



SERVICE BULLETIN

DATE: 22 OCTOBER 2002

PAGE 1 OF 6

/// MANDATORY ////////////////////////////////////// MANDATORY ////////////////////////////////////// MANDATORY ///

* Supersedes Service Bulletin SB900-089, dated 18 October 2002. This revision adds the requirement to remove the hub and inspect the thread area.

MAIN ROTOR SUPPORT STATIC MAST, ONE TIME INSPECTION

1. PLANNING INFORMATION:

A. Aircraft Affected:

MD-900 helicopters, serial number 900-00008 thru 900-00110.

B. Assembly/Components Affected By This Bulletin:

Main Rotor Support Static Mast 900F2401021-101.

C. Reason:

Operators have reported a crack in the top of the main rotor support static mast. Information obtained since SB900-089 was released indicates it is possible that cracks may be present in the outside diameter (OD) without showing on the inside diameter (ID). Failure to comply with instructions in this bulletin could result in loss of main rotor system.

D. Description:

Procedures in this Bulletin provide owners and operators with information to inspect the main rotor support static mast for evidence of cracks in the top of the main rotor support static mast.

E. Time of Compliance:

The requirements of this bulletin shall be accomplished prior to the next flight after receipt of this Bulletin.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Accomplishment of this bulletin will require approximately **6.0** man-hours.

H. Interchangeability:

None

/// MANDATORY ////////////////////////////////////// MANDATORY ////////////////////////////////////// MANDATORY ///

DATE: 22 OCTOBER 2002

PAGE 2 OF 6

SERVICE BULLETIN

/// MANDATORY ////////////////////////////////////// MANDATORY ////////////////////////////////////// MANDATORY ///

I. Material/Part Availability:

Contact MDHI Parts Sales Dept. (Materials can be obtained locally)

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Primer Stripper	Turco 5873 Turco 5351 Turco 6813	AR	Turco Products, Inc 2700 Temple Ave Suite B Long Beach, CA 90806
Primer, Epoxy (MIL-P-23377 T1, CL C) (MIL-P-23377 T2) (MIL-P-85582 T1, CL2) (MDM15-1 100 T1, CL2)		AR	Deft Inc, 17451 Von Kamman Avenue Irvine CA 92614-6295 or Commercially available
Solvent: Alcohol, Isopropyl or Acetone or MEK	O-A-51	AR AR AR	Commercial available Commercial available Commercial available

J. Warranty Policy:

Contact MDHI warranty administrator if parts are found to be unserviceable.

K. Tooling:

TOOLS AND EQUIPMENT	
Nomenclature	Source
Magnetic Particle Inspection, Portable yoke	Commercially Available

N/A

L. Weight and Balance:

N/A

M. Electrical Load Data:

N/A

N. Other Publications Affected:

N/A

SERVICE BULLETIN

DATE: 22 OCTOBER 2002

PAGE 3 OF 6

/// MANDATORY ////////////////////////////////////// MANDATORY ////////////////////////////////////// MANDATORY ///

2. ACCOMPLISHMENT INSTRUCTIONS:

A. Inspection Instructions

Ref. Figure 1.

- (1). Remove main rotor drive shaft (Ref CSP-900RMM-2, Section 63-10-00, Main Rotor Drive Shaft Removal).
- (2). Using torque wrench (dial indicator preferred), check existing torque in tightening direction of each of the 12 bolts in main rotor retention nut and record on Compliance Recording Form (attached). Torque should be **80-90 in-lbs. (9.0-10.1 Nm)**. (Ref CSP-900RMM-2, Section 62-20-00, Main Rotor Hub Assembly Installation.)

NOTE: Re-inspection of inside diameter (ID) of static mast is not necessary if aircraft has not flown since previous compliance to Service Bulletin 900-089.

- (3). Inspect top inside diameter (ID) of static mast for cracks and pitting.



