

SERVICE BULLETIN

DATE: 4 FEBRUARY 2004

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MAIN ROTOR BLADE ASSEMBLY TORQUE EVENT INSPECTION

* Supersedes Service Bulletin SB369H-245R1, SB369D-201R1, SB369E-095R1, SB369F-079R1, SB500N-023R1, SB600N-031R1, dated 24 July 2001. This revision adds cross-reference blade information, revises the aircraft affected (369H/HE/HS/HM series helicopters are no longer affected), and adds additional inspection instructions.

1. PLANNING INFORMATION:

A. Aircraft Affected:

All 369D/E/F/FF, 500N, and 600N series helicopters . **This is for next rev.**

B. Assembly/Components Affected by this Bulletin:

Main Rotor Blade Assembly (P/N 369A1100 BASIC thru -511)

Main Rotor Blade Assembly (P/N 369D21100 BASIC thru -523)

Main Rotor Blade Assembly (P/N 369D21102 BASIC thru -523)

Main Rotor Blade Assembly (P/N 369D21120-501)

- This blade is also known as Helicopter Technology Company (HTC) P/N 500P2100-101 (STC Number SR09074RC) and carries HTC's PMA data plate as well as MDHI's data plate. All references in HTC's Maintenance Manual, HTC-M-001 and HTC's Mandatory Service Bulletin Notice No. 2100-3R3 that pertain to P/N 500P2100-101 pertain to MDHI P/N 369D21120-501, as well. The blades are identical.

Main Rotor Blade Assembly (P/N 369D21121-501)

- This blade is also known as Helicopter Technology Company (HTC) P/N 500P2300-501 (STC Number SR01050LA) and carries HTC's PMA data plate as well as MDHI's data plate. All references in HTC's Maintenance Manual, HTC-M-003 and HTC's Mandatory Service Bulletin Notice No. 2100-3R3 that pertain to P/N 500P2300-501 pertain to MDHI P/N 369D21121-501, as well. The blades are identical.

NOTE: HTC's Mandatory Service Bulletin Notice No. 2100-3R3 also pertains to P/N 500P2100 Basic (foreign military helicopters).

Table 1 provides a cross reference of the MDHI and HTC blade part numbers and applicable helicopter model.

Table 1. Main Rotor Blade Part Numbers and Helicopter Models

MDHI M/R Blade Part Number	Helicopter Model	HTC M/R Blade Part Number
N/A	Foreign Military	500P2100 Basic
369D21100 Basic thru -523	369D, 369E	N/A
369D21102 Basic thru -523	369FF, 500N, 600N	N/A
369D21120 Basic, -501	369D, 369E	500P2100- 101
369D21121 Basic, -501	369FF, 500N, 600N	500P2300-501

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C. Reason:

Some operators have experienced cracking of main rotor blades. These cracked blades have been associated with a high number of torque events/external lifts per hour which exceed the original design 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.

D. Description:

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.

E. Time of Compliance:

This Bulletin shall be accomplished at the next 100-Hour inspection, or no later than 90 days after the issue date of this Bulletin.

F. FAA Approval:

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

G. Warranty Policy:

N/A

H. Disposition of Parts Removed:

Scrap

I. Other Publications Affected:

Handbook of Maintenance Instructions (CSP-HMI-2), Revision 34 dated 21 August 2003, TR03-004, 9 January 2004 or later.
Rotorcraft Log Book (CSP-RLB), Revision 4 dated 31 May 2002 or later.

J. Points of Contact:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona.
Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.

2. ACCOMPLISHMENT INSTRUCTIONS:

A. Preparation

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

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B. Inspection

- (1). Determine the main rotor blade TE inspection interval, using current number of TE (Ref. CSP-HMI-2, Section 04-00-00, Table 1. Airworthiness Limitations Component Mandatory Replacement Schedule).
- (2). Inspect main rotor blades at the required interval (Ref. CSP-HMI-2, Section 62-10-00, Main Rotor Blade Torque Event Inspection), to include the following.

NOTE:

- A record of TEs must be kept (Ref. CSP-HMI-2, Section 04-00-00, Table 1, Airworthiness Limitations Component Mandatory Replacement Schedule).
- 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. (Ref. CSP-HMI-2, Section 20-30-00, Main Rotor Blade Painting.)

(Ref. Figure 1)

- (3). When inspecting bottom side of blade, using bright light and 10x magnifying glass, inspect for chordwise cracks protruding from under root fitting and doubler.

