

[Federal Register: June 3, 2004 (Volume 69, Number 107)]
[Rules and Regulations]
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[DOCID:fr03jn04-1]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2004-SW-09-AD; Amendment 39-13651; AD 2004-06-51]

RIN 2120-AA64

Airworthiness Directives; Boeing Defense and Space Group Model 234 Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This document publishes in the Federal Register an amendment adopting Airworthiness Directive (AD) 2004-06-51, which was sent previously to all known U.S. owners and operators of Boeing Defense and Space Group (Boeing) Model 234 helicopters by individual letters. This AD requires, before further flight, inspecting the upper shaft extension for a crack and modifying the aft vertical shaft assembly (assembly). Thereafter, this AD requires, before the first flight of each day, inspecting the upper shaft extension for any crack. If any crack is found during any of the inspections, replacing the assembly with an airworthy assembly is required before further flight. This amendment is prompted by the discovery of a crack in the upper shaft extension of an assembly. The actions specified by this AD are intended to detect a crack in the upper shaft extension, which could result in catastrophic failure of the assembly and subsequent loss of control of the helicopter.

DATES: Effective June 18, 2004, to all persons except those persons to whom it was made immediately effective by Emergency AD 2004-06-51, issued on March 18, 2004, which contained the requirements of this amendment.

Comments for inclusion in the Rules Docket must be received on or before August 2, 2004.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Office of the Regional Counsel, Southwest Region, Attention: Rules Docket No. 2004-SW-09-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. You may also send comments electronically to the Rules Docket at the following address: 9-asw-adcomments@faa.gov.

FOR FURTHER INFORMATION CONTACT: George Duckett, Aviation Safety Engineer, FAA, New York Aircraft Certification Office, Airframe and Propulsion Branch, 1600 Stewart Ave., suite 410, Westbury, New York 11590, telephone (516) 228-7325, fax (516) 794-5531.

SUPPLEMENTARY INFORMATION: On March 18, 2004, the FAA issued Emergency AD 2004-06-51 for the specified model helicopters, which requires, before further flight, inspecting the upper shaft extension for a crack and modifying the assembly. Thereafter, the AD requires, before the first flight of each day, inspecting the upper shaft extension for any crack. If any crack is found during any of the inspections, replacing the assembly with an airworthy assembly is required before further flight. That action was prompted by the discovery of a crack in the upper shaft extension of an assembly. The discovery was made by an operator who was in the process of troubleshooting a lateral vibration and noticed a slight wobble in the assembly when the rotors were turned by hand. The manufacturer subsequently determined that the crack initiated at an arc burn that occurred during the silver-plating process of the part. The actions specified by the AD are intended to detect a crack in the upper shaft extension, which could result in catastrophic failure of the assembly and subsequent loss of control of the helicopter.

The FAA has reviewed Boeing BV234 Service Bulletin No. 234-63-1055, Revision 2, dated March 16, 2004, which describes procedures for inspecting the inside diameter surfaces of the 114D3248 upper shaft extension of the 234D3300 aft vertical shaft assembly for cracks. The service bulletin also describes procedures for fabricating and installing an aluminum inspection plug. Further, the service bulletin provides for recurring inspections.

Since the unsafe condition described is likely to exist or develop on other Boeing Model 234 helicopters of the same type design, the FAA issued Emergency AD 2004-06-51. The AD requires, before further flight, inspecting the upper shaft extension for a crack and, if no crack is found, modifying the assembly. Thereafter, before the first flight of each day, inspecting the upper shaft extension for any crack is required. If any crack is found during any of the inspections, replacing the assembly with an airworthy assembly is required before further flight. The requirements of the AD are interim actions that are necessary until an arc-burn free replacement assembly is installed. The short compliance time involved is required because the previously described critical unsafe condition can adversely affect the structural integrity and controllability of the helicopter. Therefore, the actions previously described are required before further flight and before the first flight of each day, and this AD must be issued immediately.

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment thereon were impracticable and contrary to the public interest, and good cause existed to make the AD effective immediately by individual letters issued on March 18, 2004 to all known U.S. owners and operators of Boeing Model 234 helicopters. These conditions still exist, and the AD is hereby published in the Federal Register as an amendment to 14 CFR 39.13 to make it effective to all persons.

