

# SERVICE BULLETIN

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## ONE-TIME INSPECTION OF FUEL CELL CORD ROUTING

### 1. PLANNING INFORMATION

#### A. Aircraft Affected:

MD900 helicopters serial numbers 900-000124 thru 900-000127, 900-000129 thru 900-000134, and 900-000136 that possibly have 900D3661120-101 Category A fuel cell serial numbers 0172, 0173, 0174, 0178, 0179, and 0183 installed. Also included are Category A MD900 helicopters converted from the 900 configuration to the 902 configuration (SN 900-000037) that have had the fuel cell replaced with a fuel cell shipped from MDHI after 1 April 2008, but before 18 June 2009, and inventory of spare fuel cells or kits with the specified part number and serial number.

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

900P3661120-101 Category A fuel cell.

#### C. Reason:

The specified range of serial numbers of Category A fuel cells may have an incorrectly routed baffle support lacing cord. If the routing of the lacing cord is incorrect, the cord can rub against the aft fuel gaging probe. If the operator does not do this bulletin, wear damage to the outer tube of the aft fuel gaging probe or the cord can occur.

#### D. Description:

Procedures in this bulletin give owners and operators data about an inspection of the routing of the fuel cell cord and corrective action, if necessary.

#### E. FAA Approval:

The technical design aspects of this bulletin are FAA approved.

#### F. Time of Compliance:

Must be completed at the next annual inspection or at the next access to the fuel cell, but no later than 30 September 2010.

#### G. Manpower:

Five (5) man-hours to remove the floor, inspect the fuel cell serial numbers, and to install the floor. Two (2) man-hours to correctly lace the fuel cell.

#### 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.

#### J. Material/Part Availability:

SUPPLIES			
Nomenclature	Part or Specification No.	Qty.	Source
Braided Nylon Cord	C803 (MIL-C-5040, Type III)	As Necessary	Commercial

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## **K. Warranty Policy:**

N/A

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

N/A

## **M. Tooling:**

N/A

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

N/A

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

N/A

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

CSP-900RMM-2 Rotorcraft Maintenance Manual.

## **2. ACCOMPLISHMENT INSTRUCTIONS**

### **A. Inspect Fuel Cell for Serial Number Effectivity**



Defuel the helicopter before you remove the floor panels. Damage to the structure can occur if you remove the floor panels with fuel in the helicopter.

#### **Aviation Turbine Fuel**



- (1). Defuel helicopter (refer to CSP-900RMM-2, Section 12-00-00, Defueling).
- (2). Remove cabin seats, if necessary (refer to CSP-900RMM-2, Section 25-20-00, Cabin Seat Assembly Removal).

**NOTE:** Refer to manufacturer instructions to remove non-OEM cabin interiors and floor panels, if necessary.

- (3). Remove carpet, if necessary (refer to CSP-900RMM-2, Section 25-20-00, Cabin Carpet Removal).



The helicopter cannot be moved after you remove the floor panels. Put the helicopter in a hanger or maintenance facility before you remove the floor panels.

- (4). Remove cabin floor panels AL165, AR165, and A170 (refer to CSP-900RMM-2, Section 53-20-00, Cabin Floor Outboard Panel Removal and Cabin Floor Center Panel Removal).
- (5). Check serial number of fuel cell.
  - (a). Record the serial number on the Bulletin Completed Record.
  - (b). If the serial number is 0172, 0173, 0174, 0178, 0179, or 0183, go to Procedure B.
  - (c). If the serial number is not 0172, 0173, 0174, 0178, 0179, or 0183, go to Procedure D.

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## **B. Inspect Cord Routing**

- (1). Remove fuel cell access covers (refer to CSP-900RMM-2, Section 28-00-00, Fuel Cell Access Cover Removal).
- (2). Inspect Cord 1 routing (refer to Figure 1).
  - (a). If cord routing is not correct, go to Procedure C.
  - (b). If cord routing is correct, go to Procedure D.

## **C. Repair Cord Routing**

- (1). Remove cord.
- (2). Inspect cord for wear damage.
  - (a). If there is wear damage, replace the cord with new cord (C803).
  - (b). If there is no wear damage, use the cord again.
- (3). Put a straightedge across fuel cell cavity from the left keel beam flange to the right keel beam flange.
- (4). Support fuel cell access cover fittings so that they are **1.5 to 1.7 inches (38 to 43 mm)** below the bottom of the straightedge.
- (5). Tie a bowline knot at end of cord to prevent movement through Hanger 1 (H1) (refer to Figure 2).

