

## **MAIN ROTOR BLADE ABRASION STRIP DAILY INSPECTION REQUIREMENTS**

### **SUMMARY:**

Some operators of Model 369/500/600 Helicopters have experienced delamination or dis-bonding of the Abrasion Strip on Main Rotor Blades which resulted in a departure of the Abrasion Strip in-Flight.

Daily Inspection of the Abrasion Strip bond integrity on Model 369/500/600 Helicopter Main Rotor Blades is required in order to detect delamination or dis-bonding if it occurs.

### **PURPOSE:**

The purpose of this bulletin is to ensure the Daily Inspection of the Abrasion Strip bond integrity on Model 369/500/600 Helicopter Main Rotor Blades is carried out as required.

Failure to comply with this bulletin may result in dis-bond or delamination of the Main Rotor Blade Abrasion Strip during operation. Loss of the Main Rotor Blade Abrasion Strip could result in significant vibration, and potential loss of control of the aircraft.

### **REVISION:**

This document supersedes 2100-8R2, adds additional figures to aid in the inspection process, and changes this document to Mandatory Service Bulletin.

### **PART NUMBERS AND SERIAL NUMBERS AFFECTED:**

500P2100-105 (STC Number SR09047RC) with 1.25 inch (31.8 mm) Chord Length Abrasion Strip installed and less than 700 hours Total Time Since New (TTSN) or since Abrasion Strip Replacement, All Serial Numbers. These blades are also known as MD Helicopters, Inc. Part Number 369D21120-505 and all references in MD Helicopters, Inc. CSP-HMI-2 that pertain to Part Number 369D21120-505 pertain to HTC Part Number 500P2100-105 as well.

500P2100-305 (STC Number SR09184RC) with 1.25 inch (31.8 mm) Chord Length Abrasion Strip installed and less than 700 hours Total Time Since New (TTSN) or since Abrasion Strip Replacement, All Serial Numbers. These blades are also known as MD Helicopters, Inc. Part Number 369D21123-505 and all references in MD Helicopters, Inc. CSP-H-2 and CSP-H-4 that pertain to Part Number 369D21123-505 pertain to HTC Part Number 500P2100-305 as well.

500P2300-505 (STC Number SR01050LA) with 1.25 inch (31.8 mm) Chord Length Abrasion Strip installed and less than 700 hours Total Time Since New (TTSN) or since Abrasion Strip Replacement, All Serial Numbers. These blades are also known as MD Helicopters, Inc. Part Number 369D21121-505 and all references in MD Helicopters, Inc. CSP-HMI-2 that pertain to Part Number 369D21121-505 pertain to HTC Part Number 500P2300-505 as well.

### **HELICOPTER MODELS AFFECTED:**

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

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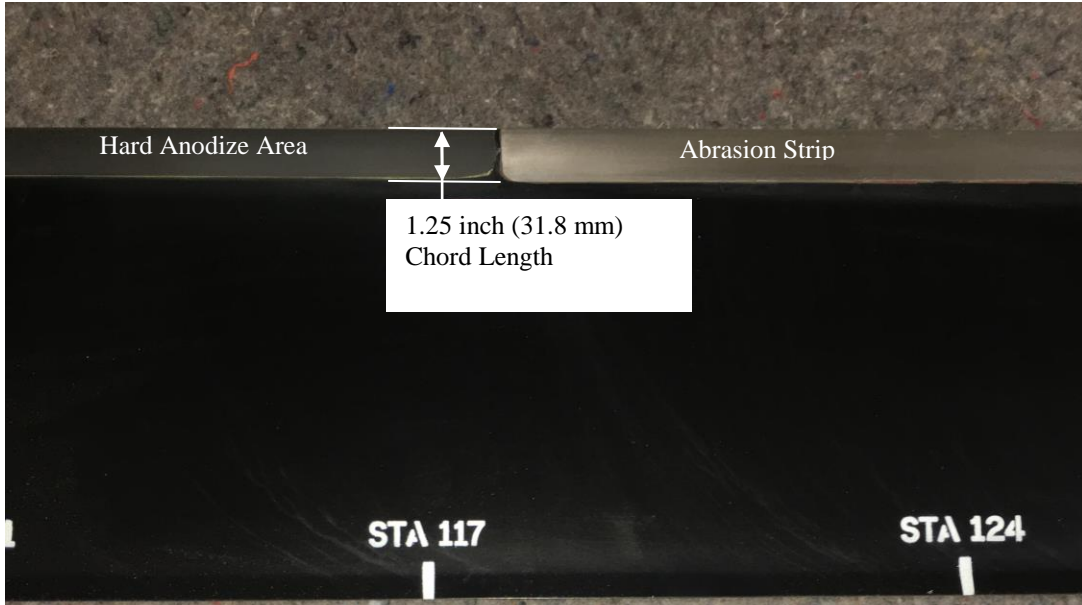


