

## **INSPECTION OF MAIN ROTOR BLADE**

### **REVISION:**

Revision 1 expands the summary.

Revision 2 adds the requirement to remove the rotor blade from the helicopter before performing the inspection.

### **SUMMARY:**

Corrosion has been detected in a blade that had voids that extended to the trailing edge of the spar and the inboard end of the blade that permitted moisture to accumulate between the skin and spar. The corrosion formed a pit that resulted in a fatigue crack and subsequent blade failure.

### **PURPOSE:**

The purpose of this bulletin is to perform a one-time inspection for skin to spar bonding voids before next flight. Perform the test per the instructions below. Should the voids exceed those identified as allowable please notify Helicopter Technology Co. for disposition.

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

500P2100-BSC (STC No: SR09172RC) Serial numbers K101 thru K562.

500P2100-101 and -301(STC No: SR09074RC and SR09184RC), Serial numbers A001 thru A999 and B001 thru B529.

500P2300-501 (STC No: SR01050LA) Serial numbers T101 thru T107

### **HELICOPTER MODELS AFFECTED:**

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

### **TIME OF COMPLIANCE:**

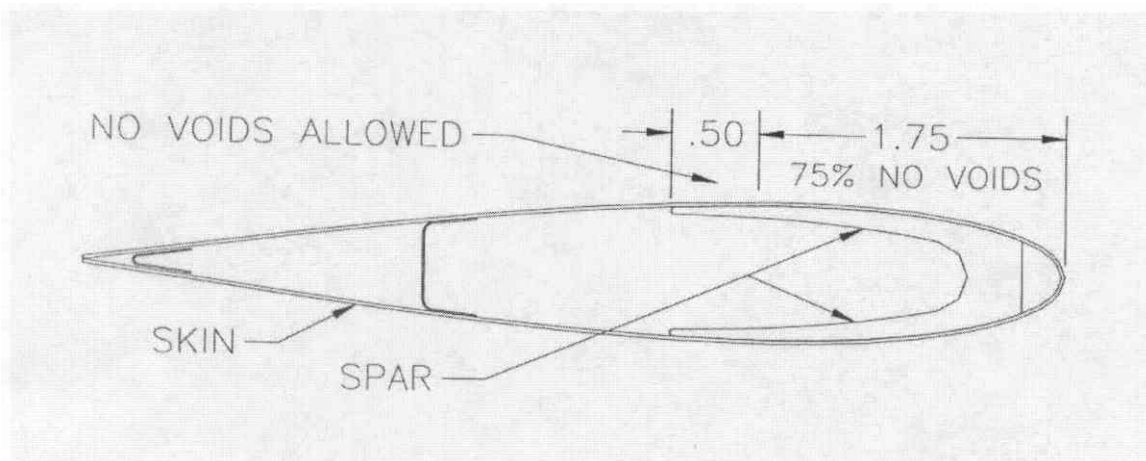
Accomplish prior to the next flight

### **INSPECTION:**

Remove the rotor blade to be inspected from the helicopter and place it on a flat surface. Physically perform a tap inspection on both the upper and lower surfaces of the main rotor blade. Inspect the skin to spar 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 spar in the chordwise direction. The allowable void size (area) is 0.50 square inches except that no voids over 2.0 inches in length are allowed. There shall be 2.0 inches between voids except for the aft 0.50 inches of the spar where there are no voids allowed. Also, there are no voids allowed in any location in the inboard 12.0 inches of the blade. Measure the 12.0 inches from the inboard end of the blade not the end of the root fitting lugs. The upper and lower surfaces shall be considered separately.

**Mandatory  
Service Bulletin**

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 area over the spar 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 spar and over the unsupported skin, you will notice a distinctive lowering of the tone produced. Tap in a pattern with no more than 0.50 inches between taps in any direction.



**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**