3. COMPLIANCE RECORD

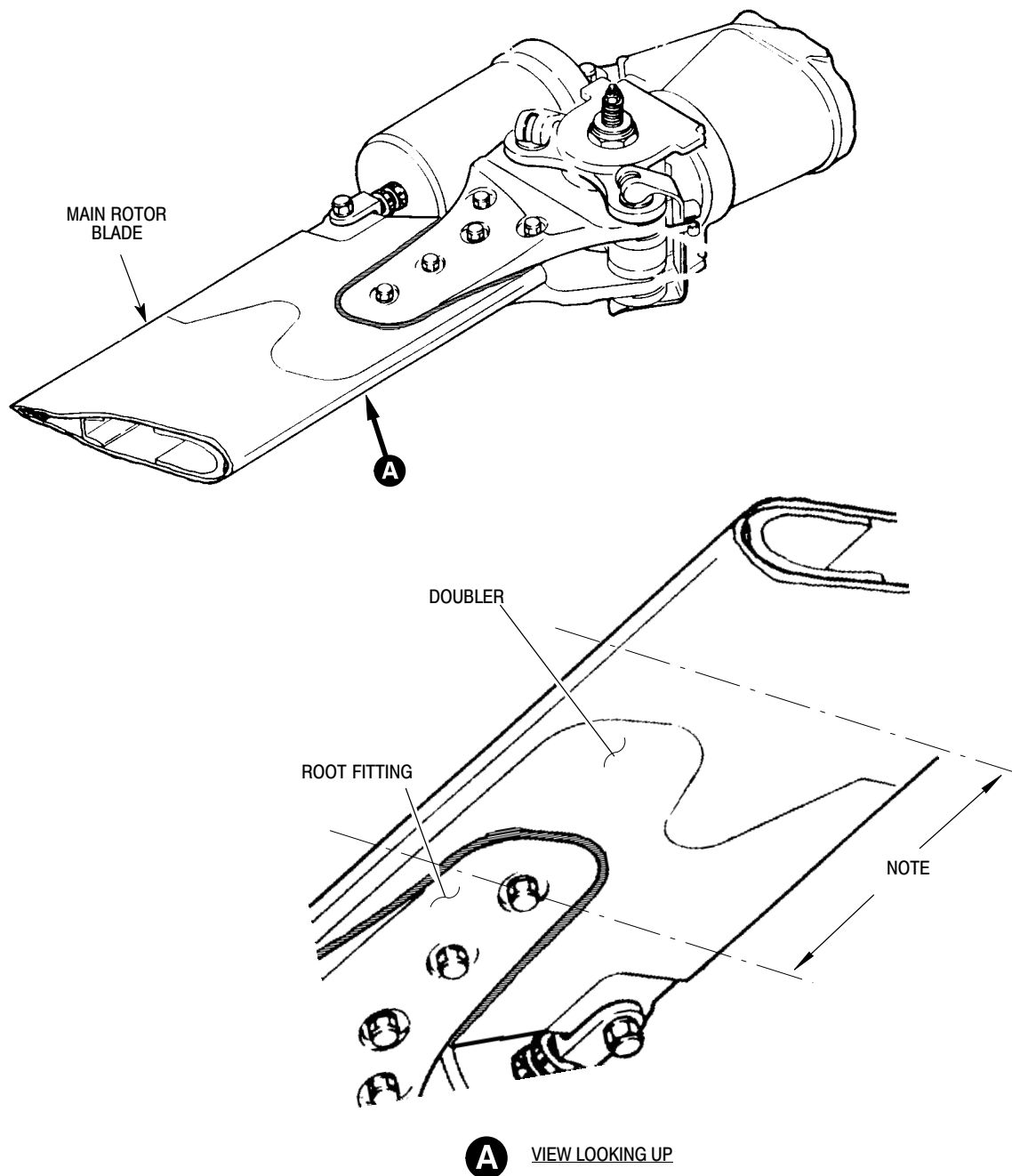
Record compliance to this Service Bulletin in the Compliance Record section of the helicopter Log Book.

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NOTE:
USING BRIGHT LIGHT AND 10X MAGNIFYING GLASS, INSPECT FOR CHORDWISE CRACKS PROTRUDING FROM UNDER ROOT FITTING AND DOUBLER.

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Figure 1. Main Rotor Blade Torque Event Inspection

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