

SERVICE BULLETIN

DATE: 20 JULY 2010

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INSPECTION OF SHORT EDGE MARGIN CONDITION ON 369D23500 TAILBOOM ASSEMBLY

1. PLANNING INFORMATION

A. Aircraft Affected:

Model 369D, Model 369E and Model 369F/FF Helicopters with tailboom assembly serial numbers listed below:

7604-0001 to 7604-0003
7604-0006 to 7604-0047
7604-0049 to 7604-0082
7604-0084 to 7604-0113

B. Assembly/Components Affected By This Notice:

Model 369D: Tailboom Assembly - 369D23500-505 and -511
Model 369E: Tailboom Assembly - 369D23500-505 and -511
Model 369F/FF: Tailboom Assembly - 369D23500-507 and -513

C. Reason:

Improper installation of the frame ring at STA 209.78 can result in a short edge margin condition with the rivets that attach the installed longerons. Failure to inspect and correct short edge margin condition could result in reduced structural strength of the tailboom.

D. Description:

Procedures in this Bulletin give owners and operators information to find if a short edge margin condition exists and install repair doubler.

E. Time of Compliance:

Perform Part I of this Service Bulletin within 6 months or 100 hours after SB release, whichever ever comes first.

Perform Part II based on the results of the Part I inspection.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Part I - Inspection: Four (4.0) man-hours

Part II - Modification: Eight (8.0) 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 Warranty Repair Department to order required items

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Repair Material	2024-T3 Alclad per QQ-A-250/5 Stock size 3.0" x 5.5" x 0.063" thick	1	Commercial
Rivet	MS20470AD4	8	Commercial
Rivet	MS20470AD5	2	Commercial
Primer	CM318 / MIL-P-85582	AR	Commercial
Chemical Coating	CM206 / MIL-C-5541	AR	Commercial
Structural Adhesive	EA9394	AR	Commercial

K. Warranty Policy:

N/A

L. Disposition of Parts Removed:

N/A

M. Tooling:

TOOLS AND EQUIPMENT	
Nomenclature	Source
Inspection Light	Commercial
Inspection Mirror	Commercial
Steel Rule or Caliper	Commercial

N. Weight and Balance:

N/A

O. Electrical Load Data:

N/A

P. Other Publications Affected:

- CSP-IPC-4, Illustrated Parts Catalog
- CSP-SRM-6, Structural Repair Manual

Q. Reference Publications:

Refer to the latest revision of this publication for procedures and additional information:
CSP-HMI-2, Basic Handbook of Maintenance Instructions - Servicing and Maintenance

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2. ACCOMPLISHMENT INSTRUCTIONS

