



# SERVICE BULLETIN

DATE: 30 JANUARY 1997  
PAGE 1 OF 6

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## VSCS SYNCHRONIZATION MODIFICATION

### 1. PLANNING INFORMATION:

- A. Aircraft Affected: All McDonnell Douglas Helicopter Systems (MDHS) MD900 Helicopters, serial numbers 900-00010 thru 900-00051, that are NOT IFR certified.
- B. Assembly/Components Affected by this Notice: 900E2750612-123 and prior (A612) forward interconnect panel, wire harnesses W123, W124, and W125.
- C. Reason: Operators in the field have expressed a desire to have the pilot control the VSCS acceleration feedback. Failure to comply with this Bulletin will maintain a high pilot work load during certain maneuvers.
- D. Description: This Bulletin provides owners and operators with a procedure to modify their VSCS system. This modification provides the pilot and copilot with a means to synchronize the VSCS acceleration feedback, which will allow for pilot selectable sideslips. The Rotorcraft Flight Manual (CSP-900RFM-1, Rev. 9) will contain information pertaining to this Bulletin.

### NOTE

This Bulletin is NOT to be performed on IFR certified aircraft. This function is already included in the IFR package.

- E. FAA Approval: The technical design aspects of this Service Bulletin are FAA Approved.
- F. Manpower: Ten (10) man-hours if accomplished in conjunction with an annual inspection. Sixteen (16) man-hours if accomplished as a stand alone maintenance function.
- G. Time of Compliance: Requirements of this Bulletin shall be accomplished at the next 100-hour inspection or no later than 30 June 1997.
- H. Interchangeability: None.
- I. Material/Part Availability:

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Contact, Socket, size 22-22	M39029/22-191	10	Commercial or MDHS
Contact, Socket, size 20-20	M39029/22-192	1	Commercial or MDHS
Contact, Pin, size 22-22D	M39029/58-360	6	Commercial or MDHS

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

DATE: 30 JANUARY 1997

PAGE 2 OF 6

# SERVICE BULLETIN

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

REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
Contact, Socket, size 22-22D	M39029/56-348	12	Commercial or MDHS
Contact, Socket, size 20-20	M39029/56-351	2	Commercial or MDHS
Contact, Socket, Reduced Crimp	1662-202-1631	1	Commercial or MDHS
Standard Shield Wrap Knitted Wire Mesh or equivalent.	05-0720-1012-01 or equivalent	4 ft.	Chromerics, Inc. 77 Dragon Court Woburn, MA. 01888 617-935-4850 or Commercial

WIRE BUILD TABLE						
Wire No.	Wire Nomenclature	Part No.	Wire Length	Termination		Source
				A	B	
1	LVSCS45A22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	90 in.	M39029/56 -351	M39029/56 -348	MDHS
2	LVSCS45B22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	24 in.	M39029/56 -348	M39029/22 -191	MDHS
3	C43D22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	24 in.	M39029/56 -348	M39029/22 -191	MDHS
4	C46D22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	24 in.	M39029/56 -348	M39029/22 -191	MDHS
5	C43C22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	24 in.	M39029/22 -191	M39029/22 -191	MDHS
6	C46C22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	24 in.	M39029/56 -348	M39029/22 -191	MDHS
7	RVSCS45B22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	24 in.	M39029/56 -348	M39029/22 -191	MDHS
8	C43E22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	6 in.	M39029/56 -348	M39029/22 -191	MDHS

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



# SERVICE BULLETIN

DATE: 30 JANUARY 1997

PAGE 3 OF 6

**MANDATORY**

WIRE BUILD TABLE (Cont.)						
Wire No.	Wire Nomenclature	Part No.	Wire Length	Termination		Source
				A	B	
9	C46E22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	6 in.	M39029/22 -191	M39029/22 -191	MDHS
10	RVSCS45A22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	60 in.	M39029/56 -348	M39029/56 -351	MDHS
11	C43B22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	110 in.	M39029/56 -348	M39029/56 -348	MDHS
12	C44B22N EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	110 in.	1662-202 -1631	M39029/56 -348	MDHS
13	C46B22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	110 in.	M39029/56 -348	M39029/56 -348	MDHS
14	C43A22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	120 in.	M39029/56 -348	M39029/56 -348	MDHS
15	C44A22N EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	120 in.	1662-202 -1631	M39029/56 -348	MDHS
16	C46A22 EMI 3	M22759/43-22-9 (RM011317 Ref. MDHS)	120 in.	M39029/56 -348	M39029/56 -348	MDHS

**J. Warranty Policy:** MDHS will provide all parts required to accomplish this aircraft modification at no charge to the operator. Contact the MDHS Warranty and Repair Department.