Figure 1 – 1.25 inch (31.8 mm) Chord Abrasion Strip

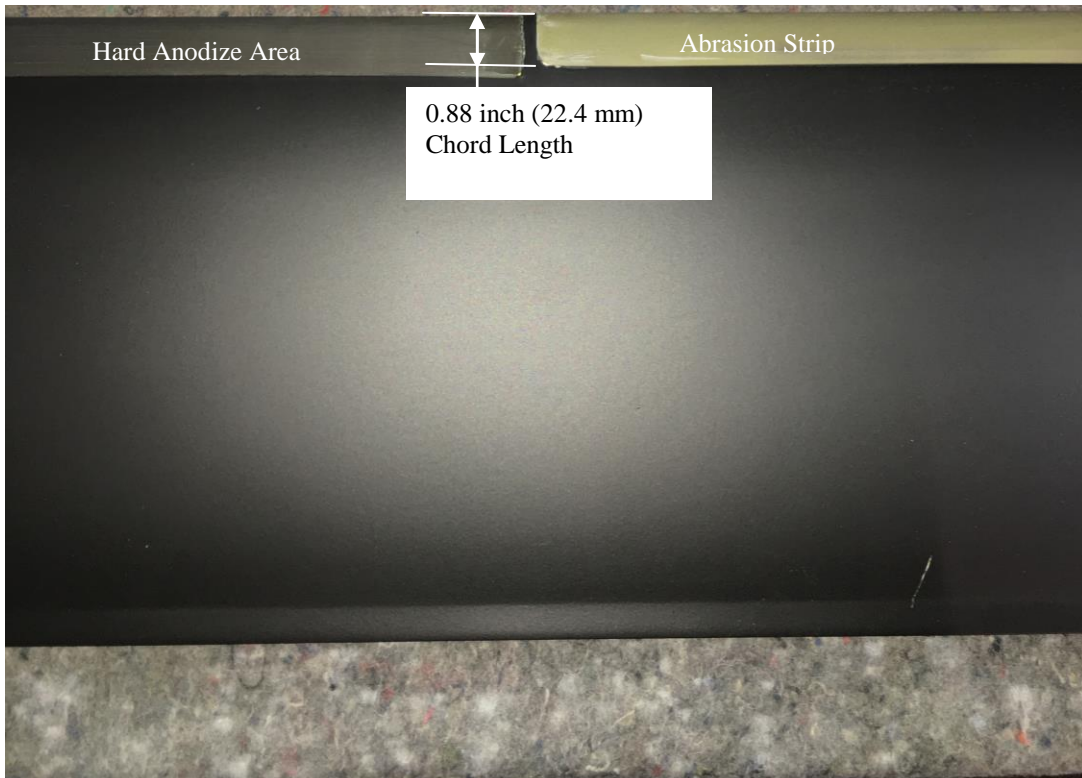


Figure 2 – 0.88 inch (22.4 mm) Chord Abrasion Strip

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**REFERENCES:**

- 1) MD Helicopters, Inc. Handbook of Maintenance Instructions (CSP-HMI-2), Revision 29, dated May 11, 2001 or later
- 2) MD Helicopters, Inc. Handbook of Maintenance Instructions (CSP-H-2), Revision 17, dated May 15, 2001 or later
- 3) MD Helicopters, Inc. Appendix B (CSP-H-4), Revision 1, dated May 14, 2001 or later
- 4) MD Helicopters, Inc. Rotorcraft Log Book (CSP-RLB), Revision 2, dated February 17, 2000 or later
- 5) Maintenance Manual HTCMM-001, Main Rotor Blades (Installation and Maintenance), Revision H, dated February 12, 2009 or later.
- 6) Mandatory Service Bulletin (SB) 2100-4R2, Main Rotor Blade Inspection and Protection, Revision 2, dated December 23, 2005 or later.
- 7) Quality Specification HTCQ-004, Standard Repair Instructions Manual – Main Rotor Blade, Revision I, dated January 27, 2016 or later.