**NOTE:** Cut cord ends must be sealed with heat.

- (6). Thread cord through grommets 1 (G1) and 2 (G2) grommets of baffle.
- (7). Fasten cord to Grommet 2 with a half-hitch knot.

**NOTE:** Keep **0.25 to 0.50 inch (6.4 to 12.7 mm)** of tension movement in cord.

- (8). Thread cord through Hanger 2 (H2) at top of fuel cell.
- (9). Thread cord through grommets 3 (G3), 4 (G4), and 5 (G5) of baffle.
- (10). Fasten cord to Grommet 5 with a half-hitch knot.

**NOTE:** Keep **0.25 to 0.50 inch (6.4 to 12.7 mm)** of tension movement in cord.

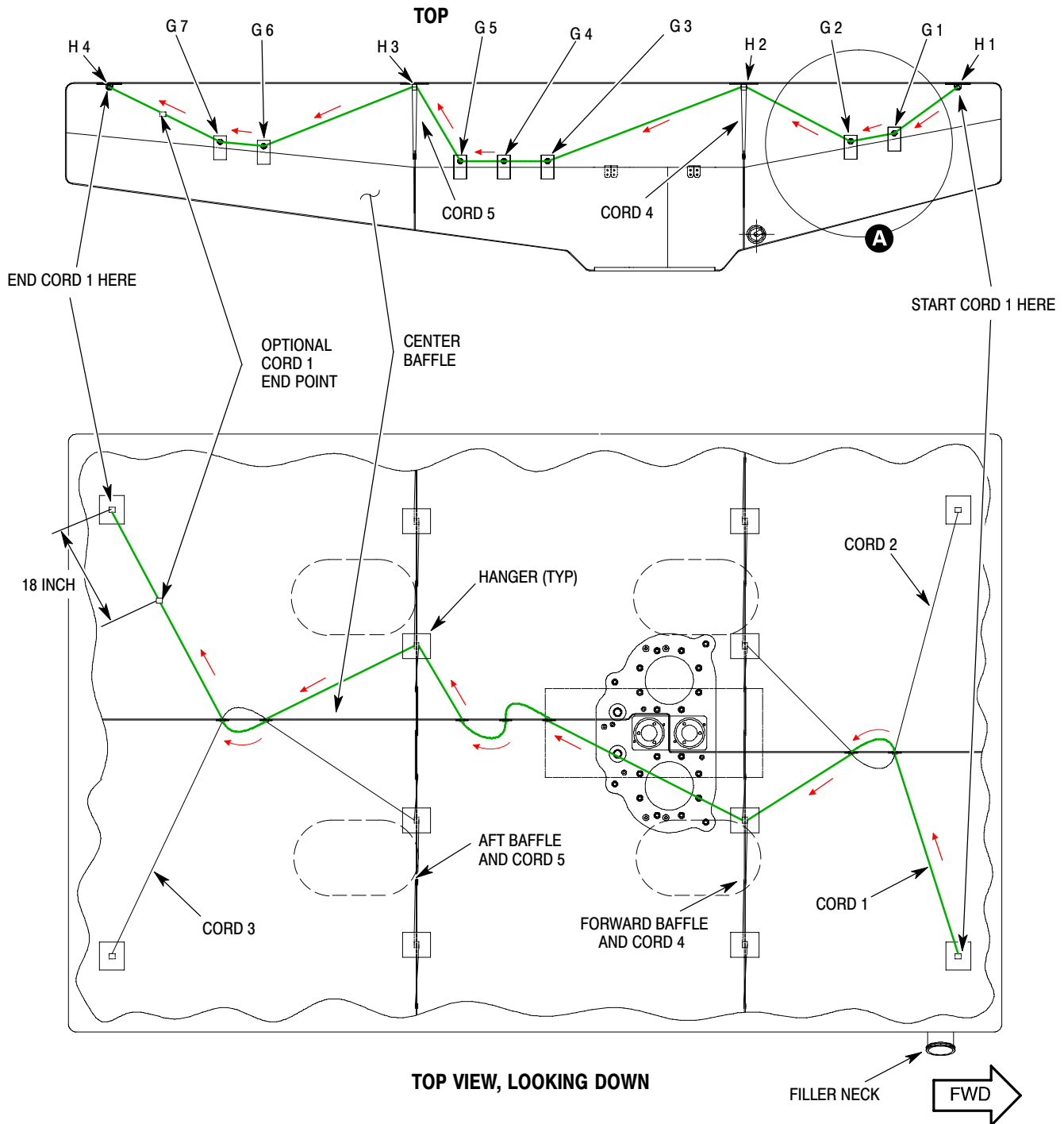
- (11). Thread cord through Hanger 3 (H3) at top of fuel cell.
- (12). Thread cord through Grommet 6 (G6) of baffle.
- (13). Fasten cord to Grommet 6 with a half-hitch knot.
- (14). Thread cord through Grommet 7 (G7) of baffle.
- (15). Thread cord through Hanger 4 (H4) at top of fuel cell.

