

**Mandatory
Service Bulletin**

TAIL ROTOR BLADE ABRASION STRIP TAP TEST AND MODIFICATION

SUMMARY:

Procedures in this service notice provide owners and operators with information pertaining to the periodic inspection of the abrasion strip to skin bond integrity on tail rotor blades.

PURPOSE:

The purpose of this notice is to ensure the periodic inspection of the abrasion strip to skin bond integrity on tail rotor blades.

Failure to comply with this bulletin may result in dis-bond or delamination of the tail rotor abrasion strip. Loss of the tail rotor abrasion strip could result in significant vibration, loss of the Tail Rotor, and ultimately loss of directional control.

REVISION:

This document supercedes 3100-4R3. The **Part 2 - Modification** may now be accomplished at an HTC Authorized Repair Station qualified to perform this modification.

PART NUMBERS AND SERIAL NUMBERS AFFECTED:

500P3100-101 and -103, including "M" and "I" (STC Number SR09213RC) All Serial Numbers.

These blades are also known as MD Helicopters, Inc. Part Number 369D21640-501, -503, and -505 and all references in MD Helicopters, Inc. CSP-HMI-2 that pertain to part number 369D21640-501, -503, and -505 pertain to HTC part number 500P3100-101 and -103 as well.

500P3100-301 and -303, including "M" and "I" (STC Number SR01282LA) All serial Numbers.

These blades are also known as MD Helicopters, Inc. Part Number 369D21641-501, -503, and -505 and all references in MD Helicopters, Inc. CSP-HMI-2 that pertain to part number 369D21641-501, -503, and -505 pertain to HTC part number 500P3100-301 and -303 as well.

500P3300-501 and -503, including "M" and "I" (STC Number SR01282LA) All Serial Numbers.

These blades are also known as MD Helicopters, Inc. Part Number 369D21643-501, -503, and -505 and all references in MD Helicopters, Inc. CSP-H-2 and CSP-H-4 that pertain to part number 369D21643-501, -503, and -505 pertain to HTC part number 500P3300-501 and -503 as well.

500P3500-701 and -703, including "M" and "I" (STC Number SR01282LA) All Serial Numbers.

These blades are also known as MD Helicopters, Inc. Part Number 369D21642-501, -503, and -505 and all references in MD Helicopters, Inc. CSP-HMI-2 that pertain to part number 369D21642-501, -503, and -505 pertain to HTC part number 500P3500-701 and -703 as well.

**Mandatory
Service Bulletin**

TAIL ROTOR BLADE ABRASION STRIP TAP TEST AND MODIFICATION

HELICOPTER MODELS AFFECTED:

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

TIME OF COMPLIANCE:

This bulletin shall be accomplished within 25 hours of receipt of this notice and every 25 hours thereafter until **PART 2** is implemented. **PART 2** shall be accomplished not later than 31 January 2007. **PART 2** constitutes terminating action of the periodic inspection requirements of **Part 1**.

MANPOWER:

Approximately 0.1 man-hours will be required to accomplish **PART 1** of this bulletin.

Approximately 2.0 man-hours will be required to Remove and Replace the Tail Rotor Blades to accomplish **PART 2** of this bulletin.

WARRANTY POLICY:

N/A.

DISPOSITION OF PARTS REMOVED:

N/A.

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-002, Part Number 500P3100, 500P3300, 500P3500, 369D21640, 369D21641, 369D21642, and 369D21643 Tail Rotor Blades (Installation and Maintenance), Revision B, dated 16 June 2003 or later
- 6) Federal Aviation Administration (FAA) Advisory Circular (AC) 43.13

**Mandatory
Service Bulletin**

TAIL ROTOR BLADE ABRASION STRIP TAP TEST AND MODIFICATION

PART 1 - INSPECTION:

Physically perform a tap test on both the upper and lower surfaces of the abrasion strip surfaces on each tail rotor blade. Inspect the abrasion strip to skin bond from the inboard end of the blade to the blade tip in the spanwise direction and from the leading edge to the aft edge of the abrasion strip in the chordwise direction. The allowable void size in the abrasion strip area is 0.2 square inches. There shall be a minimum of 1.0 inches between voids in this area. 75% of the abrasion strip bonded area shall be free from voids except that no voids shall break out to the edges of the abrasion strip. The upper and lower surfaces shall be considered separately.

The tap inspection may be conducted using a coin (U.S. 25 cent piece or equivalent) or a small brass, steel, or aluminum hammer. Lightly tap the abrasion strip area as shown in the sketch below. A void will produce a tone change. The tone will be lower over the void. A method of “tuning” your ear is to tap from the leading edge of the blade towards the trailing edge. As you move pass the aft edge of the abrasion strip and over the unsupported skin, you will notice a distinctive lowering of the tone produced. Tap in a pattern with no more than 0.13 inches between taps in any direction.

Any blade that is outside of the above specification shall be replaced with an airworthy blade.



**Mandatory
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TAIL ROTOR BLADE ABRASION STRIP TAP TEST AND MODIFICATION

PART 2 - MODIFICATION:

Fielded Tail Rotor Blades are to be returned to the HTC Factory or an HTC Authorized Repair Station qualified to perform this modification. This modification consists of the installation of a 500P3124-13 Titanium Rivet installed in the tip of the blade in accordance with the following Engineering Drawing as applicable:

**500P3100, Revision F, dated 11/22/04,
500P3300, Revision B, dated 11/22/04, or
500P3500, Revision B, dated 10/22/04**

or Standard Repair Instruction:

SRI #3100-006 as described in HTCQ-012, Revision B, dated 05/10/06

or later FAA Approved revisions. The Identification "T" shall signify that the aforementioned procedure has been accomplished. Installation of the -13 Rivet and the Re-Identification shall constitute compliance and repeating **PART 1** is no longer required. Newly built blades shall already comply.

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 HTC at (310) 523-2750, or FAX (310) 523-2745.

THIS SERVICE BULLETIN IS FAA APPROVED