

# TECHNICAL BULLETIN

DATE: 19 JULY 2010

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\* Supersedes TB600N-009, dated 02 June 2010. Revised to clarify PVC tubing specification. ■

## MODIFICATION OF ENGINE CONTROL CABLE

### 1. PLANNING INFORMATION

#### A. Aircraft Affected:

Model 600N Helicopters equipped with P/N 600N7714-1 or 600N7714-3 engine control cables.

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

Engine Control Cable (P/N 600N7714-1, 600N7714-3).

#### C. Reason:

The bulkhead swivel on P/N 600N7714-1 or -3 engine control cables allows cable bending loads to be reacted by the sliding inner part of the cable. This can cause increased wear and binding at the engine throttle bellcrank end of the cable.

#### D. Description:

Procedures in this Bulletin give owners and operators information to replace the cable bulkhead swivel with rigid doubler plates. This modification rigidly mounts the engine control cable to the cable bracket so cable bending loads are reacted by the cable bracket.

#### E. Time of Compliance:

Customer option, at owner/operator discretion.

#### F. FAA Approval:

The technical design aspects of this Bulletin are FAA approved.

#### G. Manpower:

Compliance with this bulletin will be approximately 3.0 man-hours.

#### H. Interchangeability:

None

#### I. Points of Contact:

For further assistance, 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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## **J. Material/Part Availability:**

Contact MDHI Parts Sales Department.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Doubler	600N7720-1	1	MDHI
Doubler	600N7720-3	1	MDHI
Cotter Pin	MS24665-151	1	Commercial
Lockwire	MS20995C32	AR	Commercial
PVC Tubing, 0.106 inch (2.692 mm) I.D., 0.016 inch (0.406 mm) Wall Thickness	MIL-I-631, Type F, Form U, Grade A, Class I, AWG Size 10	AR	Commercial

## **K. Warranty Policy:**

N/A

## **L. Disposition of Parts Removed:**

Scrap removed parts.

## **M. Tooling:**

N/A

## **N. Weight and Balance:**

N/A

## **O. Electrical Load Data:**

N/A

## **P. Other Publications Affected:**

CSP-HMI-2, Basic Handbook of Maintenance Instructions - Servicing and Maintenance

CSP-IPC-4, Illustrated Parts Catalog

## **2. ACCOMPLISHMENT INSTRUCTIONS**

(Ref. Figure 1)

### **A. Preparation**

- (1). Remove center seat cover to access engine control cable at engine throttle bellcrank end (Ref. CSP-HMI-2, Chapter 67-10-00).
- (2). Count the number of visible threads on inner cable below jam nut (7) and record the result.
- (3). If installed, remove lockwire from jam nuts (8 and 16).