The FAA estimates that this AD will affect 7 helicopters of U.S. registry. The required actions will take approximately 17½ work hours per helicopter to accomplish (4½ work hours for the initial inspection and modification, 1 work hour for each recurring inspection, and 12 work hours to replace an assembly, if necessary), at an average labor rate of \$65 per work hour. Required parts will cost approximately \$250,000 per assembly. Based on these figures, we estimate the total cost impact of the AD on U.S. operators to be \$1,871,257.50 (assuming \$2,047.50 for each initial inspection and modification, \$113,750 for 250 recurring inspections on each helicopter, \$1,755,460 to replace one assembly on each helicopter, and negligible parts costs associated with the modifications and inspections).

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All

communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their mailed comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 2004-SW-09-AD." The postcard will be date stamped and returned to the commenter.

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.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, 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 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).

2004-06-51 Boeing Defense and Space Group: Amendment 39-13651. Docket No. 2004-SW-09-AD.

Applicability: Model 234 helicopters, with aft vertical shaft assembly, part number (P/N) 234D3300, serial number-181 or lower with a prefix of A, installed, certificated in any category.

Compliance: Required as indicated.

To detect a crack in the upper shaft extension, which could result in catastrophic failure of the aft vertical shaft assembly and subsequent loss of control of the helicopter, accomplish the following:

Note 1: Prepare the helicopter for safe ground maintenance and disconnect the battery.

(a) Before further flight, unless accomplished previously, perform the following initial inspection and modification:

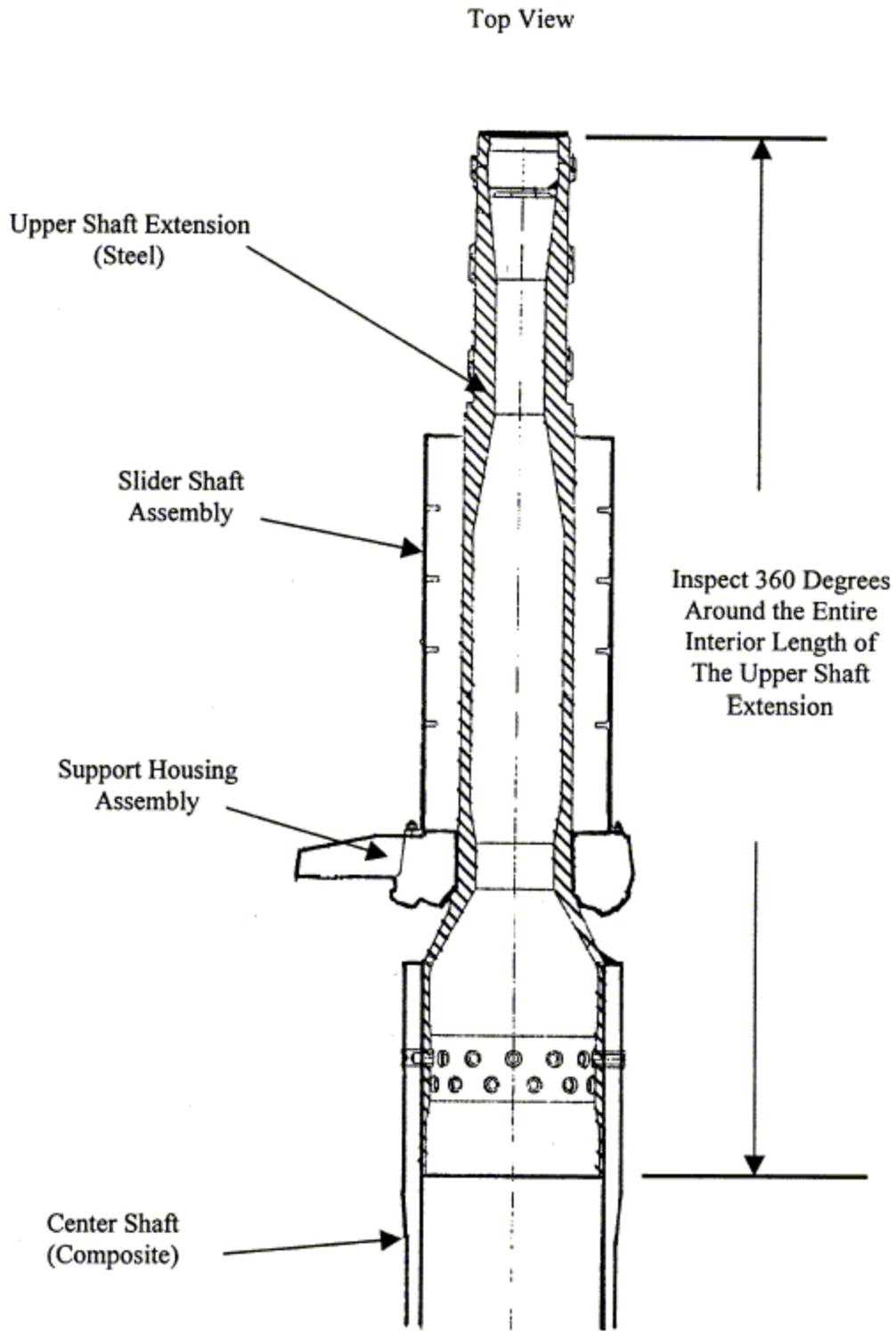
(1) Remove the screws, P/N MS51957-63 or MS51958-63, and washers, P/N AN960-D10L, from the oil tank assembly. Remove the retainer, P/N 114R2059-1, cover, P/N 14R2054-1, and packing, P/N M83248/1-264, from the oil tank assembly.

