 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 (LAACO), FAA. Operators shall submit their requests through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, LAACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the LAACO.

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

(d) The inspection of the pitch control assembly shall be done in accordance with Robinson Helicopter Company Service Bulletin SB-43A, Revision A, dated June 10, 2002. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Robinson Helicopter Company, 2901 Airport Drive, Torrance, California 90505, telephone (310) 539-0508, fax (310) 539-5198. Copies may be inspected at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) This amendment becomes effective on March 26, 2003.

Issued in Fort Worth, Texas, on February 6, 2003.

David A. Downey,

Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. 03-3773 Filed 2-18-03; 8:45 am]

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