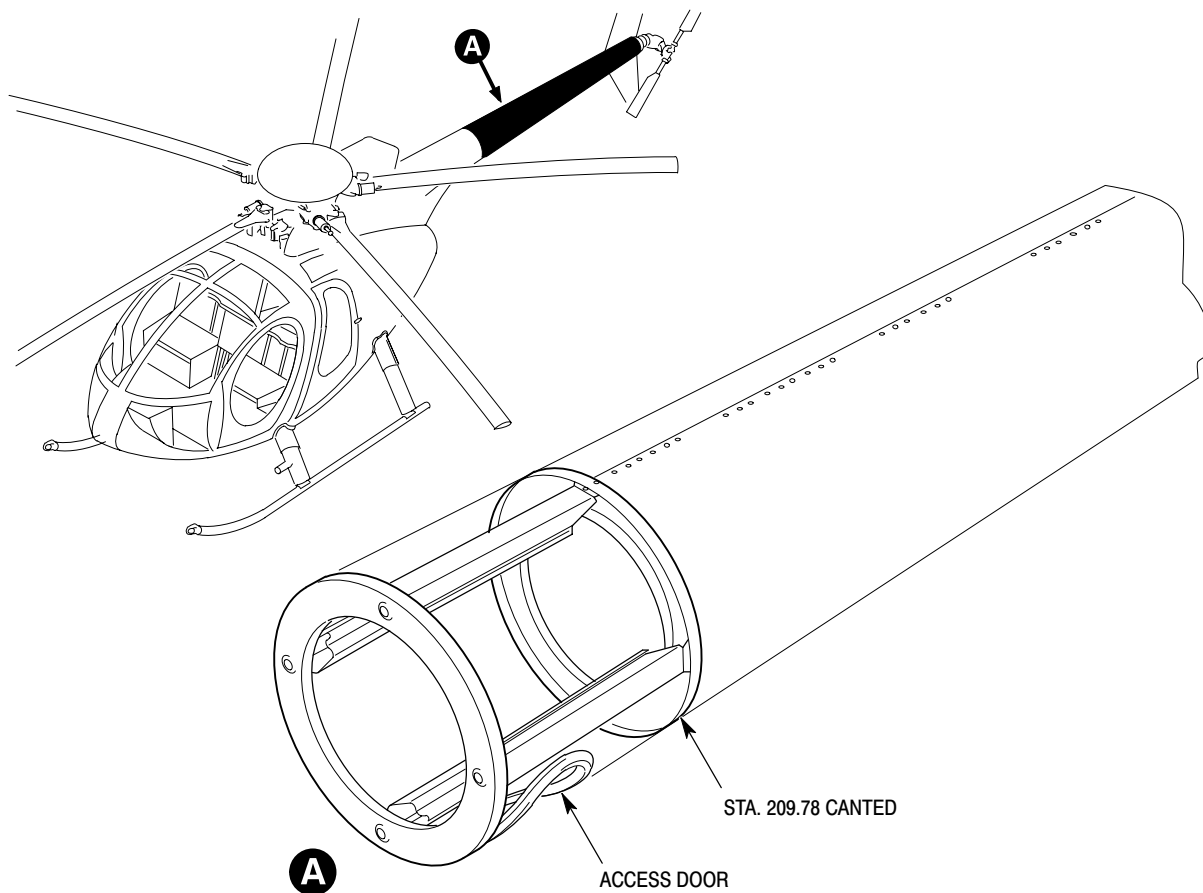
A. Prepare Aircraft

(Ref. Figure 1)

- (1). Remove the access door from the lower left-hand side of the tailboom assembly.
- (2). Remove the tail rotor transmission and tail rotor drive shaft as a unit
(Ref. CSP-HMI-2, Section 63-15-00).

NOTE: If there is sufficient access after Step 2.A.(2). is complete, do not remove tail rotor control rod.

- (3). Remove tail rotor control rod (Ref. CSP-HMI-2, Section 67-20-10).



