



SERVICE BULLETIN

DATE: 25 MAY 2001

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INSPECTION OF VERTICAL STABILIZER AND TORQUE TUBE AND REPLACEMENT OF ATTACHING HARDWARE

* Supersedes Service Bulletin SB600-030, dated 06 December 2000. This revision changes aircraft affected, the expandable diameter bolt part number and revises accomplishment instructions to include replacement of torque tube bearing race. Aircraft which have complied with SB600-030 do not meet the intent of this revision.

1. PLANNING INFORMATION

A. Aircraft Affected:

600N helicopters, serial number RN003 thru RN063.

B. Assembly/Components Affected By This Notice:

Torque Tube (P/N 500N3950-7)

C. Reason:

Some 600N helicopter operators have reported looseness of vertical stabilizers and elongation of the bolt holes in the vertical stabilizer torque tube prior to reaching the life limit of the torque tube.

This bulletin provides inspection and replacement criteria.

Failure to comply with this Bulletin may result in looseness of the vertical stabilizers and possible subsequent premature failure of the torque tube.

D. Description:

Procedures in this Bulletin provide owners and operators with information pertaining to inspection of the vertical stabilizers and torque tube bolt holes, replacement of the torque tubes and bearing races, if required, and installation of new expandable diameter bolts.

E. Time of Compliance

The initial inspection requirements of this Bulletin shall be accomplished within the next 100 hours of helicopter operation or no later than 28 February 2001, whichever occurs first. Recurring inspection is required at each 100 hours of helicopter operation until the expandable diameter bolts are installed. The expandable diameter bolts shall be installed no later than 1 December 2001.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Inspection: 0.5 man-hours.

Torque tube replacement and installation of expandable diameter bolts: 2.0 man-hours.

H. Interchangeability:

None

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I. Material/Part Availability:

Contact MDHI Parts Sales Dept.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Tube, Torque	500N3950-7	2	MDHI
Bolt, Expandable Diameter (1)	600N2012-3	8	MDHI
Pin, Cotter	MS24665-155 (or equivalent)	8	MDHI
Washer	NAS1149C0316 or NAS1149C032	8	MDHI
Bearing Race	500N3990-1	2	MDHI

NOTES:

(1) The 600N2012-3 expandable bolt can be identified by the two 0.050 inch (1.27 mm) thick spacers under the thick washer at the nut end of the bolt (the 600N2012-1 bolt does not have these spacers).

J. Warranty Policy:

Torque tubes will be provided, through 1 December 2001, at a pro-rated price based on the published 3,000 hour life (refer to CSP-HMI-2, Chapter 04 for Life Limit hours).

Expandable diameter bolts and cotter pins will be provided, through 1 December 2001, at no cost. Labor costs will be incurred by the operator.

K. Tooling:

N/A

L. Weight and Balance:

N/A

M. Electrical Load Data:

N/A

N. Other Publications Affected:

Basic Handbook of Maintenance Instructions (CSP-HMI-2, Revision 29 or later),
Illustrated Parts Catalog (CSP-IPC-4, Revision 6 or later).

2. ACCOMPLISHMENT INSTRUCTIONS

A. Inspect Vertical Stabilizers

(Ref. Figure 1)

- (1). Check both vertical stabilizers for looseness. Hold either upper or lower vertical stabilizer and move other portion of stabilizer.

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- (a). If movement is 2° or less, as indicated on horizontal stabilizer degree plate, inspection is complete. Reinspect vertical stabilizers at each 100 hours of helicopter operation. Removal of existing attaching hardware and installation of expandable diameter bolts removes the 100 hour reinspection requirement.
- (b). If movement is greater than 2°, as indicated on horizontal stabilizer degree plate, check torque of each vertical stabilizer attaching nut.
- (2). Torque check of MS21042L4 nut (if stabilizer looseness is greater than 2°).
 - (a). If torque is **40 - 60 inch-pounds (4.52 - 6.77 Nm)**, inspect torque tubes per step B. below.
 - (b). If torque is less than **40 - 60 inch-pounds (4.52 - 6.77 Nm)**, retorque nuts.
 - 1). Remove vertical stabilizer attaching nuts.
 - 2). Reinstall nuts and note drag torque.
 - 3). Torque each nut to **30 - 40 inch-pounds (3.39 - 4.52 Nm)** plus drag torque.
 - 4). Recheck both vertical stabilizers for looseness. Hold either upper or lower vertical stabilizer and move other portion of stabilizer.
 - a). If movement is 2° or less, as indicated on horizontal stabilizer degree plate, inspection is complete. Reinspect vertical stabilizers at each 100 hours of helicopter operation. Removal of existing attaching hardware and installation of expandable diameter bolts removes the 100 hour reinspection requirement.
 - b). If movement is greater than 2°, as indicated on horizontal stabilizer degree plate, inspect torque tubes per step B. below.

