



CIVIL AVIATION AUTHORITY  
CZECH REPUBLIC  
**Airworthiness Division**

*Airport Ruzyně, 160 08 Prague 6  
Tel: 420 233320922, fax: 420 220562270*

## AIRWORTHINESS DIRECTIVE

**Number: CAA-AD-091/2003**

Date of issue: December 01, 2003

**MD Helicopters, Inc.**

369A, H, HE, HM, HS, D, E

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### HELICOPTER – MAIN ROTOR BLADE – INSPECTION

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**Applicability:** Models 369A, H, HE, HM, HS, D, or E, with a main rotor blade (blade), part number (P/N) 500P2100-BSC, 500P2100-101, or 500P2100-301, and modified with Helicopter Technology Company, LLC, Supplemental Type Certificate (STC) No. SR09172RC, SR09074RC, or SR09184RC, installed, certificated in any category.

**Effective date:** December 10, 2003

**Compliance:** Required as indicated in FAA AD 2003-24-01.

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*Remarks: The compliance of this AD must be recorded in Aircraft Logbook, where applicable the requirements of this AD must be integrated into Aircraft Technical Documentation. Address inquiries concerning this AD to: Civil Aviation Authority, Airworthiness Division, Ruzyně Airport, 160 08 Prague 6, Czech Republic, tel: 420 233320922, fax: 420 220562270.*

**Ing. Pavel MATOUŠEK**  
director

**2003-24-01 MD Helicopters, Inc.:** Amendment 39-13370. Docket No. 2003-SW-16-AD.

*Applicability:* Models 369A, H, HE, HM, HS, D, or E, with a main rotor blade (blade), part number (P/N) 500P2100-BSC, 500P2100-101, or 500P2100-301, and modified with Helicopter Technology Company, LLC, Supplemental Type Certificate (STC) No. SR09172RC, SR09074RC, or SR09184RC, installed, certificated in any category.

*Compliance:* Required as indicated, unless accomplished previously.

To prevent fatigue cracking of the blade, blade failure, and subsequent loss of control of the helicopter, accomplish the following:

(a) Within 12 hours time-in-service (TIS) or 30 days, whichever occurs first, determine and record on the component history card or equivalent record the number of torque events (TEs) accumulated on each blade. Record a torque event (TE) for each transition to a hover or landing from forward flight with an airspeed of 30 or more knots or any external lift operation. An external lift operation is defined as the pickup and drop-off of an external load. (An external lift operation with a return flight at an airspeed of 30 or more knots back to the pick-up location would be recorded as two TEs).

(1) If you cannot determine the actual number of TEs for a blade, assume and record 13,720 TEs as the accumulated total number of TEs on that blade.

(2) Thereafter, after each day's operation or after 100 external lift operations, whichever occurs first, record on the component history card or equivalent record the number of TEs that occurred during that period for each blade.

**Note 1:** Helicopter Technology Company, LLC, Mandatory Service Bulletin Notice No. 2100-3R2, dated December 30, 2002, pertains to the subject of this AD.

(b) For each blade with 750 or more hours TIS and 13,720 or more TEs, before further flight and thereafter at intervals not to exceed 35 hours TIS or 200 TEs, whichever occurs first:

(1) Lift the outboard end of the blade until the blade is off the droop stop.

(2) Using a bright light and a 10x or higher magnifying glass, inspect for a crack on the first 24-inch inboard area of the bottom side of the blade. Pay particular attention to the area around the root fitting, its adjacent doubler and skin, and in line with the root fitting attach bolts. Also, pay particular attention at blade stations: 22.6, 24.1, 25.1, 25.3, 27.9, and 36.4 (these blade stations are located 4.9, 6.4, 7.4, 7.6, 10.2, and 18.7 inches outboard (parallel to the blade) from the center of the root fitting and lead lag attach bolt holes closest to the trailing edge).

(3) Using a bright light, inspect for a crack on the remaining length of the bottom side of the blade.

(4) Lower the blade back onto the droop stop.

(5) Using a bright light and a 10x or higher magnifying glass, inspect for a crack on the first 24-inch inboard area of topside of the blade. Pay particular attention to the area around the root fitting, its adjacent doubler and skin, and in line with root fitting attach bolts. Also pay particular attention at blade stations: 22.6, 24.1, 25.1, 25.3, 27.9, and 36.4 (these blade stations are located 4.9, 6.4, 7.4, 7.6, 10.2, and 18.7 inches outboard (parallel to the blade) from the center of the root fitting bushing and lead lag attach bolt hole closest to the trailing edge).

(6) Using a bright light, inspect for a crack on the remaining length of the topside of each blade.

(c) If a crack is found, replace the blade with an airworthy blade before further flight.

(d) On or before 3,530 hours TIS, replace each blade, P/N 500P2100-BSC or P/N 500P2100-101, with an airworthy blade.

(e) On or before 2,440 hours TIS, replace each blade, P/N 500P2100-301, with an airworthy blade.

(f) This AD revises the Limitations and Conditions of Helicopter Technology Company, LLC, STC Nos. SR09172RC, SR09074RC, or SR09184RC by establishing a life limit of 3,530 hours TIS for blade, P/N 500P2100-BSC and P/N 500P2100-101, and 2,440 hours TIS for blade P/N 500P2100-301.

**Note 2:** TEs are used only to establish an additional inspection interval and not to establish an alternative retirement life.

(g) 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 Rotorcraft Certification Office, Rotorcraft Directorate, FAA, for information about previously approved alternative methods of compliance.

(h) This amendment becomes effective on December 10, 2003.