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Figure 1. Tailboom Assembly

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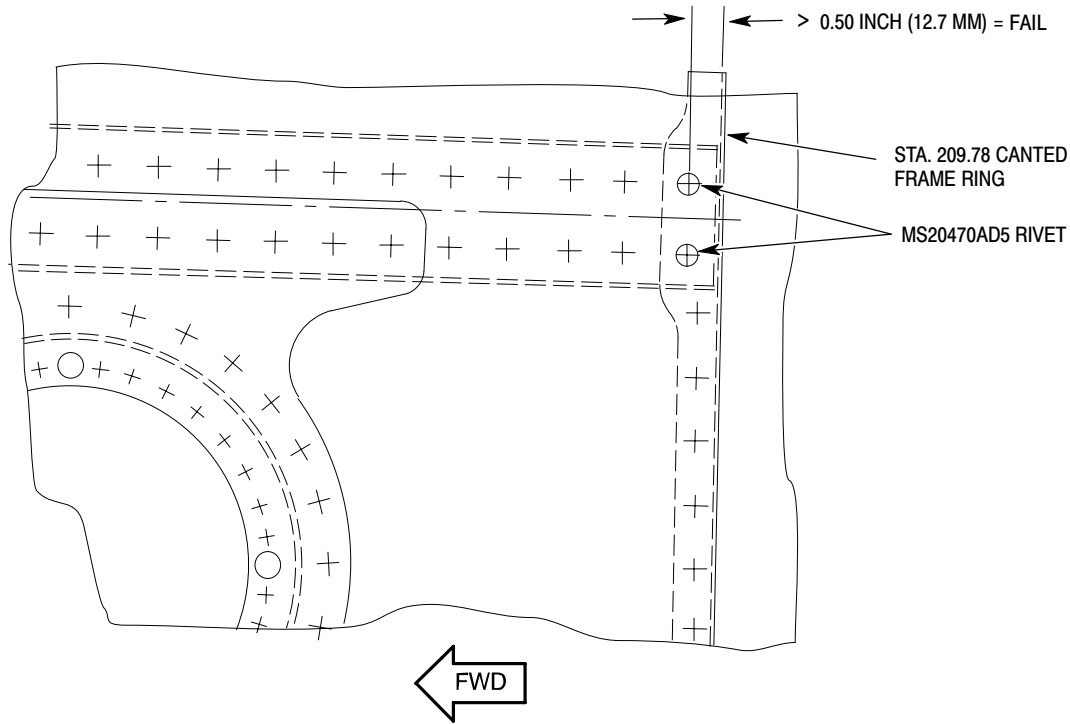
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B. PART 1 - Inspection

(Ref. Figure 2)

- Measure the distance from the forward face of the STA 209.78 frame ring to the center of the two aft rivet locations on each longeron.



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Figure 2. STA 209.78 Frame Ring to Rivet Measurement

- Record each rivet measurement in the table below:

Longeron Location (Looking Forward)						
12 O'Clock:	Rivet No. 1		Rivet No. 2		Pass / Fail	
3 O'Clock:	Rivet No. 1		Rivet No. 2		Pass / Fail	
