

**Mandatory  
Service Bulletin**

**MAIN ROTOR BLADE CORROSION INSPECTION AND PROTECTION**

**SUMMARY:**

Procedures in this service bulletin provide owners and operators with information pertaining to corrosion detection and protection in the areas surrounding the Root Fitting Bushings, Root Fittings, Doublers, Abrasion Strip, and Tip End of the Blade and protection from moisture intrusion into the blade through the Tip End.

**PURPOSE:**

The purpose of this notice is to detect corrosion and ensure the appropriate protection around the Main Rotor Blade Root Fitting Bushings, Root Fitting-to-Doubler Bond-Lines, Doubler-to-Skin Bond-Lines, Abrasion Strip-to-Skin Bond Lines, and Tip End of the Blade.

Operation of Main Rotor Blades in wet or high humidity environments can significantly accelerate the onset of corrosion or moisture intrusion into the blade. Improper storage of main rotor blades for extended periods of time can also foster corrosion.

Failure to comply with this bulletin may result in corrosion around the Main Rotor Blade Root Fitting Bushings, Root Fitting-to-Doubler Bond-Line, Doubler-to-Skin Bond-Lines, Abrasion Strip-to-Skin Bond Lines, and Tip End of the Blade or excessive moisture intrusion into the blade through the Tip End. Active Corrosion in these areas could ultimately result in failure or loss of a Main Rotor Blade.

**REVISION:**

This document supercedes 2100-4 and adds additional sealant to protect from moisture intrusion into the blade through the Tip End.

**PART NUMBERS AND SERIAL NUMBERS AFFECTED:**

500P2100-BSC and -BSC-1 (STC Number: SR09172RC), All Serial numbers.

500P2100-101 and -103 (STC Number: SR09074RC), All Serial numbers.

The 500P2100-101 blade is also known as MD Helicopters, Inc. Part Number 369D21120-501 and the 500P2100-103 blade is also known as MD Helicopters, Inc. Part Number 369D21120-503. All references in MD Helicopters, Inc. CSP-HMI-2 that pertain to part number 369D21120-501 and -503 pertain to HTC part number 500P2100-101 and -103 as well.

500P2100-301 and -303 (STC Number: SR09184RC), All Serial numbers.

The 500P2100-301 blade is also known as MD Helicopters, Inc. Part Number 369D21123-501 and the 500P2100-303 blade is also known as MD Helicopters, Inc. Part Number 369D21123-503. All references in MD Helicopters, Inc. CSP-H-2 and CSP-H-4 that pertain to part number 369D21123-501 and -503 pertain to HTC part number 500P2100-301 and -303 as well.

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**PART NUMBERS AND SERIAL NUMBERS AFFECTED - CONTINUED:**

500P2300-501 and -503 (STC Number: SR01050LA), All Serial numbers.

The 500P2300-501 blade is also known as MD Helicopters, Inc. Part Number 369D21121-501 and the 500P2300-503 blade is also known as MD Helicopters, Inc. Part Number 369D21121-503. All references in MD Helicopters, Inc. CSP-HMI-2 that pertain to part number 369D21121-501 and -503 pertain to HTC part number 500P2300-501 and -503 as well. On the Model 600 helicopter, all references in MD Helicopters, Inc. CSP-HMI-2 that pertain to part number 369D21102-523 pertain to HTC part number 500P2300-501 and -503 as well.

**HELICOPTER MODELS AFFECTED:**

MD Helicopters, Inc. Models 369A, H, HE, HM, HS, D, E, FF, 500N, and 600N.

**TIME OF COMPLIANCE:**

**For Blade(s) in storage:** If blade(s) have been in storage for six (6) months or longer, this bulletin shall be accomplished as soon as possible after receipt of this notice. If storage is planned for more than six (6) months, this bulletin shall be accomplished every six (6) months. This bulletin shall be accomplished prior to re-installation.

**For Blade(s) presently in service:** This bulletin shall be accomplished within 25 hours of receipt of this notice and Blades shall be inspected every 100 hours thereafter.

**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.

**MANPOWER:**

Approximately 1.0 man-hours will be required to accomplish this bulletin.

**WARRANTY POLICY:**

N/A.

**DISPOSITION OF PARTS REMOVED:**

N/A.

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**REFERENCES:**

- 1) MD Helicopters, Inc. Handbook of Maintenance Instructions (CSP-H-2), Revision 17, dated May 15, 2001 or later
- 2) MD Helicopters, Inc. Appendix B (CSP-H-4), Revision 1, dated May 14, 2001 or later
- 3) MD Helicopters, Inc. Handbook of Maintenance Instructions (CSP-HMI-2), Revision 29, dated May 11, 2001 or later
- 4) MD Helicopters, Inc. Rotorcraft Log Book (CSP-RLB), Revision 2, dated February 17, 2000 or later
- 5) 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

**REQUIRED MATERIALS:**

- 1) Sealant, Two-Part Epoxy, DP-190, 3M Corporation or Sealant per MIL-S-8802, Type II, Class B-2 (e.g. Pro-Seal)
- 2) Liquid Wax, Turtle Wax T-123, Turtle Wax Inc., Chicago, Illinois or equivalent
- 3) Naphtha
- 4) Kim Wipes or equivalent clean lint-free wipes.

