



# SERVICE BULLETIN

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\* Supersedes Service bulletins SB500N-029R2 and SB600N-046R2, dated 05 May 2008. Revised to change parts necessary and instructions for strap replacement. Helicopters that have completed SB500N-029R2 or SB600N-046R2 do not have to do this service bulletin again.

## NOTAR® FAN TENSION-TORSION (TT) STRAP REPLACEMENT

### 1. PLANNING INFORMATION

#### A. Aircraft Affected:

MD Helicopters, Inc. (MDHI) Model 500N Helicopters, serial number LN-001 thru LN-105, Model 600N Helicopters, serial number RN003 thru RN074 and all spares inventory.

#### B. Assembly/Components Affected By This Bulletin:

500N5311-5 tension-torsion strap, fan blade NOTAR®.

One fan assembly contains thirteen tension-torsion straps.

#### C. Reason:

MD Helicopters, Inc. and Lord Corporation have determined that it is necessary at intervals to replace fan blade tension-torsion straps as part of maintenance of the NOTAR® system. The Lord Corporation has determined that the tension-torsion straps can, over time, absorb moisture that can cause the straps to have decreased strength. If you do not complete this bulletin, parts will remain in service after their life limit expires which could cause the straps to have decreased strength which decreases directional/yaw control of the helicopter if the strap fails.

#### D. Description:

Procedures in this bulletin give owners and operators information about the tension-torsion strap replacement. The tension-torsion straps have been added to the life limited parts list in the CSP-HMI-2, Section 04-00-00 Airworthiness Limitations Component Mandatory Replacement Schedule. A component record card must be made for each tension-torsion strap affected by this bulletin and kept in the Rotorcraft Log Book.

Part 1 removes, inspects and identifies each tension-torsion strap with an expiration date and records their serial numbers and expiration date in the Rotorcraft Log Book.

Part 2 replaces the tension-torsion straps and makes a record of completion.

#### E. FAA Approval:

The technical design aspects of this bulletin are FAA Approved.

#### F. Time of Compliance:

Part 1 - Inspection and marking must be completed no later than 6 months from the date of this bulletin.

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Part 2 – Replacement of the tension-torsion straps must be completed as follows:

- If the manufacturing cure date is more than 9 years before the date of this bulletin, the strap must be replaced within 6 months.
- If the manufacturing cure date is between 7 to 9 years before the date of this bulletin, strap must be replaced within 12 months.
- If the manufacturing cure date is between 3 to 7 years before the date of this bulletin, the strap must be replaced within 24 months.
- If the manufacturing cure date is less than 3 years before the date of this bulletin, the strap must be replaced 5 years after the manufacturing cure date.

**G. Manpower:**

Part 1: 20 man-hours.

Part 2: 20 man-hours.

**H. Interchangeability:**

None

**I. Material/Part Availability:**

Owners/operators who complete this bulletin within two years of the date of this bulletin are eligible for special pricing.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Tension-Torsion Strap Assembly-Fan Blade, NOTAR®	500N5311-5	13	MDHI
Bolt	NAS1954-20	13	MDHI or Commercial
Pin, Cotter (Split)	MS24665-86	13	MDHI or Commercial
Ink, Marking, Stencil  or	A-A-208 Type 1 Color Number 37038 (or equivalent)	As necessary	Matthews International 6515 Penn Avenue Pittsburgh, PA 15206 Ph 412-665-2500 Fax 412-665-2594
Fine Tip Permanent Marker	Sharpie™ (or equivalent)	1	Commercial

**J. Warranty Policy:**

**NOTE:** If the date of original Airworthiness Certificate of the helicopter is more than 9 years before the date of this bulletin, contact Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or (480) 346-6387, DATAFAX: (480) 346-6813 before you do Part 1.

MDHI to supply one ship-set (13 straps) for each operating NOTAR® helicopter. Sets will be supplied to the owner/operator based on need as defined in time of compliance. Parts will be sent when available from the manufacturer and after MDHI has received the Bulletin Completed Record form for Part 1.

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MDHI Warranty and Repair Department will give Authorized Service Centers not more than 20 hours of labor credit (spares credit) to complete the inspection and identify the component with a service life date in accordance with Part 1.

MDHI Warranty and Repair Department will give Authorized Service Centers not more than 20 hours of labor credit (spares credit) to complete the component replacement in accordance with Part 2.

**K. Tooling:**

N/A

**L. Weight and Balance:**

N/A

**M. Electrical Load Data:**

N/A

**N. Other Publications Affected:**

Handbook of Maintenance Instructions CSP-HMI-2 and CSP-IPC-4.

**O. Points of Contact:**

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.

## 2. ACCOMPLISHMENT INSTRUCTIONS

(Ref. Figure 1)

**A. Part 1: Tension-Torsion Strap Assembly Inspection and Identification:**

**NOTE:** The life limit of the tension-torsion strap will start on the date the package is opened. If the package is open, and the package opening date is unknown, the life limit will be determined by the cure date marked on each part.