6 O'Clock:	Rivet No. 1		Rivet No. 2		Pass / Fail	
9 O'Clock:	Rivet No. 1		Rivet No. 2		Pass / Fail	

- For each longeron location, record if each rivet inspection passes or fails, based on the following criteria:

If either of the two aft rivets for a longeron is more than 0.50 inches (12.7mm) from the forward face of the frame ring, there is an unsatisfactory edge margin condition.

- Record the pass or fail result for each rivet in the last column of the table above.
- Mark each rivet that fails the edge margin inspection.

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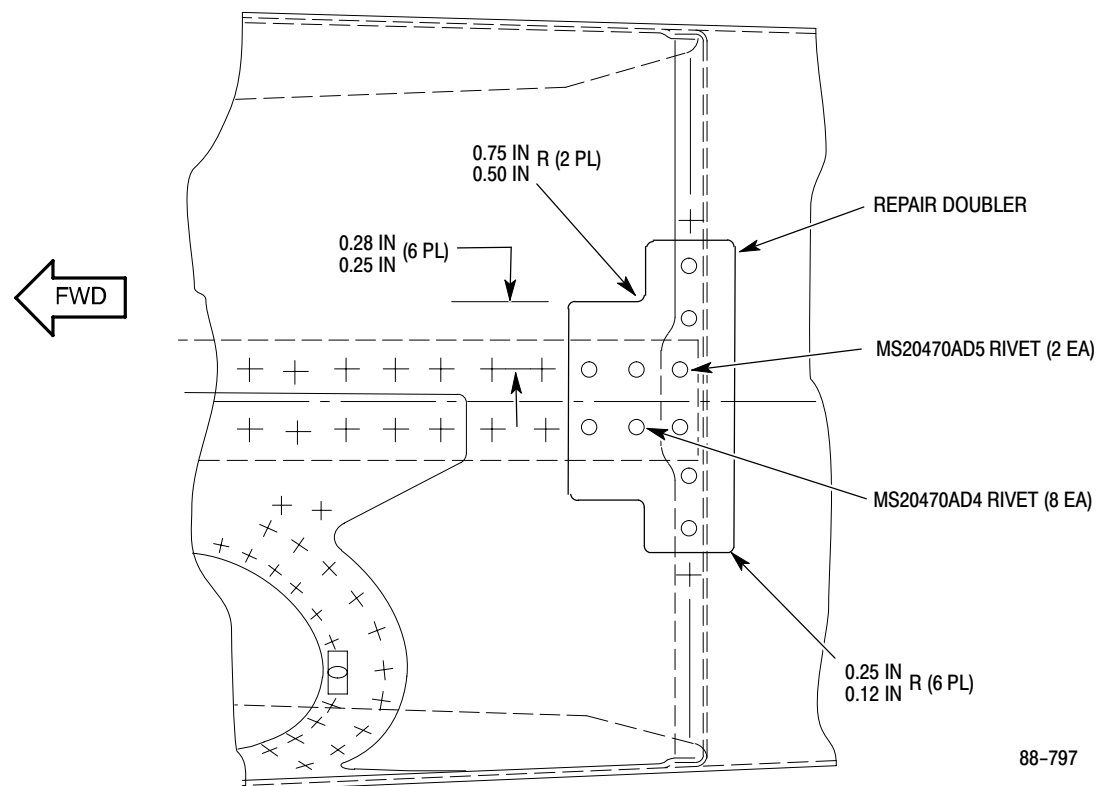
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C. PART 2 - Modification