**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.

**TIME OF COMPLIANCE:**

This bulletin shall be accomplished within 7 days of receipt of this bulletin and on Every Daily Tap Test Inspection thereafter until **PART 2** is implemented. **PART 2** shall be accomplished not later than 120 days after the issuance of the FAA Airworthiness Directive (A/D). **PART 2** constitutes terminating action of the Daily inspection requirements of **Part 1**.

**MANPOWER:**

Approximately 0.25 man-hours will be required to accomplish **PART 1** of this bulletin.  
Approximately 1.0 man-hours will be required to Remove and Replace the Main Rotor Blades to accomplish **PART 2** of this bulletin.

**WARRANTY POLICY:**

As applicable per Helicopter Technology Company (HTC) written Limited Warranty for New Product located on the company Website at [www.helicoptertech.com](http://www.helicoptertech.com).

**DISPOSITION OF PARTS REMOVED:**

As determined by HTC Factory or HTC Authorized Repair Station.

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**PART 1 - INSPECTION: REQUIRED ABRASION STRIP INSPECTION:**

- 1) Determine which Chord Length Abrasion Strip is present on the subject blade and Total Time Since New (TTSN) or since Abrasion Strip Replacement to determine if this Mandatory Service Bulletin is applicable. Reference **Figure 1** and **Figure 2** on Page 2.
- 2) The leading edge Abrasion Strip shall be inspected for Voids, including Blistering, Bubbling, or Lifting on Every Daily Inspection by Tap Testing.
- 3) The Tap Testing to be conducted using a coin (U.S. 25 cent piece or equivalent) or a small brass, steel, or aluminum hammer. Lightly tap the entire surface of the Abrasion Strip Area, both upper and lower. Tap in a pattern with no more than 0.12 inches (3.0 mm) between taps in any direction.
- 4) 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 past the aft edge of the spar and over the unsupported skin, you will notice a distinctive lowering of the tone produced.
- 5) If any Void is found within 0.50 inches (12.7 mm) of any edge regardless of size, replace the subject blade with another airworthy blade, Reference **Figure 3** and **Figure 4** on Page 5. **Note: Do not attempt a field repair.**
- 6) If a single Void is detected:
  - a. That is fully encapsulated (i.e. is not within 0.50 inches (12.7 mm) of any edge).
  - b. Does not exceed 0.50 square inches (322.6 square mm) in area.the blade may continue to fly so long as it is Reported to and acknowledged by the HTC Factory. Please notify Helicopter Technology Company (HTC) at contact below.
- 7) If multiple Voids are present or a Void exceeds 0.50 square inches (322.6 square mm), replace the subject blade with another airworthy blade. **Note: Do not attempt a field repair.**
- 8) If a Void is not detected, continue with Daily Tap Test Inspections until **PART 2** is implemented or until 700 hours is reached.

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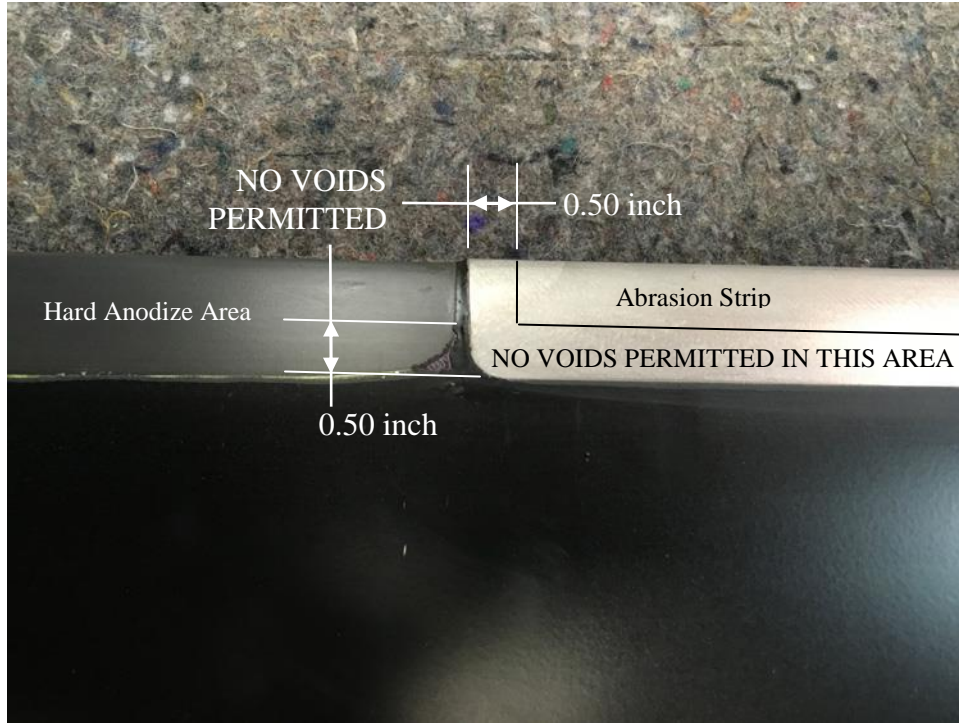