Do not allow paint stripper to run down inside or outside surfaces of mast below work area or enter into transmission.

- (a). Remove 1 inch (25.4 mm) of primer from top inside diameter of main rotor support static mast (Ref CSP-SPM, Section 20-40-00, Paint Removal Chemical). During paint removal, wipe clean, do not scrub area and do not flush.
- (b). Inspect top 1 inch (25.4 mm) of inside of mast (entire circumference) for evidence of cracks or pitting using bright light and 10x magnification. If there is a crack, the main rotor support static mast must be removed from service. If there is evidence of pitting or other anomaly, contact MDHI Field Service Department for repair disposition before further flight.
- (4). Remove main rotor hub assembly. (Ref CSP-900RMM-2, Section 62-20-00, Main Rotor Hub Assembly Removal.)
- (5). Clean threads thoroughly with solvent. Inspect static mast threads for cracks using bright light and 20x magnification. Pay particular attention to thread root area. If defects or suspect cracks in thread area are found, perform magnetic particle inspection (wet fluorescent) per ASTM E 1444-01 using electromagnetic yoke or coil. If there is a crack, the main rotor support static mast must be removed from service.
- (6). If there is no evidence of cracks or pitting in mast, reapply primer to mast ID and reassemble main rotor drive shaft and hub assemblies (Ref CSP-900RMM-2) and return to service. Perform Main Rotor Drive Plate Nut Torque Verification (Ref CSP-900RMM-2, Section 05-20-10, Special Inspection - After Component Installation.)

3. DISPOSITION OF PARTS REMOVED:

Return to MDHI as soon as possible.

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

4. COMPLIANCE RECORD:

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

/// MANDATORY ////////////////////////////////////// MANDATORY ////////////////////////////////////// MANDATORY ///



DATE: 22 OCTOBER 2002
PAGE 4 OF 6

SERVICE BULLETIN

/// MANDATORY ////////////////////////////////////// MANDATORY ////////////////////////////////////// MANDATORY ///

5. POINTS OF CONTACT:

For further assistance, contact your local MDHI Field Service Representative or contact the Field Service Department at MDHI, Mesa, Arizona.
Telephone 1-800-388-3378 or (480) 346-6387.

Fax the Compliance Recording Form to MDHI Field Service at DATAFAX: (480) 346-6813.

