



# TECHNICAL BULLETIN

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## HEAT/DEFOG SHUT OFF VALVE UPGRADE MODIFICATION

### 1. PLANNING INFORMATION

#### A. Aircraft Affected:

MD Helicopters, Inc. MD900 serial number 900-00002 thru 900-00051.

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

900P3250210-103 Heat/Defog Flow Control Shut Off Valve, 900P2250205 Line Assembly, Heat/Defog Shut Off Valve to Deck, and 900P2250209 Tube Assembly, Heat/Defog-Roof to Valve.

#### C. Reason:

The Heat/Defog flow control shut off valve P/N 900P3250210-103 is no longer manufactured and is replaced by the P/N 900P3250210-105 shut off valve.

#### D. Description:

Procedures in this Bulletin provide owners and operators with instructions to replace their existing Heat/Defog flow control shut off valve P/N 900P3250210-103 with a P/N 900P3250210-105. This modification requires flaring of one end of the affected line assembly.

#### E. Time of Compliance:

Customer option, at the discretion of the owner/operator.

#### F. Classification:

Compliance with this Bulletin is a minor alteration.

#### G. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

#### H. Manpower:

Five (5) man-hours (includes required part of TB900-005) on a standard helicopter with a standard interior.

#### I. Interchangeability:

N/A

#### J. Disposition of Parts Removed

N/A

#### K. Points of Contact

For further assistance, contact your local MDHS 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 MDHS, Mesa, Arizona. Telephone 1-800-388-3378 or (602) 891-6342. DATAFAX: (602) 891-6782.

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## L. Material/Part Availability:

Contact MDHI Commercial Warranty and Repair Dept. (Ref. Parts Request Form at the end of this Bulletin).

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Line Assembly,	900P2250205-109	1	MDHI
Valve Assembly, Shut Off	900P3250210-105	1	MDHI
Screw, Machine	NAS603-7P	1	MDHI or Commercial
Clamp, Cushioned	MS21919WCH19	2	MDHI or Commercial
Contact, Pin	M39029/58-363	2	MDHI or Commercial
Bracket	MS9592-102 or AS9592-102	1	MDHI or Commercial
Union, Bulkhead, Flared Tube	AN832-12J	1	MDHI or Commercial
Nut, Union, Bulkhead, Flared Tube	AN924-12J	1	MDHI or Commercial
Nut, Tube Coupling, Short	AN818-12J	2	MDHI or Commercial
Sleeve, Flared Tube Fitting	MS20819-12J	2	MDHI or Commercial
Seal Assembly, Flexible Coupling	W932-12D	2	MDHI or Commercial
Thread Locking Compound	MIL-S-22473, GB, Color Yellow, RM002598	1.6 oz (47.32 Cu cm)	MDHI or Loctite Inc. 702 North Mountain Rd. Newington, CT. 06111 (203) 278-1280
Sealing Compound, Fireproof	HMS16-1191, RM011316	3.0 oz (88.72 Cu cm)	MDHI or Courtaulds Aerospace 5430 San Fernando Rd. Glendale, CA. 91209 (818) 240-2060
Tape, Adhesive	HS5227-K1208, RM009971	108 ft (32.92 M)	MDHI or Airtec International Inc. 2542 E. Del Amo Bl. Carson, CA. 90749 (213) 603-9683
Solvent Cleaner	Desoclean 45 or Equivalent	AR	DeSoto Aerospace Coatings Inc. 1608 Fourth St. Berkeley, CA. 94710 (818) 549-7823



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## **M. Warranty Policy:**

Standard warranty policy applies.

## **N. Tooling:**

Flaring equipment capable of flaring 0.75 in (19.05 mm) 321 CRES tubing with an 0.020 in. (0.51 mm) wall thickness.

## **O. Weight and Balance:**

N/A

## **P. Electrical Load Data:**

N/A

## **Q. Other Publications Affected:**

N/A

## **2. ACCOMPLISHMENT INSTRUCTIONS**

**NOTE:** Removal of components may be simplified by removing the 900P2250205-105 line assembly, 900P3250210-103 shut off valve assembly, and 900P2250202-101 line assembly prior to disassembly.

### **A. Modification If TB900-005 Was Previously Accomplished:**

- (1). Remove and discard 900P2250205-105 line assembly, retain attaching hardware (Ref. CSP-900RMM-2, Section 21-40-00).

### **B. Modification If TB900-005 Was Not Previously Accomplished:**

- (1). Remove and discard 900P2250205-105 line assembly, retain attaching hardware (Ref. CSP-900RMM-2, Section 21-40-00). Retain flange in accordance with instructions in TB900-005.
- (2). Remove 900P2250209-103 tube assembly, retain attaching hardware (Ref. CSP-900RMM-2, Section 21-40-00).
- (3). Perform upper deck modifications and install the AN832-12J bulkhead union in accordance with instructions in TB900-005.
- (4). Perform modifications to the 900P2250209-103 tube assembly in accordance with the instructions in TB900-005.
- (5). Install modified 900P2250209-103 tube assembly (Ref. TB900-005).

### **C. Modification All:**

- (1). Remove 900P3250210-103 shut off valve assembly (Ref. CSP-900RMM-2, Section 21-40-00).
- (2). Remove 900P2250202-101 line assembly, retain attaching hardware (Ref. CSP-900RMM-2, Section 21-40-00).
- (3). Modify 900P2250202-101 line assembly.

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- (a). Measure and mark the 900P2250202-101 line assembly **1.320 in (3.353 cm)** from flange end adjacent to shut off valve.

### Protective Equipment



- (b). Cut the line assembly at the mark, and deburr.
- (c). Install one each sleeve and coupling nut on cut line assembly, and flare in accordance with MS33584 for **0.75 in. (19.05 mm)** tube.

### Solvent Cleaner (NO TAG)



- (d). Clean line assembly with Desoclean 45 or equivalent and blow dry with filtered compressed air.

**NOTE:** Installation of components may be simplified by assembling the 900P2250205-109 line assembly, 900P3250210-105 shut off valve assembly, MS9592-102 bracket, upper MS21919WCH19 clamp, and modified 900P2250202-101 line assembly prior to installation.

- (4). Install 900P2250205-109 line assembly between shut off valve and upper deck (Ref. CSP-900RMM-2, Section 21-40-00).
- (5). Install contacts onto 900P3250210-105 shut off valve assembly wiring (Ref. CSP-900RMM-3, Chapter 98).
- (6). Install 900P3250210-105 shut off valve assembly (Ref. CSP-900RMM-2, Section 21-40-00).
- (7). Install modified 900P2250202-101 line assembly using new seals on upper end (Ref. CSP-900RMM-2, Section 21-40-00).
- (8). Torque above deck coupling nuts **500-600 in. lb. (56.47-67.76 N•m)**.
- (9). Install retained attaching hardware replacing AN743 bracket with MS9592 bracket, NAS603-10P screw/NAS43 spacer with NAS603-7P screw, and two existing clamps with MS21919WCH19 clamps (Ref. CSP-900RMM-2, Section 21-40-00). Torque attaching hardware (Ref. CSP-SPM).
- (10). Perform Heat/Defog System Leak Check (Ref. CSP-900RMM-2, Section 21-40-00).
- (11). Record compliance to this Technical Bulletin in the Compliance Record section of the helicopter Log Book.