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**Figure 1. Routing of Cord 1.**

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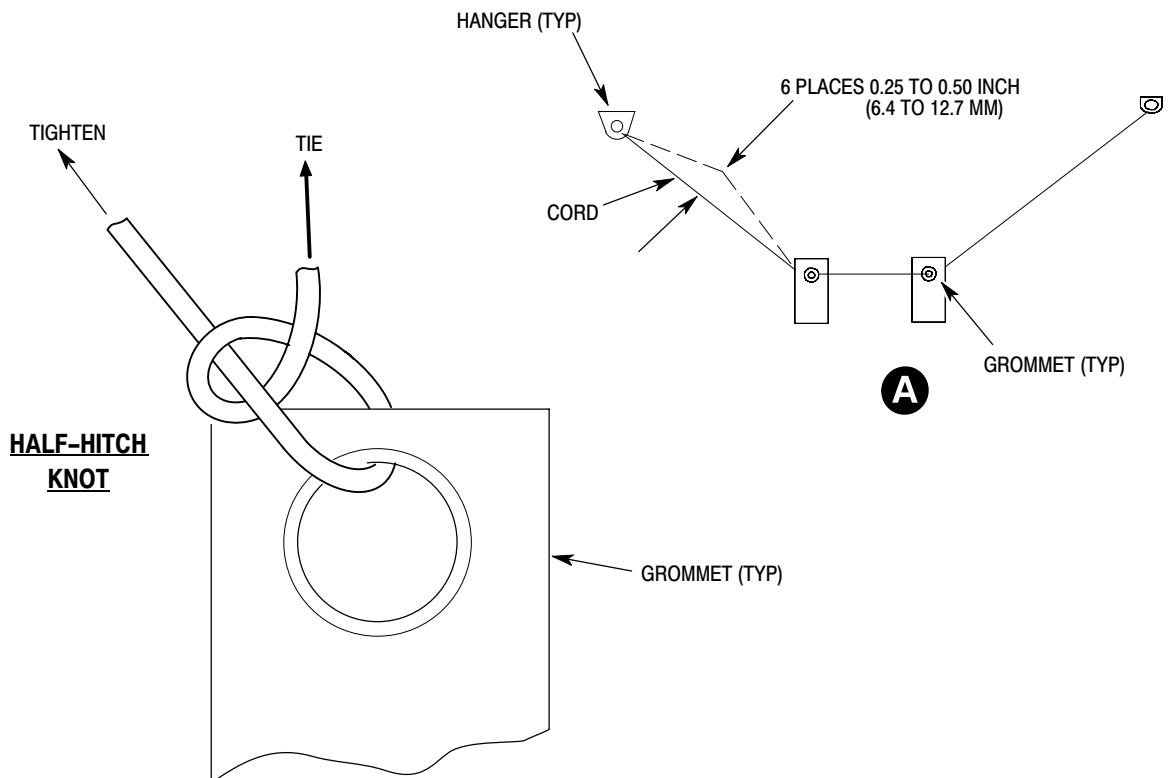
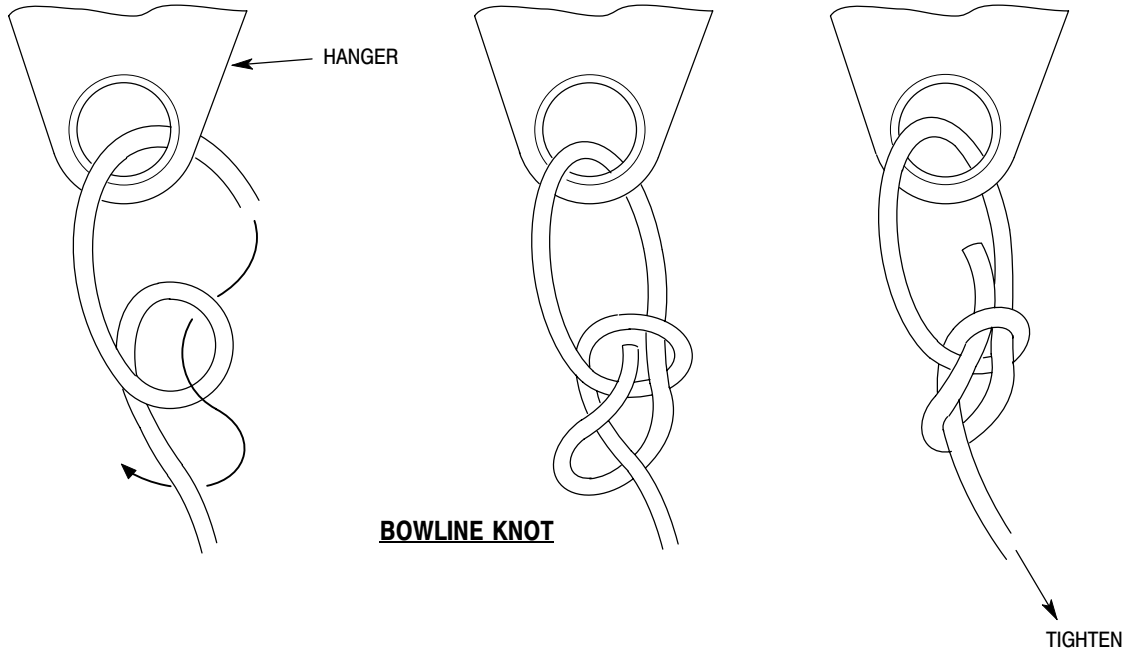


