



TECHNICAL BULLETIN

DATE: 16 NOVEMBER 2000

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DUAL PILOT TO SINGLE PILOT FLIGHT CONTROL CONVERSION

* Supersedes TB900-0016R1, dated 7 April 2000. Revised to correct cyclic jumper plug part number and clarify conversion instructions. Aircraft that complied with previous versions of TB900-016, meet the intent of this revision.

1. PLANNING INFORMATION

A. Aircraft Affected:

MD-900 helicopters, serial number 900-00008 and subsequent.

B. Assembly/Components Affected By This Notice:

Cyclic controls installation, dual pilot P/N 900C7012007-101; collective controls installation, dual pilot P/N 900C7012006-101; and directional controls installation, dual pilot P/N 900C7012008-101.

C. Reason:

This bulletin allows operators to change their rotorcraft configuration from dual to single flight control and back to dual, as required.

D. Description:

Procedures in this Bulletin provide owners and operators with information pertaining to removing the dual pilot flight controls and installing an autopilot disconnect switch jumper plug. The autopilot disconnect switch jumper plug allows operation of the autopilot, if installed, when the co-pilot's cyclic is removed. Failure to install the jumper plug when the co-pilot's cyclic is removed will cause the autopilot, if installed, to be inoperative.

E. Manpower:

Two (2) manhours one time preparation and two (2) manhours each conversion.

F. Time of Compliance

Optional, at the discretion of the owner/operator.

G. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

H. Classification:

Compliance with this Bulletin is a minor alteration.

I. 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.

J. Interchangeability:

None

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K. Material/Part Availability:

Contact MDHI Part Sales Dept.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Pedal Cover, Copilot	900C2012079-101	1	MDHI
Sheet, Aluminum Alloy, 2024-T3, 0.032 in (0.81 mm) Thick	QQ-A-250/5	15 in (38 cm) X 12 in (30.5 cm)	MDHI (MRM000163) or Commercial
Lockwire	MS20995C20	AR	MDHI (MRM002793) or Commercial
* Plug, Jumper	200-05647-0040	1	MDHI or AlliedSignal Avionics, 23500 W 150th St, Olathe, KS (913) 782-0400

* Jumper Plug is listed for reference only and is furnished with the AlliedSignal IFR Kit. It is used when autopilot is installed and the cyclic stick is removed.

L. Disposition of Parts Removed:

Scrap

M. Warranty Policy:

N/A

N. Tooling:

N/A

O. Weight and Balance:

-7.86 lbs (3.57 kg) @ FS 139.5 and LBL 18.3 for removal.

+7.86 lbs (3.57 kg) @ FS 139.5 and LBL 18.3 for installation.

P. Electrical Load Data:

N/A

Q. Other Publications Affected:

None

2. ACCOMPLISHMENT INSTRUCTIONS

A. Preparation:

(Ref. Figure 1)

(1). Cyclic cover:

(a). Fabricate cyclic cover from aluminum sheet and deburr.