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## **B. Modification**

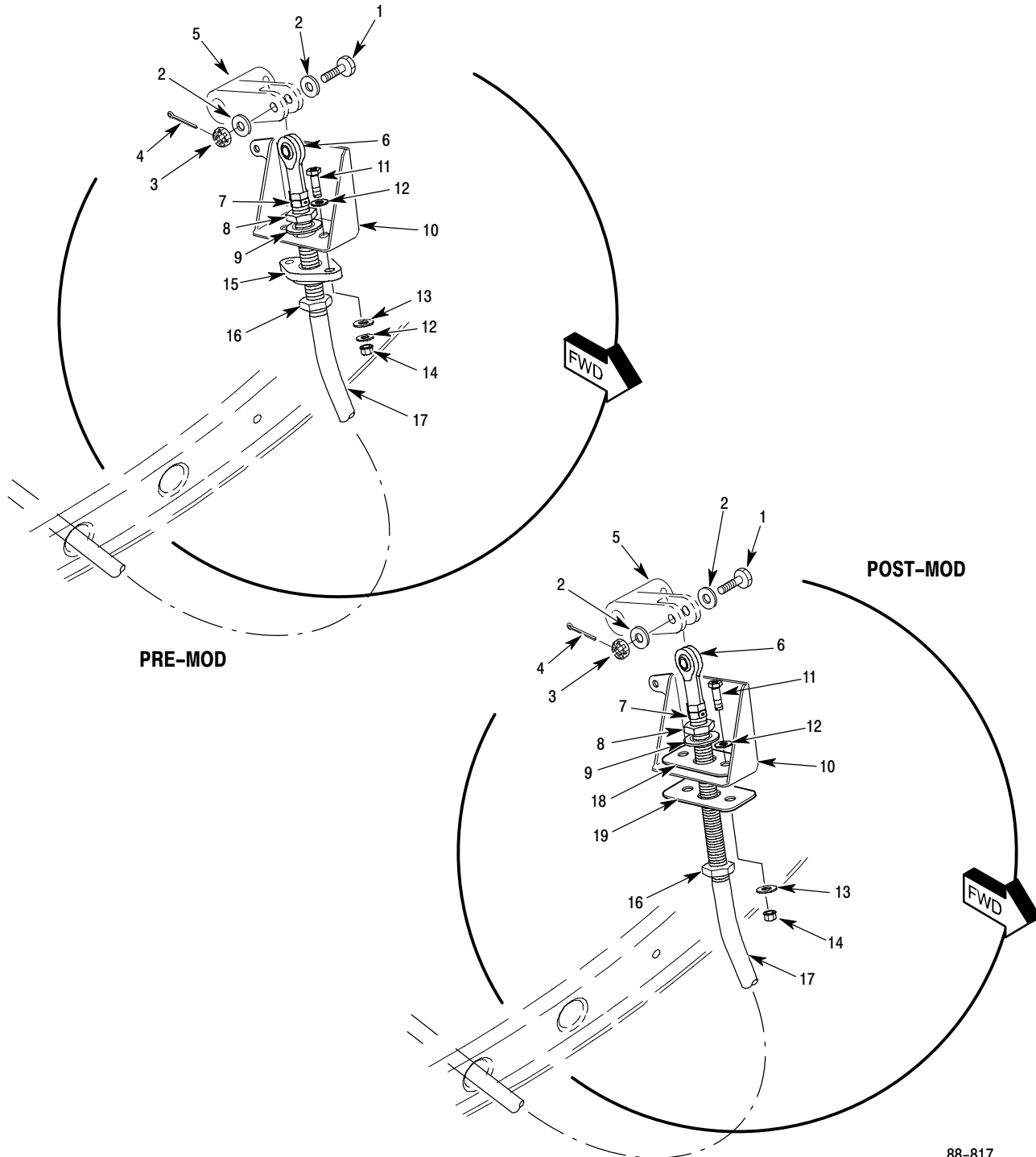
- (1). Remove cotter pin (4), nut (3), bolt (1) and flat washers (2) from engine throttle bellcrank (5).
- (2). Disconnect rod end bearing (6) from engine throttle bellcrank (5).
- (3). Loosen jam nut (7) and remove rod end bearing (6) and jam nut from engine control cable (17).
- (4). Loosen jam nut (8) and jam nut (16).
- (5). Remove nuts (14), flat washers (12), flat washers (13) and screws (11) that attach cable bulkhead swivel (15) to bracket (10).
- (6). Discard two flat washers (12). Keep remaining two flat washers (12).
- (7). Remove jam nut (8) and flat washer (9) from end of engine control cable (17).
- (8). Pull engine control cable (17) out of bracket (10).
- (9). Remove cable bulkhead swivel (15) from engine control cable (17).
- (10). Discard cable bulkhead swivel (15).
- (11). Keep jam nut (16) on engine control cable (17).
- (12). Put doubler (19) on engine control cable (17).
- (13). Put engine control cable (17) back in bracket (10).
- (14). Put doubler (18) on engine control cable (17).
- (15). Install flat washer (9) and jam nut (8) on engine control cable (17). Do not tighten jam nut.
- (16). Install screws (11), flat washers (12), flat washers (13) and nuts (14) through doubler (18), bracket (10) and doubler (19).
- (17). Torque nuts (14) to **12 - 15 inch pounds (1.35 - 1.69 Nm)**.
- (18). Install jam nut (7) and rod end bearing (6) on engine control cable (17).
- (19). Adjust jam nut (7) and rod end bearing (6) until the inner cable visible thread count recorded in Step 2.A.(2). occurs.
- (20). Torque jam nut (7) to **40 inch pounds (4.52 Nm)**.
- (21). Connect rod end bearing (6) to engine throttle bellcrank (5) with bolt (1), washers (2) and nut (3).
- (22). Torque nut (3) to **30 - 40 inch pounds (3.39 - 4.52 Nm)**.
- (23). Install new cotter pin (4).
- (24). Rig engine control cable (Ref. CSP-HMI-2, Chapter 76-47-00).

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**Figure 1.**

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## Legend (Ref. Figure 1)

- |                              |                              |
|------------------------------|------------------------------|
| 1. BOLT                      | 11. SCREW                    |
| 2. FLAT WASHER               | 12. FLAT WASHER (AN960KD10L) |
| 3. CASTELLENATED NUT         | 13. FLAT WASHER (NAS629-10L) |
| 4. COTTER PIN                | 14. NUT                      |
| 5. ENGINE THROTTLE BELLCRANK | 15. CABLE BULKHEAD SWIVEL    |
| 6. ROD END BEARING           | 16. JAM NUT                  |
| 7. JAM NUT                   | 17. ENGINE CONTROL CABLE     |
| 8. JAM NUT                   | 18. DOUBLER (600N7720-1)     |
| 9. FLAT WASHER               | 19. DOUBLER (600N7720-3)     |
| 10. BRACKET                  |                              |

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### **C. Job Close-up**

- (1). Make sure engine control cable rigging is complete (Ref. CSP-HMI-2, Chapter 76-47-00).
- (2). Install safety wire between jam nut (16) and jam nut (8) with MS20995C32 lockwire.
- (3). Insulate bracket (10) with a 1 inch length of PVC tubing where lockwire contacts bracket.
- (4). Install center seat cover (Ref. CSP-HMI-2, Chapter 67-10-00).

### **D. Compliance Record**

- (1). Record compliance to this Technical Bulletin in the Compliance Record section of the helicopter Log Book.
- (2). Complete Bulletin Completed Record form (attached) and FAX or e-mail to MHDI Field Service Department.



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## Bulletin Completed Record

### TB600N-009, Modification of Engine Control Cable

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

800-388-3378 Phone (U.S. and Canada)  
480-346-6387 Phone (International)  
480-346-6813 Fax  
ServiceEngineering@mdhelicopters.com

FAX or E-mail this form to MDHI

<b>Owner /Operator:</b> _____	<b>Helicopter Serial No:</b> _____
<b>Address:</b> _____ _____ _____	<b>Helicopter Total Time:</b> _____
	<b>Compliance Date:</b> _____
<b>Phone:</b> _____	<b>Location:</b> _____
<b>E-mail:</b> _____	

This bulletin is complete: \_\_\_\_\_  
 (Signature)

\_\_\_\_\_

(Print Name)

\_\_\_\_\_

(Title)

Comments: \_\_\_\_\_

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