**STORAGE REQUIREMENTS:**

- 1) Blades shall be stored in a container designed for storage of Blades.
- 2) Blades shall be stored so that moisture is not enclosed in the container.
- 3) Blades shall not be permitted to be in contact with standing or pooling water.
- 4) Blades shall be inspected periodically to verify that there is no visible corrosion.
- 5) Blades shall have required Sealant in place prior to storage.
- 6) Blades should be Waxed prior to storage.

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**INSPECTION AND PROTECTION INSTRUCTIONS:**

- 1) Clean area thoroughly with Solvent. Naphtha is recommended. MPK, MEK, or Acetone should not be used as they will remove the pigment from the black paint.
- 2) Inspect areas as shown in Figure 1 and Figure 2 for Active Corrosion. Any evidence of corrosion in these areas is cause for scrapping of the blade.
- 3) If areas do not have Sealant in place, apply small bead of Sealant around peripheries (top and bottom surfaces) of Root Fitting Bushings (inside and outside), around peripheries of Root Fitting-to-Doubler Bond-Lines, around peripheries of Doubler-to-Skin Bond-Lines, around Abrasion Strip-to-Skin Bond Lines, and around the Tip End of the Blade as shown in Figure 1 and Figure 2 below. Ensure that the center portion of each of the Tip Cap Rivets (2 Places, Top and Bottom Side of Blade – Figure 2) are sealed to prevent water/moisture from entering the blade.
- 4) Wax all painted surfaces of blades in accordance Wax manufacturer's instructions.

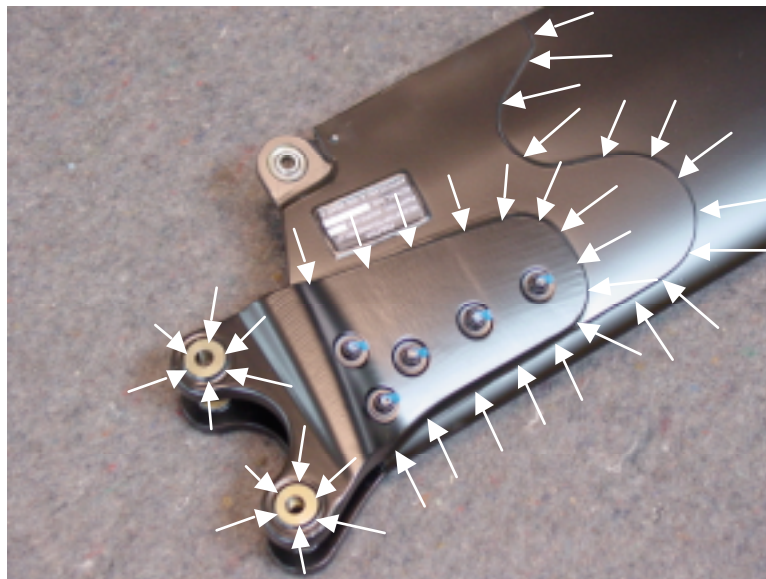


Figure 1 – Main Rotor Blade Root End Affected Areas (Bottom Side Shown – Same Applies to Top Side)

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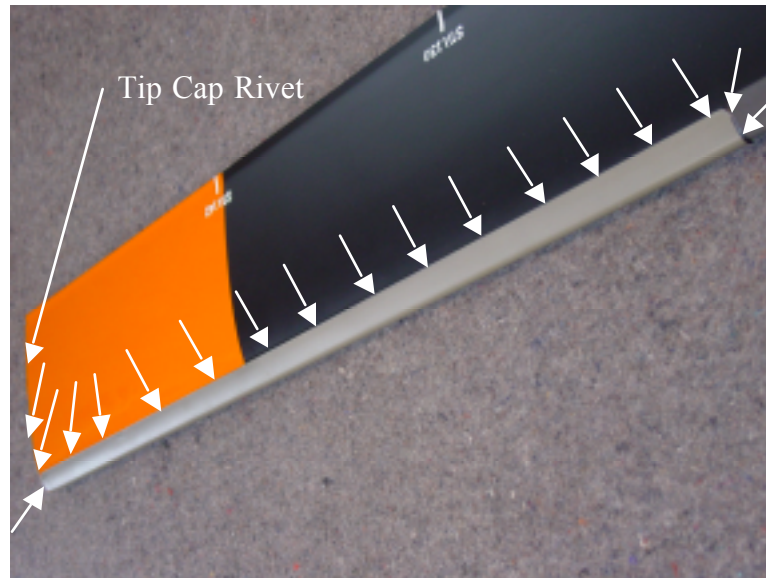


Figure 2 – Main Rotor Blade Tip End Affected Areas (Top Side Shown – Same Applies to Bottom Side)

**RECORDING AND COMPLIANCE:**

Record compliance with 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**