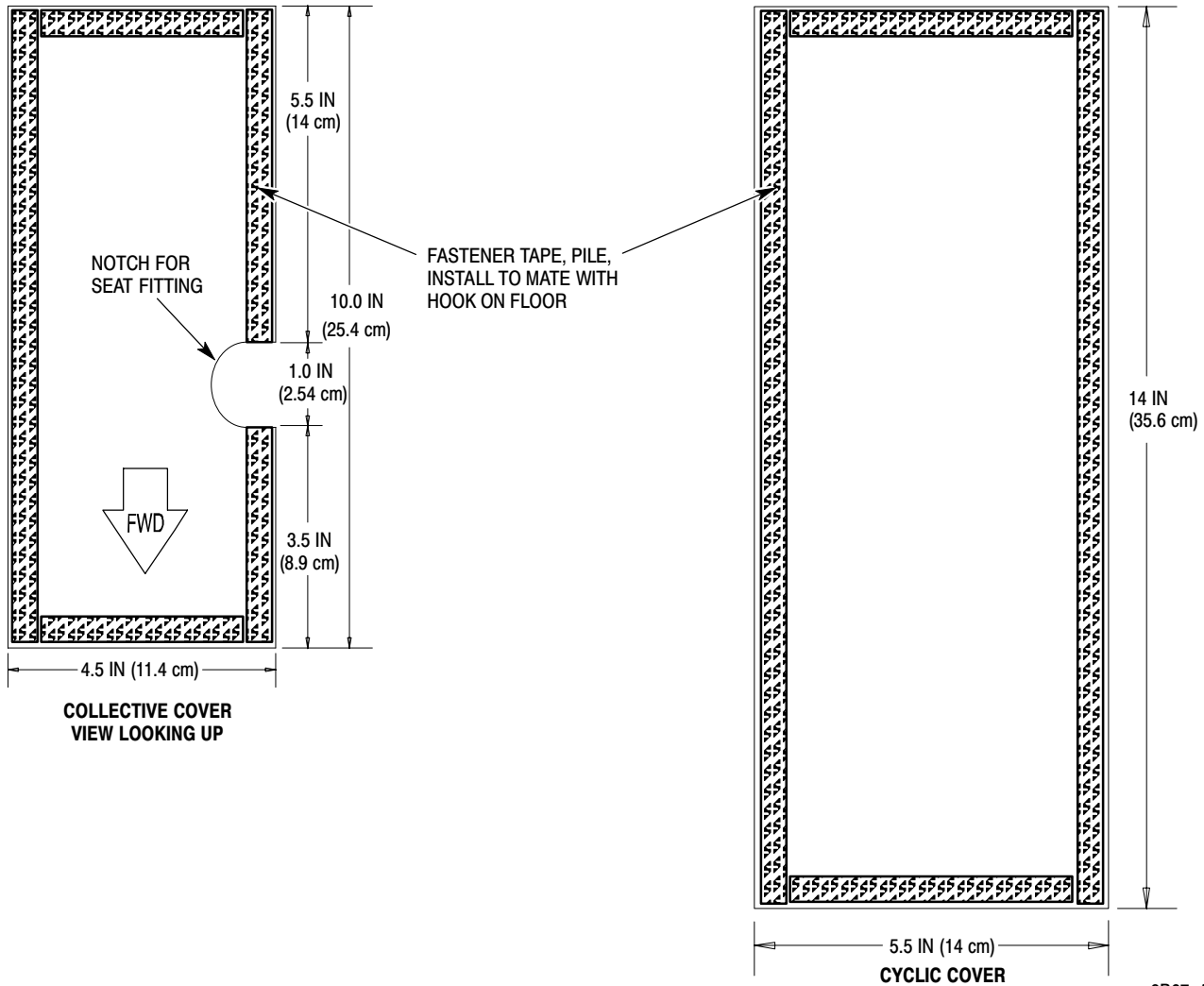


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- (b). Paint to match installed surrounding area and dry.
- (c). Install pile fastener tape.
- (2). Collective cover:
 - (a). Fabricate collective cover from aluminum sheet and deburr.
 - (b). Paint to match installed surrounding area and dry.
 - (c). Install pile fastener tape.
- (3). This Step Deleted

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Figure 1. Collective and Cyclic Cover

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B. Converting From Dual To Single Controls:

- (1). Remove left cyclic stick (Ref. CSP-900RMM-2, Section 67-10-00).
- (2). If autopilot is installed, remove jumper plug from adjacent dummy receptacle and install it on J143.
- (3). If autopilot is not installed, remove protective cover from adjacent dummy receptacle and install it on J143.
- (4). Install cyclic cover over opening in floor.
- (5). Remove left collective stick (Ref. CSP-900RMM-2, Section 67-10-00).
- (6). Unplug connector, P2, from J141 and remove left collective stick wire harness, W100.
- (7). Remove protective cover from adjacent dummy receptacle and install it on J141.
- (8). Remove left collective stick link, reinstall hardware in collective stick bellcrank. **Torque 5 in lb (0.56 N•m)** and install new cotter pin (Ref CSP-900RMM-2, Section 67-10-00).
- (9). Remove mechanical engine controls interconnect cables (Ref. CSP-900RMM-2, Section 76-00-00).
- (10). Cut lockwire and remove mechanical engine controls interconnect cable adapters from right collective.
- (11). Cut lockwire and remove mechanical engine controls over travel tube assemblies from outboard side of removed left collective stick. Cover openings with suitable plugs.
- (12). Install over travel tube assemblies into right collective stick in place of removed interconnect cable attach fittings. **Torque 5 in lb (0.56 N•m)** and safety with lockwire.
- (13). Reinstall all opened panels (Ref. CSP-900RMM-2, Section 06-00-00).
- (14). Install collective cover over opening in floor.
- (15). Stow left directional pedals:
 - (a). Simultaneously pull up the adjustment handle and pull out the adjustment stop knob on the left co-pilot pedal, and pivot the left pedal shaft assembly forward to contact the stowage block (Ref. CSP-900RMM-2, Section 67-20-00).
 - (b). Repeat step (15).(a). for the right pedal.
 - (c). Install pedal cover over left directional pedals.
- (16). Check the following prior to flight.
 - (a). Operation of cyclic stick switches.
 - (b). Operation of collective stick switches, twist grip functions and collective friction.
 - (c). Start helicopter or connect hydraulic mule to GSE panel (Ref. CSP-900RMM-2, Section 12-00-00) and perform cyclic control response check (Ref. CSP-900RFM-1 or CSP-902RFM-1, Section IV).

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C. Converting From Single To Dual Controls:

- (1). Un-stow left directional pedals:
 - (a). Remove pedal cover from over left directional pedals.
 - (b). Simultaneously pull up the adjustment handle and pull out the adjustment stop knob on the left co-pilot pedal, and pivot the left pedal shaft assembly aft to align with the pedal crank assembly. Release adjustment handle and lock pedal shaft assembly to pedal crank assembly (Ref. CSP-900RMM-2, Section 67-20-00).
 - (c). Repeat step (1).(b). for the right pedal.
- (2). Remove collective cover from over opening in floor.
- (3). Remove cockpit access floor panel AL129 and AL138 Ref. CSP-900RMM-2, Section 06-00-00).
- (4). Cut lockwire and remove over travel tube assemblies from right collective stick mechanical engine controls interconnect cable attach points.
- (5). Install mechanical engine controls over travel tube assemblies into outboard side of left collective stick. **Torque 5 in lb (0.56 N•m)** and safety with lockwire.
- (6). Install mechanical engine controls interconnect cable adapters into right collective. **Torque 5 in lb (0.56 N•m)** and safety with lockwire.
- (7). Install left collective stick link (Ref CSP-900RMM-2, Section 67-10-00).
- (8). Remove protective cover from J141 and install it on adjacent dummy receptacle. Plug connector, P2, of left collective stick wire harness, W100, into J141.
- (9). Install left collective stick (Ref. CSP-900RMM-2, Section 67-10-00).
- (10). Install mechanical engine controls interconnect cables (Ref. CSP-900RMM-2, Section 76-00-00).
- (11). Remove cyclic cover from over opening in floor.
- (12). If autopilot is installed, remove jumper plug from J143 and install it on adjacent dummy receptacle.
- (13). If autopilot is not installed, remove protective cover from J143 and install it on adjacent dummy receptacle.
- (14). Install left cyclic stick (Ref. CSP-900RMM-2, Section 67-10-00).
- (15). Close all opened areas (Ref. CSP-900RMM-2, Section 06-00-00).
- (16). Check the following prior to flight.
 - (a). Operation of cyclic stick switches.
 - (b). Operation of collective stick switches, twist grip functions and collective friction.
 - (c). Start helicopter or connect hydraulic mule to GSE panel (Ref. CSP-900RMM-2, Section 12-00-00) and perform cyclic control response check (Ref. CSP-900RFM-1 or CSP-902RFM-1, Section IV).