**K. Tooling:** N/A

**L. Weight and Balance:** N/A

**M. Electrical Load Data:** N/A

**N. Other Publications Affected:** Rotorcraft Maintenance Manual (CSP-900RMM-3), Wiring Manual (CSP-900WIR-8), Illustrated Parts List (CSP-900IPL-4) and Rotorcraft Flight Manual (CSP-900RFM-1, Rev. 9 or later).

**MANDATORY**

DATE: 30 JANUARY 1997  
PAGE 4 OF 6

# SERVICE BULLETIN

**MANDATORY**

## 2. ACCOMPLISHMENT INSTRUCTIONS:

(Ref. Figure 1)

- A.** Access 900E2750612 (A612) forward interconnect panel (Ref. CSP-900RMM-3, Section 96-30-00).

**NOTE:** If when installing this modification, it is found that optional equipment installation(s) have utilized any of these pin locations. Contact MDHS Customer Support for assistance with completing this modification on that aircraft.

- B.** Access wire harness W123, W124, and W125 (Ref. CSP-900WIR-8 Section 98-60-00).

**C.** Install wires:

- 1). Install wire LVSCS45A22 EMI 3 between P159-ZB and P173-62.

**NOTE:** When installing wire LVSCS45A22, approximately six inches from P159 connector, exit EMI shield at shield extension solder sleeve. Re-enter EMI shield after passing solder sleeve. Wrap area of exposed wire with knitted wire mesh and secure with tie string.

- 2). Install wire LVSCS45B22 EMI 3 between A612 J2-62 and A612 TB4-4L.  
3). Install wire C43D22 EMI 3 between A612 J2-63 and A612 TB4-4S.  
4). Install wire C46D22 EMI 3 between A612 J2-66 and A612 TB4-4Z.  
5). Install wire C43C22 EMI 3 between A612 J6-113 and A612 TB4-4N.  
6). Install wire C46C22 EMI 3 between A612 J6-116 and A612 TB4-4T.  
7). Install wire RVSCS45B22 EMI 3 between A612 J6-112 and A612 TB4-4M.  
8). Install wire C43E22 EMI 3 between A612 TB4-4J and A612 TB4-4P.  
9). Install wire C46E22 EMI 3 between A612 TB4-4K and A612 TB4-4W.  
10). Install wire RVSCS45A22 EMI 3 between A612 P172-112 and P156-ZB.

**NOTE:** When installing wire RVSCS45A22, approximately six inches from P156 connector, exit EMI shield at shield extension solder sleeve. Re-enter EMI shield after passing solder sleeve. Wrap area of exposed wire with knitted wire mesh and secure with tie string.

- 11). Install wire C43B22 EMI 3 between A612 P173-63 and J141-43.  
12). Install wire C44B22N EMI 3 between GS109-A and J141-44.  
13). Install wire C46B22 EMI 3 between A612 P173-66 and J141-46.  
14). Install wire C43A22 EMI 3 between A612 P172-113 and J120-43.

**MANDATORY**



# SERVICE BULLETIN

DATE: 30 JANUARY 1997  
PAGE 5 OF 6

**/// MANDATORY ////////////////////////////////////// MANDATORY ////////////////////////////////////// MANDATORY ///**

- 15). Install wire C44A22N EMI 3 between GS107-H and J120-44.
- 16). Install wire C46A22 EMI 3 EMI 3 between A612 P172-116 and J120-46.
- 17). Tie all added wires into existing wire harnesses.
- 18). Reinstall any removed components.
- 19). Close all opened panels.
- 20). Using indelible ink, identify the A612 forward interconnect panel in the area of the part number with the number of this Bulletin.