(2) Cut the sealant around the upper shaft extension plug, P/N 114D1246-1. Remove the (adhesive) sealant from the plug and the inside diameter of the upper shaft extension, P/N 114D3248, before removing the plug.

(3) Tap one side of the rubber plug, P/N 114D1246-1, with a hammer and drift to raise and offset the opposite edge of the plug. Pull the plug from the upper shaft extension.

(4) Remove any loose sealant that remains on the inside diameter of the aft vertical shaft assembly using care not to drop debris into the shaft.

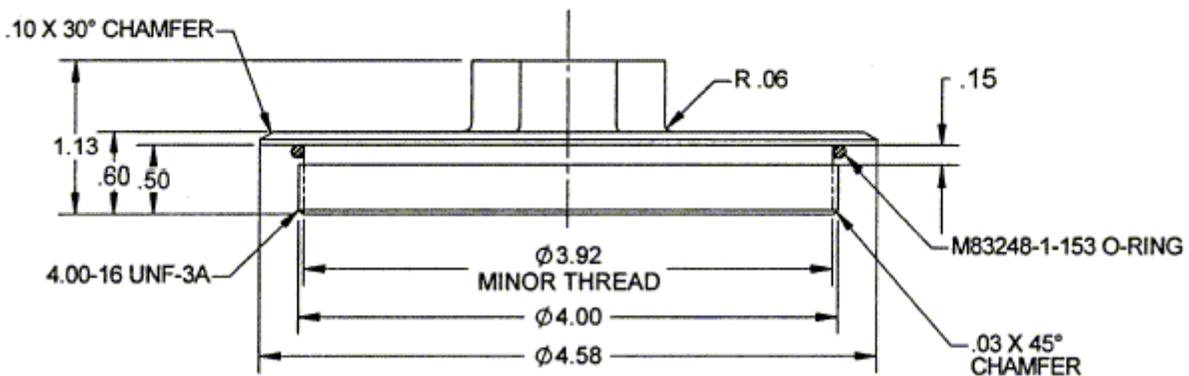
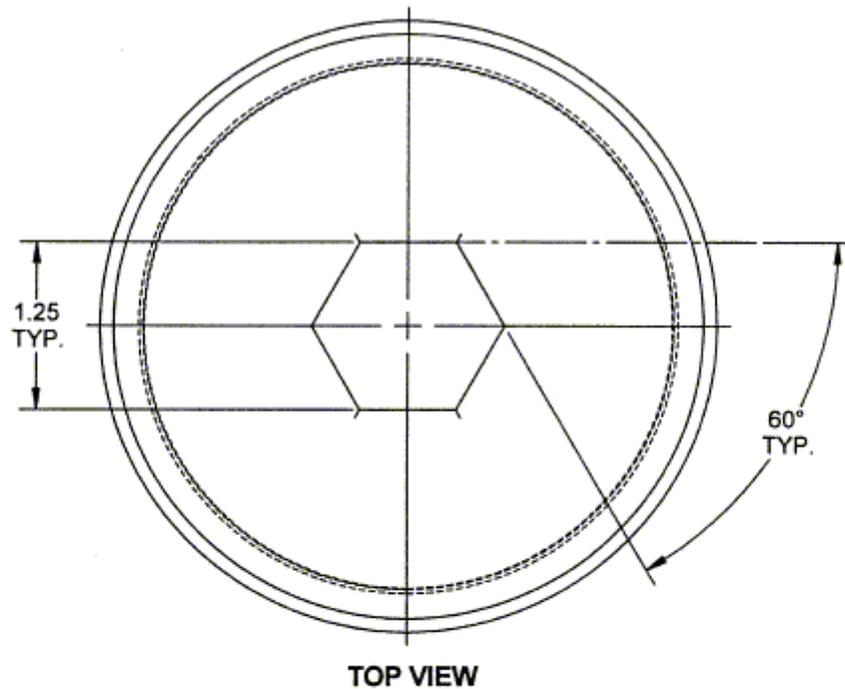
(5) Inspect the upper shaft extension, P/N 114D3248, using a borescope or other lighted device that provides direct visual observation of the interior of the aft rotor shaft. Inspect 360 degrees around the entire interior length of the upper shaft extension. If any crack is found, replace the aft vertical shaft assembly, P/N 234D3300, with an airworthy assembly before further flight. See the following Figure 1 of this AD for the area to inspect:



Aft Vertical Shaft
Assembly Inspection Area
Figure 1

(6) If no crack is found, using a light source, visually inspect the aft vertical shaft assembly for debris or foreign object damage (FOD) inside the diameter of the assembly.

(7) Manufacture an aluminum-threaded plug to replace the rubber plug, P/N 114D1246-1. The replacement plug is to be installed in the internal threads on the top of the upper shaft extension. Machine the plug from a block of 7050-T7451, 7075-T6 or 6061-T6, with 4.000" -16 UNS-3A threads and a minor thread diameter of 3.920". Machine a hex head to the center of the cap to aid in removal. Machine the hex head to fit a 1 1/4" wrench. See the following Figure 2 of this AD:



Note 2: All dimensions stated in this AD are in inches.

(8) Install the aluminum-threaded plug with an o-ring, P/N M83248-1-153, in the internal threads on the top of the upper shaft extension (hand tighten only). Assure the safety wire for the rotor hub nut is clear of the plug.

(9) Install packing, P/N M83248/1-264, into the o-ring groove of the oil tank assembly. Install the cover, P/N 114R2054-2, retainer, P/N 114R2059-1, washer, P/N AN960D10L, and screws, P/N MS51957-63 or MS51958-63, into the oil tank assembly that is installed on the aft rotary wing head assembly. Torque screws to 23 pounds-inches dry.

(b) Before the first flight of each day, perform the following recurring inspection:

(1) Remove the screws, P/N MS51957-63 or MS51958-63, and washers, P/N AN960D10L, from the oil tank assembly. Remove the retainer, P/N 114R2059-1, cover, P/N 114R2054-1, and packing, P/N M83248/1-264, from the oil tank assembly.

(2) Remove the aluminum-threaded plug from the internal threads on the top of the upper shaft extension.

(3) Inspect the upper shaft extension, P/N 114D3248, using a borescope or other lighted device that provides direct visual observation of the interior of the aft rotor shaft. Inspect 360 degrees around the entire interior length of the upper shaft extension (see Figure 1 of this AD). If any crack is found, replace the aft vertical shaft assembly, P/N 234D3300, with an airworthy assembly before further flight.

(4) If no crack is found, install the aluminum-threaded plug with an o-ring, P/N M83248-1-153, in the internal threads on the top of the upper shaft extension (hand tighten only). Assure the safety wire for the rotor hub nut is clear of the plug.

(5) Install packing, P/N M83248/1-264, into the o-ring groove of the oil tank assembly. Install the cover, P/N 114R2054-2, retainer, P/N 114R2059-1, washer, P/N AN960D10L, and screws, P/N MS51957-63 or MS51958-63, into the oil tank assembly that is installed on the aft rotary wing head assembly. Torque screws to 23 pounds-inches dry.

Note 3: Boeing BV234 Service Bulletin No. 234-63-1055, Revision 2, dated March 16, 2004, pertains to the subject of this AD.

(c) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Contact the Manager, New York Aircraft Certification Office (NYACO), Engine and Propeller Directorate, FAA, for information about previously approved alternative methods of compliance.

(d) Special flight permits will not be issued.

(e) This amendment becomes effective on June 18, 2004, to all persons except those persons to whom it was made immediately effective by Emergency AD 2004-06-51, issued March 18, 2004, which contained the requirements of this amendment.

Issued in Fort Worth, Texas, on May 21, 2004.

David A. Downey,

Manager, Rotorcraft Directorate, Aircraft Certification Service.

[FR Doc. 04-12442 Filed 6-2-04; 8:45 am]

BILLING CODE 4910-13-P