

SB369H-246R1 SB369D-203R1 SB369E-097R1 SB369F-082R1

## **SERVICE BULLETIN**

**DATE: 23 JANUARY 2006** 

PAGE 1 OF 4

MANDATORY MANDATORY MANDATORY MANDATORY

## TAIL ROTOR BLADE ABRASION STRIP TAP TEST AND MODIFICATION

\* Supersedes SB369H-246, SB369D-203, SB369E-097, SB369F-082, dated 5 January 2006. This revision adds additional tail rotor blade assemblies.

#### 1. PLANNING INFORMATION:

#### A. Aircraft Affected:

All MD Helicopters, Inc. (MDHI) Model 369A, including the OH-6A, 369H, 369HE, 369HS, 369HM, 369D, 369E, 369F and 369FF helicopters equipped with the affected tail rotor blades not modified per Part 2 of this Bulletin.

## B. Assembly/Components Affected by this Bulletin:

Tail Rotor Blade Assy, MDHI P/N 369D21640-501, -503 and -505 (Helicopter Technology Co - HTC P/N 500P3100-101 and -103)

Tail Rotor Blade Assy, MDHI P/N 369D21641-501, -503 and -505 (Helicopter Technology Co - HTC P/N 500P3100-301 and -303)

Tail Rotor Blade Assy, MDHI P/N 369D21643-501, -503 and -505 (Helicopter Technology Co - HTC P/N 500P3300-501 and -503)

Tail Rotor Blade Assy, MDHI P/N 369D21642-501, -503 and -505 (Helicopter Technology Co - HTC P/N 500P3500-701 and -703)

#### C. Reason:

MDHI has received a report of an abrasion strip separating from a tail rotor blade.

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

## D. <u>Description:</u>

Procedures in this Bulletin provide owners and operators with information pertaining to periodic inspection of the tail rotor blade abrasion strip to skin bond integrity (Part 1) and modification of the tail rotor blade by HTC to install a titanium rivet in the tip of the blade (Part 2).

#### E. FAA Approval:

The technical design aspects of this Service Bulletin are FAA Approved.

#### F. Manpower:

**Part 1:** 0.1 man-hour is required for each periodic inspection.

**Part 2:** 2.0 man hours are required to remove, replace and balance the tail rotor blades after modification is accomplished.

#### G. Time of Compliance:

#### Part 1 Periodic Inspection of Tail Rotor Blade Abrasion Strip:

Inspection shall be accomplished within 25 flight hours after receipt of this Bulletin and every 25 flight hours thereafter until Part 2 of this Bulletin is accomplished.

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SERVICE BULLETIN

**DATE: 23 JANUARY 2006** 

PAGE 2 OF 4

MANDATORY MANDATORY MANDATORY

## Part 2 Tail Rotor Blade Assy Modification:

This modification shall be accomplished not later than 31 January 2007. Accomplishment of Part 2 constitutes terminating action of the periodic inspection requirements of Part 1 of this Bulletin.

## H. Interchangeability:

None

#### I. Material/Part Availability:

N/A

## J. Warranty Policy:

N/A

## K. Tooling:

N/A

## L. Weight and Balance:

N/A

#### M. Electrical Load Data:

N/A

#### N. Other Publications Affected:

N/A

## 2. ACCOMPLISHMENT INSTRUCTIONS:

#### A. Part 1: Periodic Inspection of Tail Rotor Blade Abrasion Strip

- (1). Perform a tap test on both upper and lower surfaces of abrasion strip surfaces on each tail rotor blade as follows:
  - (a). The tap test may be conducted using a coin (U.S. 25 cent piece or equivalent) or a small brass, mild steel or aluminum hammer.
  - (b). Lightly tap abrasion strip area as shown (Ref. Figure 1). Tap in a pattern with no more than 0.13 inch (3.30 mm) between taps in any direction.

**NOTE:** 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 toward the trailing edge. As you move past the aft edge of the abrasion strip and over the skin, you will notice a distinctive lowering of the tone produced.

- (c). Inspect (tap test) abrasion strip to skin bond from inboard end of blade to blade tip in spanwise direction and from leading edge to aft edge of abrasion strip in chordwise direction.
- (d). Allowable void size in abrasion strip area is 0.2 square inch (5.08 square mm). There shall be 1.0 inch (25.4 mm) between voids in this area.
- (e). Seventy-five percent 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.

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SB369H-246R1 SB369D-203R1 SB369E-097R1 SB369F-082R1

# **SERVICE BULLETIN**

**DATE: 23 JANUARY 2006** 

PAGE 3 OF 4

MANDATORY MANDATORY MANDATORY MANDATORY

(2). Remove from service any tail rotor blade that does not meet the above inspection requirements.

## B. Part 2: Tail Rotor Blade Assy Modification

(1). Fielded tail rotor blades are to be returned to the HTC Factory for installation of a titanium rivet in the abrasion strip at the blade tip. Modified tail rotor blades will be identified by the letter "T" painted on the blade root.

**NOTE:** After Part 2 rivet modification is completed, the Tail Rotor Blade assembly is re-balanced on installation; therefore, a mixed configuration is acceptable.

## 3. **DISPOSITION OF PARTS REMOVED:**

Ship to HTC for modification.

#### 4. COMPLIANCE RECORD:

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

## 5. POINTS OF CONTACT:

#### MDHI

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.

#### HTC

Helicopter Technology Company Gary Burdorf 12902 South Broadway Los Angeles, CA 90061 Voice: 310-523-2750

Voice: 310-523-2750 FAX: 310-523-2745

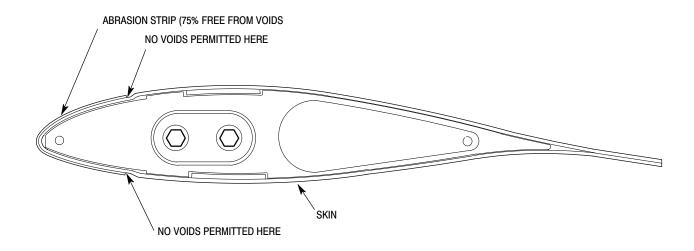


**DATE: 23 JANUARY 2006** 

**SERVICE BULLETIN** 

PAGE 4 OF 4

MANDATORY MANDATORY MANDATORY MANDATORY



88-822

Figure 1. Tail Rotor Blade Abrasion Strip Inspection