**3. DISPOSITION OF PARTS REMOVED: N/A**

**4. COMPLIANCE RECORD:**

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

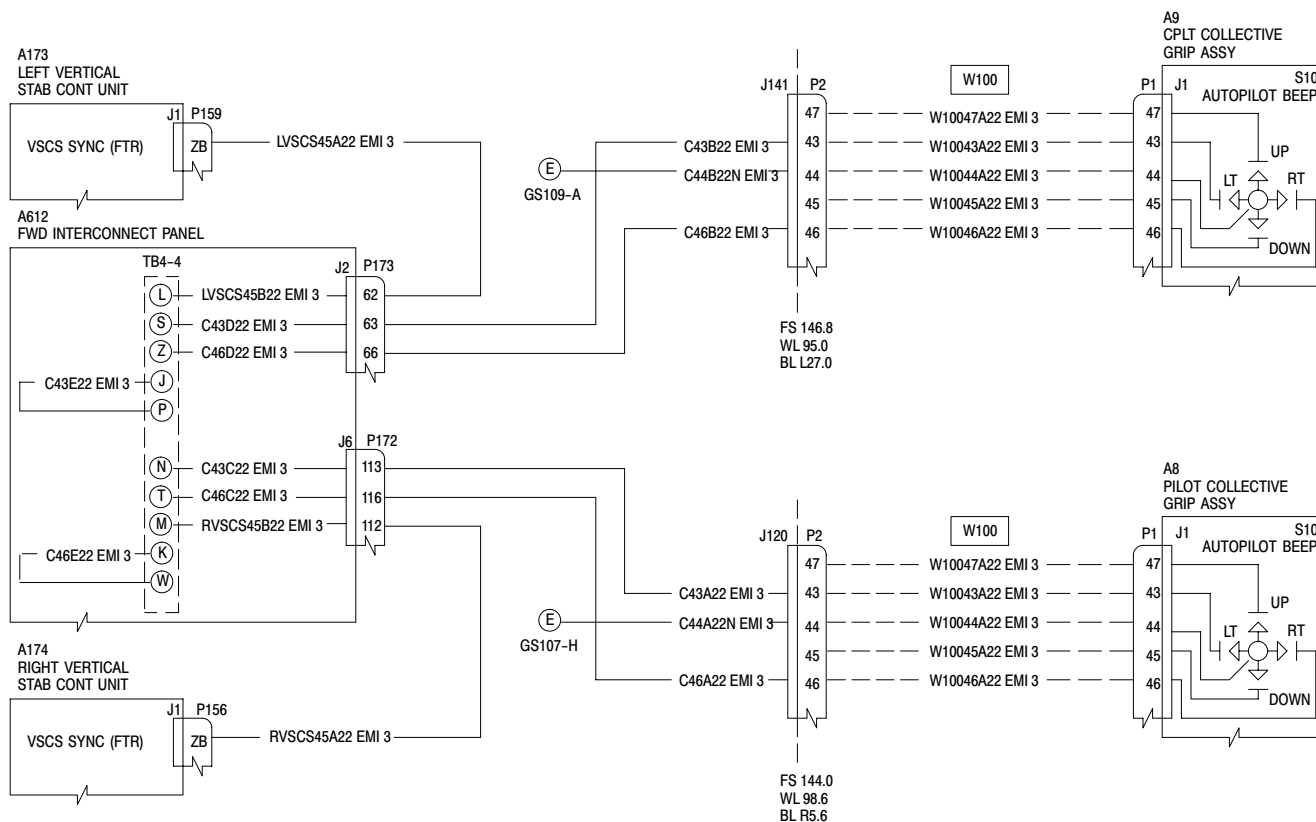
**POINTS OF CONTACT:** For further assistance, contact your local MDHS Field Service Representative (refer to the Business Development and Customer Support handbook for address and telephone numbers) or contact the Field Service Department at MDHS, Mesa, Arizona. Telephone: 1-800-388-3378 or (602) 891-6342. DATAFAX: (602) 891-6782.

**/// MANDATORY ////////////////////////////////////// MANDATORY ////////////////////////////////////// MANDATORY ///**

DATE: 30 JANUARY 1997  
PAGE 6 OF 6

# SERVICE BULLETIN

**MANDATORY MANDATORY MANDATORY**



NOTE: WIRES DESIGNATED — — — ARE EXISTING WIRES.

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Figure 1. VSCS Synchronization Wiring Schematic

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