Figure 3 – Inboard Abrasion Strip Area

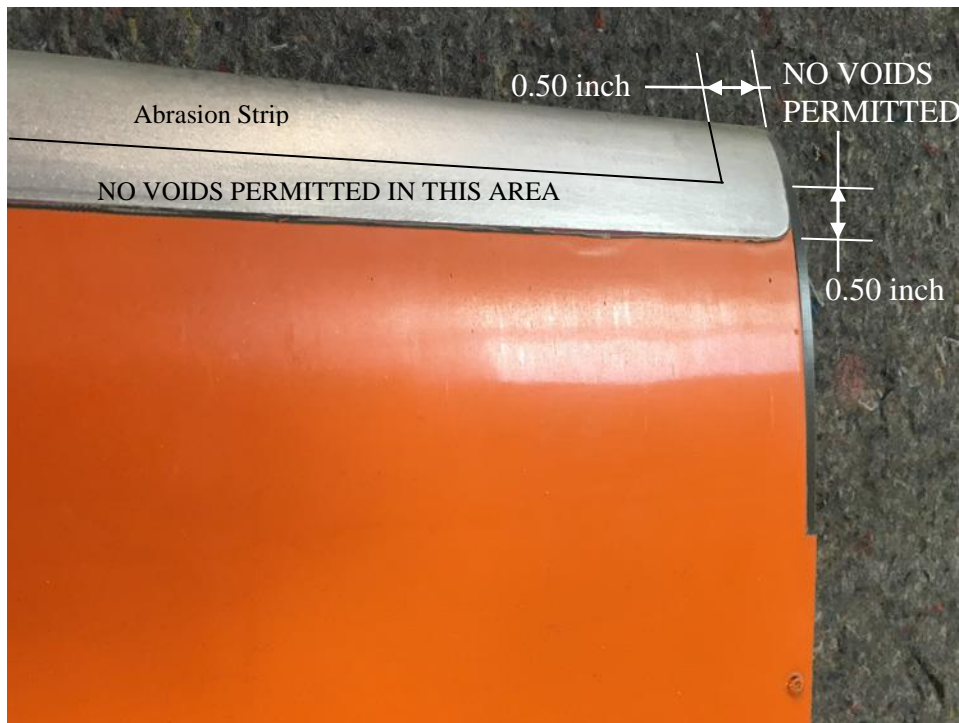


Figure 4 – Outboard Abrasion Strip Area



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**PART 2 - MODIFICATION:**

- 1) If applicable, Fielded Main 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 removal and replacement of the Abrasion Strip with a 0.88 inch (22.4 mm) chord Stainless Steel Abrasion Strip in accordance with HTCQ-004, Revision I (or later approved revision) Standard Repair Instruction – Main Rotor Blade. Installation of the 0.88 inch (22.4 mm) chord Stainless Steel Abrasion Strip shall constitute compliance and repeating **PART 1** is no longer required.
- 2) Newly built blades already comply. Newly built blades include: a) HTC Part Number 500P2100-105 (MDHI Part Number 369D21120-505), Serial Number 725C and forward, b) HTC Part Number 500P2100-305 (MDHI Part Number 369D21123-505), Serial Number 725C and forward, and c) HTC Part Number 500P2300-505 (MDHI Part Number 369D21121-505), Serial Number 330T and forward.

**RECORDING AND COMPLIANCE:**

Record compliance as applicable in the Rotorcraft Log Book (Reference 4 – CSP-RLB) and/or Serviceable Component Record.

**POINTS OF CONTACT:**

For further information and rotor blade disposition, contact Helicopter Technology Company (HTC), LLC at (310) 523-2750, or FAX (310) 523-2745. [www.helicoptertech.com](http://www.helicoptertech.com)

**THIS SERVICE BULLETIN IS FAA APPROVED**