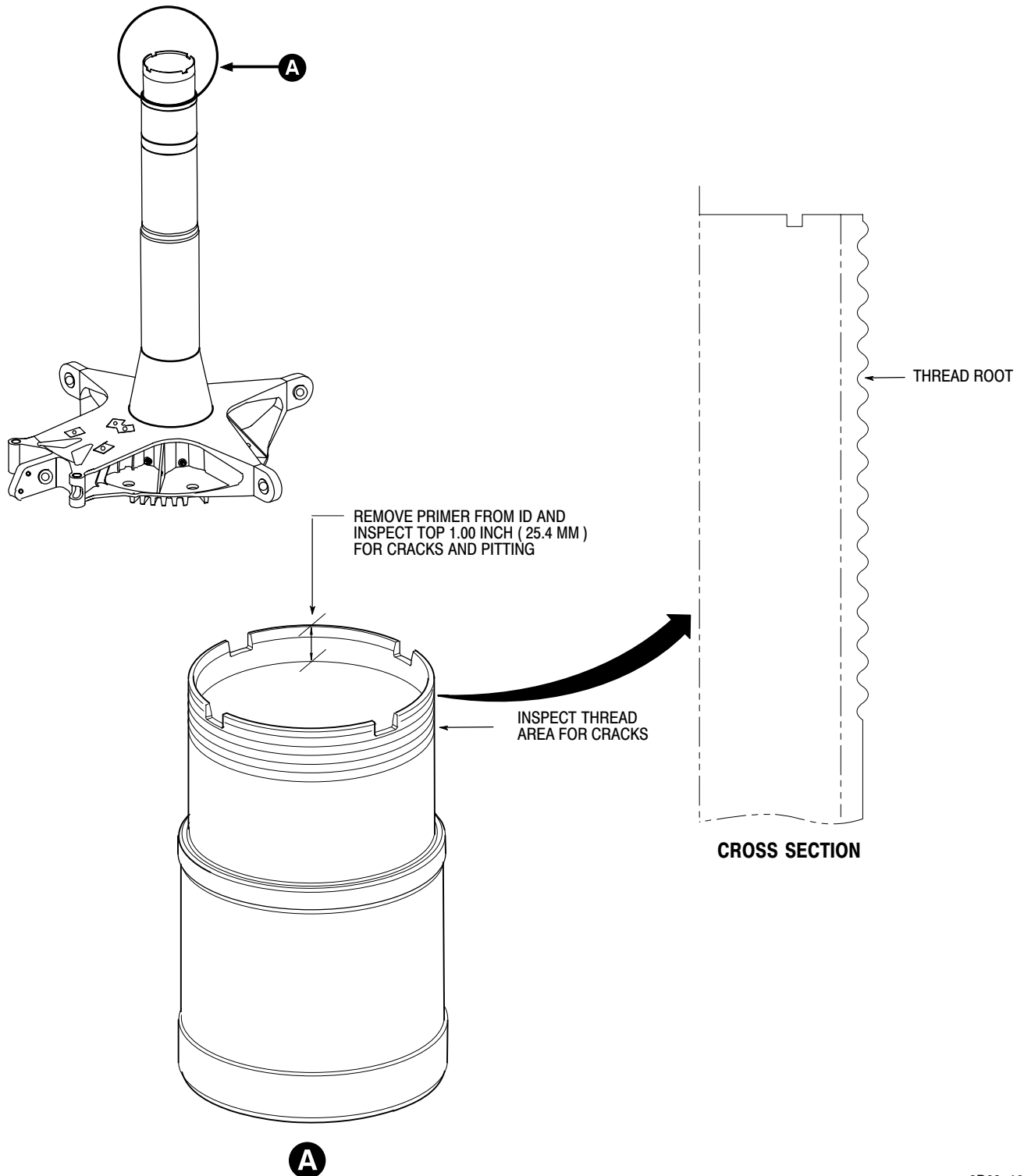
/// MANDATORY ////////////////////////////////////// MANDATORY ////////////////////////////////////// MANDATORY ///

SERVICE BULLETIN

DATE: 22 OCTOBER 2002

PAGE 5 OF 6

MANDATORY



9B63-184A

Figure 1. Main Rotor Support Static Mast

MANDATORY



DATE: 22 OCTOBER 2002
PAGE 6 OF 6

SERVICE BULLETIN

MANDATORY

Compliance Recording Form

Customer/Operator Name _____

Aircraft Serial No.: _____ Mast Serial No.: _____

Helicopter Total Time: _____ Total Time since Main Rotor Hub Installation: _____

Existing Torque:

- Bolt 1 _____ In-lbs
- Bolt 2 _____ In-lbs
- Bolt 3 _____ In-lbs
- Bolt 4 _____ In-lbs
- Bolt 5 _____ In-lbs
- Bolt 6 _____ In-lbs
- Bolt 7 _____ In-lbs
- Bolt 8 _____ In-lbs
- Bolt 9 _____ In-lbs
- Bolt 10 _____ In-lbs
- Bolt 11 _____ In-lbs
- Bolt 12 _____ In-lbs

Evidence of cracks in mast ID (Yes or No):
Describe: _____

Evidence of pitting or other anomaly in mast ID (Yes or No):
Describe: _____

Pitting repair accomplished (Yes or No).

Evidence of suspected crack in mast threads (Yes or No):
Describe: _____

Signature of Person Performing Inspection: _____ Date: _____

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

MANDATORY