- (1). If the part is in storage, remove from storage and examine the package seal to make sure it has not been opened. If open, continue to step (3). If package is not opened, return part to storage.
- (2). Remove fan blade straps from helicopter (Ref. CSP-HMI-2, Section 64-25-30).
- (3). Find the cure date on the strap. Find expiration date (Ref. Table 1). Write the words **EXPIRATION DATE** on the strap face with the applicable date, use permanent ink.

Table 1. Tension-Torsion Expiration Date		
Date of This Bulletin	Manufacturers Cure Date	Expiration Date
03/2008	Before 03/1999	09/2008
03/2008	03/1999 thru 02/2001	03/2009
03/2008	03/2001 thru 02/2005	03/2010
03/2008	03/2005 thru 02/2008	Cure Date Plus 5 Years

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- (4). If the strap goes back to storage, create item Component Record Cards for tension-torsion straps.
- (5). Install tension-torsion straps (Ref. CSP-HMI-2, Section 64-25-30).
- (6). Put revision 41 (or later) of the Airworthiness Limitations Schedule (ALS) in the CSP-HMI-2 Handbook of Maintenance Instructions, Section 04-00-00.
- (7). Make a record in the Compliance Record section of the Rotorcraft Log Book that Part 1 of this bulletin is completed.
- (8). Complete Part 1 of the Bulletin Completed Record form. Fax to MDHI Warranty and Repair Department.

## **B. Part 2: Tension-Torsion Strap Assembly Replacement:**

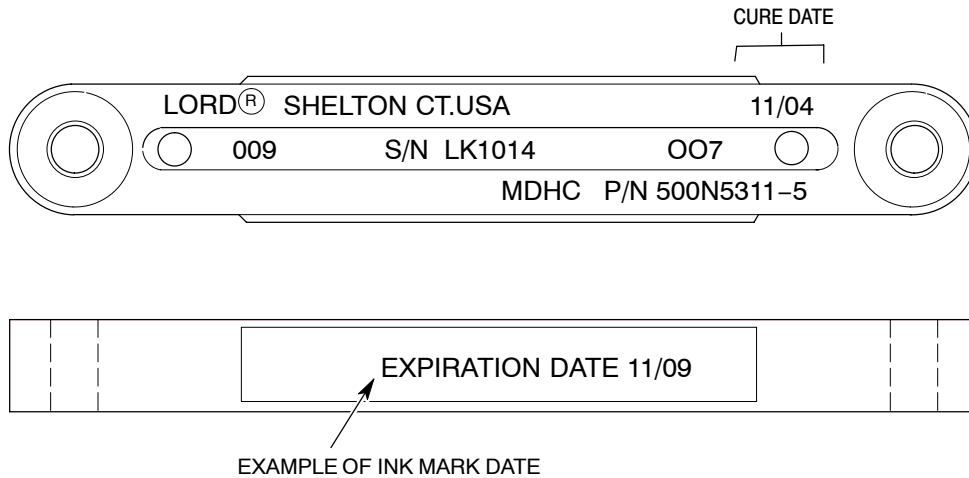
**NOTE:** The strap life limit is five years after opening the package.

- (1). Remove straps from packages; write the words **EXPIRATION DATE** on the strap face with the date 5 years after package is opened, use permanent ink.
- (2). Make item Component Record Cards for tension-torsion straps.



Make sure MS2002C4 countersunk washers are installed under bolt heads, NAS1149D0332K flat washers are installed with retainer pins, and NAS1149F0432P flat washers are installed under nuts.

- (3). Install new tension-torsion straps and new bolts (Ref. CSP-HMI-2, Section 64-25-30).
- (4). Make a record in the Compliance Record section of the Rotorcraft Log Book that Part 2 of this bulletin is completed.



**Figure 1. Fan Tension-Torsion Strap Assembly**

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

Fax a copy of the completed Service and Operations Report (SOR) form to MDHI Warranty Repair Dept. DATAFAX: (480) 346-6813.

Send tension-torsion straps (13 each) along with the (original) completed Service and Operations Report (SOR) form to MDHI Warranty Repair Dept.

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## Bulletin Completed Record

### SB500N-029R3 or SB600N-046R3, NOTAR® Fan Tension-Torsion Strap Replacement

FAX this form to MDHI (480) 346-6813 or  
Email to ServiceEngineering@mdhelicopters.com

MD Helicopters, Inc.  
Field Service Department  
4555 E. McDowell Road  
Mesa, AZ 85215-9734

800-388-3378 phone (U.S. and Canada)  
480-346-6387 phone (International)  
480-346-6813 Fax

Dear Sir:

This is to tell you that this service bulletin has been completed as shown below:

Owner/Operator: \_\_\_\_\_

Aircraft Serial No: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

E-mail address: \_\_\_\_\_

#### **PART 1 Completed**

Helicopter Total Time: \_\_\_\_\_ Date: \_\_\_\_\_

Location: \_\_\_\_\_  
\_\_\_\_\_

Part 1 of this bulletin is complete: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Title)

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