(Ref. Figure 3 and Figure 4)

NOTE: Do the following modification at each longeron location that failed the Step B.(1). inspection.

- (1). Carefully remove the ten rivets shown in Figure 3.
- (2). Fabricate a "T-shaped" repair doubler using 0.063 inch thick 2024-T3 Alclad, per QQ-A-250/5.
- (3). Size the repair doubler such that there is a 0.250 inch (6.35mm) to 0.280 inch (7.11mm) edge margin around the perimeter of the repair doubler.
- (4). Shape the repair doubler so it has a radius of approximately 5.722 inches (145.34mm) to agree with the shape of the tailboom. See Figure 4.
- (5). Put the repair doubler on the tailboom assembly and drill pilot holes in the repair doubler at existing rivet locations.
- (6). Remove the repair doubler and drill full size holes at each hole location to match final rivet diameter.
- (7). Clean and deburr all hole locations on the repair doubler and tailboom assembly.
- (8). Remove paint from tailboom, clean area and prepare surfaces for bonding.
- (9). Apply chemical coating (CM206) to all areas of the repair doubler and any exposed material of the tailboom assembly, per CSP-HMI-2, Section 20-40-00.



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Figure 3. Repair Doubler

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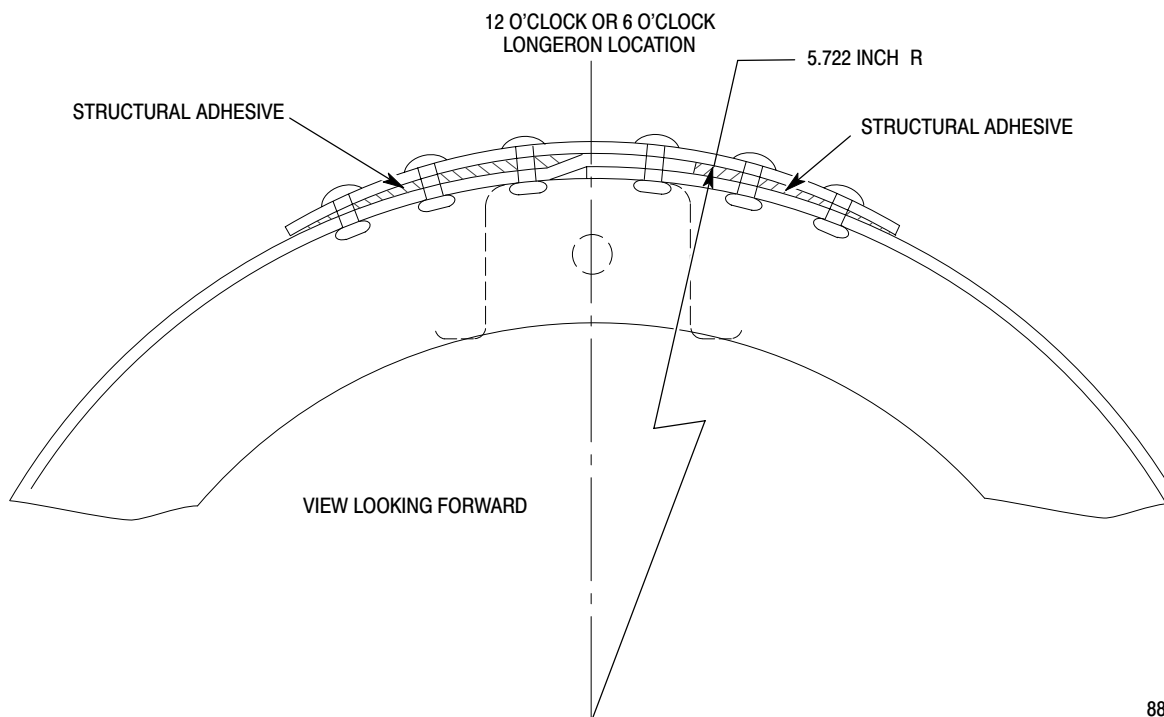
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- (10). Apply primer (CM318) to all non faying surfaces of the repair doubler.
- (11). Apply structural adhesive (EA9394) to the faying surfaces of the repair doubler.
- (12). At the 6 O'Clock and 12 O'Clock longeron location, apply structural adhesive (EA9394) to the tailboom surface as shown in Figure 4.
- (13). Install the repair doubler with eight (8) MS420470AD4 rivets and two (2) MS20470AD5 rivets. Install all rivets with wet primer (CM318) and allow adhesive and primer to cure.
- (14). Fillet seal the edges of the repair doubler with structural adhesive (EA9394).
- (15). If necessary, touch up the finish of all parts per CSP-HMI-2, Chapter 20.



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Figure 4. Repair Doubler Installation

D. Job Close-Up

- (1). If necessary, reinstall tail rotor control rod (Ref. CSP-HMI-2, Section 67-20-10).
- (2). Reinstall the tail rotor transmission and tail rotor drive shaft as a unit (Ref. CSP-HMI-2, Section 63-15-00).
- (3). Reinstall the access door on the lower left-hand side of the tailboom assembly.

E. Compliance Record

- (1). Record compliance to this Service Bulletin in the Compliance Record section of the Rotorcraft 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

[Part 1] – INSPECTION OF SHORT EDGE MARGIN CONDITION ON 369D23500 TAILBOOM ASSEMBLY

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

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

Owner /Operator: _____	Helicopter Serial No: _____
Address: _____	Helicopter Total Time: _____
_____	Date Complete: _____
_____	Location: _____
Phone: _____	
E-mail: _____	

[Part 1 of] This bulletin is complete: _____ (Signature)

_____ (Print Name)

Part 2 Required: Y / N (circle one) _____ (Title)

Serial Number of tailboom: _____

Comments: _____

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Bulletin Completed Record

[Part 2] INSPECTION OF SHORT EDGE MARGIN CONDITION ON 369D23500 TAILBOOM ASSEMBLY

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

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

Owner /Operator: _____	Helicopter Serial No: _____
Address: _____	Helicopter Total Time: _____
_____	Date Complete: _____
_____	Location: _____
Phone: _____	
E-mail: _____	

[Part 2 of] This bulletin is complete: _____
 _____ (Signature)
 _____ (Print Name)
 _____ (Title)

Serial Number of modified tailboom: _____

Comments: _____

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