EMERGENCY AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

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DATE: June 20, 2003
AD #: 2003-13-51

Send to all U.S. owners and operators of MD Helicopters, Inc., Model MD900 helicopters.

This Emergency Airworthiness Directive (EAD) is prompted by two instances of failure of a main rotor blade retention bolt (bolt). This EAD is an interim action until the investigations are complete. Preliminary investigation indicates that the bolt failure may be due to fretting induced fatigue. This condition, if not corrected, could result in failure of a bolt, loss of a main rotor blade, and subsequent loss of control of the helicopter.

The FAA has reviewed MD Helicopters Service Bulletin SB900-092, dated June 19, 2003, which describes interim procedures for inspecting the bolts.

This unsafe condition is likely to exist or develop on other helicopters of the same type design. Therefore, this EAD requires, before further flight, removing, inspecting and reinstalling each bolt, part number (P/N) 900R3100001-103. If segments do not move freely or a crack is found, this EAD requires replacing the bolt with an airworthy bolt. Thereafter, before each start of the engines, this AD also requires a visual check of each bolt. If a bolt has shifted upward or if there is no gap between the thrust washer and retainer, this AD requires inspecting the bolt. Also, this AD requires at intervals not to exceed 6 hours time-in-service, performing a cam lever force inspection. The inspections must be accomplished in accordance with the service bulletin described previously.

An owner/operator (pilot) may perform the visual preflight check that the position of each installed bolt has not shifted upward and a visual inspection for a gap between the thrust washer and retainer. Pilots may perform these checks because they require no tools and can be accomplished by observation and may be performed equally well by a pilot or a mechanic. However, the pilot must enter compliance with those requirements into the helicopter maintenance records in accordance with 14 CFR 43.11 and 91.417(a)(2)(v).

This rule is issued under 49 U.S.C. Section 44701 pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this emergency AD.

2003-13-51 MD HELICOPTER, INC.: Docket No. 2003-SW-27-AD.

Applicability: Model MD900 helicopters, serial number 900-00008 through 900-00114, with main rotor blade retention bolt (bolt), part number 900R3100001-103, installed, certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent failure of a bolt, loss of a main rotor blade, and subsequent loss of control of the helicopter, accomplish the following:

(a) Before further flight, remove, inspect, and reinstall the bolt in accordance with the Accomplishment Instructions, paragraph 2.B., of MD Helicopters Service Bulletin SB900-092, dated June 19, 2003 (SB). If segments do not move freely or a crack is found, replace the bolt with an airworthy bolt before further flight.

(b) Thereafter, before each start of the engines, visually check each bolt as follows:

(1) Check that the position of each installed bolt has not shifted upward.

(2) Check for a gap between the thrust washer and retainer.

(3) An owner/operator (pilot), holding at least a private pilot certificate, may perform the visual check as required by this paragraph and must enter compliance into the aircraft maintenance records in accordance with 14 CFR sections 43.11 and 91.417(a)(2)(v)).

(c) If a bolt has shifted upward or if there is no gap between the thrust washer and retainer (the gap indicates that the O ring is intact), before further flight, inspect the bolt in accordance with the Accomplishment Instructions, paragraph 2.B., of the SB.

(d) After accomplishing paragraph (a) of this AD, at intervals not to exceed 6 hours time-in-service, do a cam lever force inspection on each bolt, without removing the bolt, in accordance with the Accomplishment Instructions, paragraphs 2.B.(5) and (6) of the SB.

(e) 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 Los Angeles Aircraft Certification Office, FAA, for information about previously approved alternative methods of compliance.

(f) Copies of the applicable service information may be obtained from MD Helicopters Inc., Attn: Customer Support Division, 4555 E. McDowell Rd., Mail Stop M615-GO48, Mesa, Arizona 85215-9734, telephone 1-800-388-3378, fax 480-891-6782, or on the web at www.mdhelicopters.com.

(g) **Emergency AD 2003-13-51, issued June 20, 2003, becomes effective upon receipt.**

FOR FURTHER INFORMATION CONTACT: Jon Mowery, Aviation Safety Engineer, FAA, Los Angeles Aircraft Certification Office, Airframe Branch, 3960 Paramount Blvd., Lakewood, California 90712, telephone (562) 627-5322, fax (562) 627-5210.

Issued in Fort Worth, Texas, on June 20, 2003.

David A. Downey,
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Aircraft Certification Service.