

MAIN ROTOR BLADE TORQUE EVENT (TE) INSPECTION

Note: Before implementing this inspection, review the definition of a Torque Event (TE) and determine whether the Main Rotor Blade TE Inspection is applicable to your particular operation and usage. See references below.

SUMMARY:

Procedures in this Bulletin provide owners and operators with information pertaining to performing the Main Rotor Blade Torque Event Inspection and determining an inspection interval. Since Helicopter Technology Company produced main rotor blades are of similar construction to those produced by MD Helicopters, this Bulletin is intended to supplement the following MD Helicopters Mandatory Service Bulletins: **SB369D-201R2, SB369E-095R2, SB369F-079R2, SB500N-023R2, and SB600N-031R2.**

PURPOSE:

Some operators have experienced cracking of Model 500/600 helicopter main rotor blades. These cracked blades have been associated with a high number of torque events per hour which exceed the fatigue spectrum. This bulletin references criteria to assist operators in understanding their level of usage, the impact of that usage on the main rotor blade life, and the corresponding inspections required to locate cracks that might occur. Failure to comply with this bulletin may result in the loss of a main rotor blade.

REVISION:

This document supercedes 2100-3R2 and revises the model effectivity and the scope of the additional inspection with a 10X Glass.

PART NUMBERS AND SERIAL NUMBERS AFFECTED:

500P2100-BSC (STC Number: SR09172RC), All Serial numbers.

500P2100-101 (STC Number: SR09074RC), All Serial numbers.

This blade is also known as MD Helicopters, Inc. Part Number 369D21120-501 and all references in MD Helicopters, Inc. CSP-HMI-2 that pertain to part number 369D21120-501 pertain to HTC part number 500P2100-101 as well.

500P2300-501 (STC Number: SR01050LA), All Serial numbers.

This blade is also known as MD Helicopters, Inc. Part Number 369D21121-501 and all references in MD Helicopters, Inc. CSP-HMI-2 that pertain to part number 369D21121-501 pertain to HTC part number 500P2300-501 as well. On the Model 600N helicopter, all references in MD Helicopters, Inc. CSP-HMI-2 that pertain to part number 369D21102-523 pertain to HTC part number 500P2300-501 as well.

HELICOPTER MODELS AFFECTED:

MD Helicopters, Inc. Models 369D, E, FF, 500N, and 600N.

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TIME OF COMPLIANCE:

Accomplish at the next 100-Hour inspection or no later than 90 days after the issue of this bulletin.

FAA APPROVAL:

The design engineering aspects of this Bulletin have been shown to comply with the applicable Federal Aviation Regulations (FARs) and are FAA Approved.

WARRANTY POLICY:

N/A

DISPOSITION OF PARTS REMOVED:

Scrap

REFERENCES:

- 1) MD Helicopters, Inc. Handbook of Maintenance Instructions (CSP-HMI-2), Revision 34, dated 21 August 2003 or later
- 2) MD Helicopters, Inc. Rotorcraft Log Book (CSP-RLB), Revision 2, dated 31 May 2002 or later
- 3) Maintenance Manual HTCM-001, Part Number 500P2100-BSC, -BSC-1, -101, -103, -301, -303, 500P2300-501, and -503 Main Rotor Blades (Installation and Maintenance), Revision F, dated 15 January 2004 or later

PREPARATION FOR INSPECTION:

(Reference MD Helicopters, Inc. Handbook of Maintenance Instructions (CSP-HMI-2))

- 1) Review the definition of a Torque Event (TE) (Reference MD Helicopters, Inc. CSP-HMI-2, Section 04-00-00, Torque Event (TE)).
- 2) Review Rotorcraft Log Book entries to determine current number of TE's accumulated (actual usage) on each main rotor blade. If the current number of TE's cannot be reliably determined, 13,720 TE's shall be used.
- 3) Record current number of TE's accumulated (actual usage) on each main rotor blade in Rotorcraft Log Book. Continue to record the number of TE's accumulated (actual usage) throughout the life of the main rotor blades.

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INSPECTION INSTRUCTIONS:

- 1) Determine main rotor blade TE inspection interval using current number of TE's per Limitations Component Mandatory Replacement Schedule (Reference MD Helicopters, Inc. CSP-HMI-2, Section 04-00-00, Table 1. Airworthiness Limitations Component Mandatory Replacement Schedule).
- 2) Inspect main rotor blades at the required interval per Main Rotor Blade Torque Event Inspection (Reference MD Helicopters, Inc. CSP-HMI-2, Section 62-10-00).

Note: A record of TE's must be kept (Reference MD Helicopters, Inc. CSP-HMI-2, Section 04-00-00, Table 1. Airworthiness Limitations Component Mandatory Replacement Schedule)

Note: It is recommended to paint the inboard 24 inches (Not to be exceeded) of the blade Gloss White to aid in crack detectability. If this is done, all blades must be painted alike and Re-Balanced (Reference MD Helicopters, Inc. CSP-HMI-2, Section 20-30-00, 4. Main Rotor Blade Paint).

- 3) In addition, inspect the **Outboard Periphery of the Bottom Doubler and Bottom Root Fitting** for cracks (**Figure 1**). **Lift outboard end of the blade off the droop stop** by the blade outboard end. Use a **10x Magnifying Glass**. Any evidence of cracking scraps the blade.

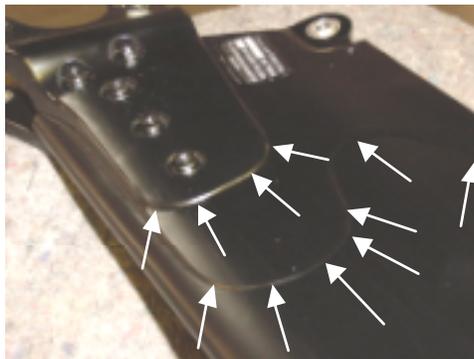


Figure 1 - Inboard Area of Main Rotor Blade - Bottom Side

RECORDING AND COMPLIANCE:

Record compliance of this Service Bulletin in the Technical Directives and Bulletins section of the rotor blade Serviceable Component Record.

POINTS OF CONTACT:

For further information and rotor blade disposition, contact Helicopter Technology Company, LLC (HTC) at (310) 523-2750, or FAX (310) 523-2745.

THIS SERVICE BULLETIN IS FAA APPROVED