Figure 2. Types of Knots and Tension Check.

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- (16). Tie a bowline knot in end of cord to prevent movement through Hanger 4, or tie a bowline knot 18 inches (457 mm) from Hanger 4.

**NOTE:** Keep **0.25 to 0.50 inch (6.4 to 12.7 mm)** of tension movement in cord.

**NOTE:** Cut cord ends must be sealed with heat.

- (17). Check tension of cords between grommets and internal hangers (six places). Refer to Figure 2.
- The cord cannot move more than **0.25 to 0.50 inch (6.4 to 12.7 mm)** as measured perpendicular to lacing.
  - If cord is too loose (moves more than **0.50 inch (12.7 mm)**), untie and retie cord knot(s) again to increase tension or replace cord.
  - If cord is too tight (moves less than **0.25 inch (6.4 mm)**), untie and retie cord knot(s) again to decrease tension or replace cord.
- (18). If routing was incorrect, inspect fuel gaging aft probe for wear damage.
- If there is damage, replace fuel gaging aft probe (refer to CSP-900RMM-2, Section 28-00-00, Aft Fuel-Gaging Probe Removal and Installation).
  - If there is no damage, continue the procedure.
- (19). Remove straightedge.
- (20). Install fuel cell access covers (refer to CSP-900RMM-2, Section 28-00-00, Fuel Cell Access Cover Installation).

## D. Job Close-Up

- Install cabin floor panels AL165, AR165, and A170 (refer to CSP-900RMM-2, Section 53-20-00, Cabin Floor Outboard Panel Installation and Cabin Floor Center Panel Installation).

**NOTE:** Refer to manufacturer instructions to install non-OEM cabin interiors and floor panels, if necessary.

- Install carpet, if necessary (refer to CSP-900RMM-2, Section 25-20-00, Cabin Carpet Installation).
- Install cabin seats, if necessary (refer to CSP-900RMM-2, Section 25-20-00, Cabin Seat Assembly Installation).
- Fuel helicopter (refer to CSP-900RMM-2, Section 12-00-00, Fueling).
- Make a record in the Compliance Record section of the Rotorcraft Log Book that this service bulletin has been completed.
- Complete Bulletin Completed Record form (attached) and FAX or e-mail to MDHI Field Service Department.

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## Bulletin Completed Record

### Service Bulletin SB900-114, Inspection of Fuel Cell Cord Routing.

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

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

Dear Sir:

This is to tell you that this service bulletin has been completed as shown below:

Owner/Operator: \_\_\_\_\_

Aircraft Serial No: \_\_\_\_\_

Fuel Cell Serial No: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail address: \_\_\_\_\_

Helicopter Total Time: \_\_\_\_\_

Date: \_\_\_\_\_

Location: \_\_\_\_\_

This bulletin is complete: \_\_\_\_\_

(Signature)

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Title)

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