B. Inspect Torque Tubes

- (1). Remove vertical stabilizers (CSP-HMI-2, Section 53-50-30, Vertical Upper and Lower Stabilizer Removal).
- (2). Measure diameter of eight holes in each torque tube.
- (3). If diameter of any hole exceeds 0.254 in. (6.4516 mm), remove and replace torque tube with new parts.
 - (a). Install new bearing race on new torque tube (CSP-HMI-2, Section 53-50-30, Vertical Stabilizer Torque Tube Bearing Race Replacement).
 - (b). Remove existing torque tube and install new torque tube with bearing race (CSP-HMI-2, Section 53-50-30, Vertical Torque Tube Replacement).
- (4). If new torque tube is installed, rig vertical stabilizers (CSP-HMI-2, Section 67-20-30, Vertical Stabilizer Assembly Rigging).
- (5). Install vertical stabilizers with existing attaching hardware or with expandable diameter bolts (CSP-HMI-2, Section 53-50-30, Vertical Upper and Lower Stabilizer Installation). If existing attaching parts are used, reinspect vertical stabilizers at each 100 hours of helicopter operation. Installation of vertical stabilizers with expandable diameter bolts removes the 100 hour reinspection requirement.

NOTE: If expandable diameter bolts were installed per this Bulletin prior to Revision 1, reinstall the expandable diameter bolts per the instructions given in CSP-HMI-2, Section 53-50-30, Vertical Upper and Lower Stabilizer Installation.

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C. Install Expandable Diameter Bolts

Deleted and incorporated in CSP-HMI-2, Section 53-50-30, Vertical Upper and Lower Stabilizer Installation.

3. DISPOSITION OF PARTS REMOVED

Return to MDHI Warranty Administration.

4. COMPLIANCE RECORD

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

5. POINTS OF CONTACT

For further assistance, contact your local MDHI Field Service Representative (refer to the latest revision of the "At Your Service" handbook for address and telephone numbers) or contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.

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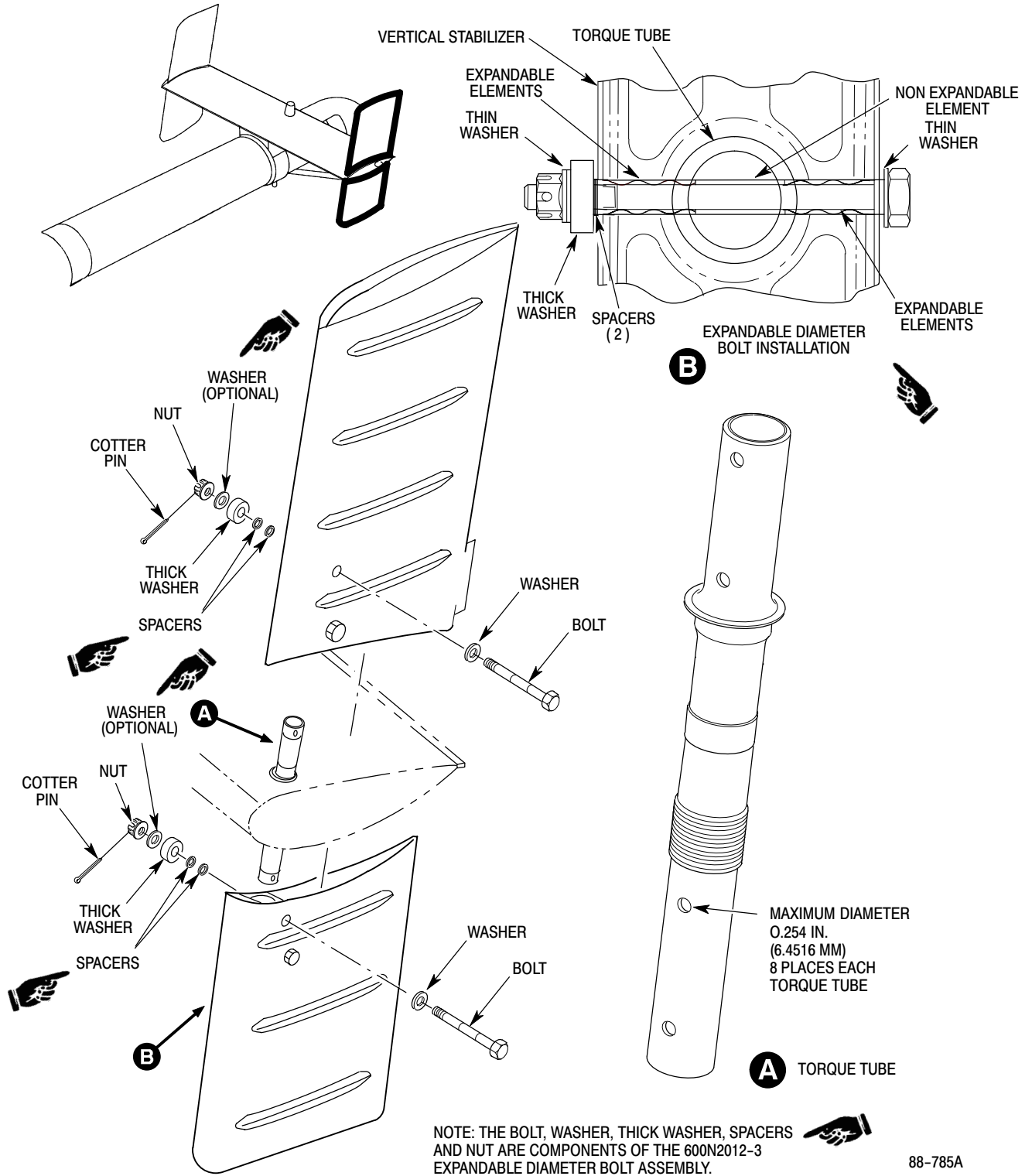


Figure 1. Torque Tube Inspection and Expandable Diameter Bolt Installation