



December 14, 2007

**TO: All Owners/Operators of Bell 205A & 205A-1 Helicopters**

**SUBJECT: REVISION "A" TO TECHNICAL BULLETIN 205-05-119:  
TAILBOOM BULKHEAD REINFORCEMENT**

Revision "A" to this bulletin introduces doubler kits for ease of ordering the doublers. They can now be ordered in five kits. Each kit includes the doublers to reinforce one bulkhead. All the doublers can also be ordered under one kit number.

TECHNICAL BULLETIN  
**Bell** Helicopter

A Textron Company

No. 205-05-119

Date Oct 10, 2005

Page 1 of 7

DATE Dec 14, 2007

REV A

**MODEL AFFECTED:** 205A & 205A-1

**SUBJECT:** TAILBOOM BULKHEAD REINFORCEMENT

**HELICOPTERS AFFECTED:** Model 205A & 205A-1 helicopters serial number 30001 through 30332.

**COMPLIANCE:** At Customer's Option

**DESCRIPTION:**

This bulletin describes a procedure to install local doublers to reinforce five tailboom bulkheads. It is provided as a prevention measure to reduce the risk of cracking. Each bulkhead (eight locations) may be reinforced individually as convenient but all 40 locations must be reinforced for this bulletin to be considered accomplished. Locations already repaired in accordance with repair 5-6-2 of the Structural Repair Manual (SRM) do not qualify as being reinforced in accordance with this bulletin. Only serviceable bulkheads can be reinforced.

**APPROVAL:**

The engineering design aspects of this bulletin are FAA/DER approved.

**MANPOWER:**

Approximately 14.0 man-hours are required to complete this bulletin. Man-hours are based on hands-on time, and may vary with personnel and facilities available.

**WARRANTY:**

There is no warranty credit applicable for parts or labor associated with this bulletin.

**MATERIALS:**

**Required Material:**

The following material is required for the accomplishment of this bulletin and may be obtained through your Bell Helicopter Textron Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Quantity</u>
<b>CT-412-05-203-6</b> consisting of:	<b>Doubler Kit (All)</b>	<b>1</b>
<b>CT-412-05-203-1</b> consisting of:	<b>Doubler Kit (BS 122.33)</b>	<b>1</b>
205-032-821-115	Doubler	1
205-032-821-116	Doubler	1
205-032-821-117	Doubler	1
205-032-821-118	Doubler	1
205-032-821-119	Doubler	1
205-032-821-121	Doubler	1
205-032-821-123	Doubler	1
205-032-821-125	Doubler	1
<b>CT-412-05-203-2</b> consisting of:	<b>Doubler Kit (BS 143.28)</b>	<b>1</b>
205-032-820-115	Doubler	1
205-032-820-116	Doubler	1
205-032-820-117	Doubler	1
205-032-820-118	Doubler	1
205-032-820-119	Doubler	1
205-032-820-121	Doubler	1
205-032-820-123	Doubler	1
205-032-820-125	Doubler	1
<b>CT-412-05-203-3</b> consisting of:	<b>Doubler Kit (BS 164.23)</b>	<b>1</b>
205-032-827-115	Doubler	1
205-032-827-116	Doubler	1
205-032-827-117	Doubler	1
205-032-827-118	Doubler	1
205-032-827-119	Doubler	1
205-032-827-121	Doubler	1
205-032-827-123	Doubler	1
205-032-827-125	Doubler	1

A

<b>CT-412-05-203-4</b> consisting of:	<b>Doubler Kit (BS 185.18)</b>	1
205-032-828-115	Doubler	1
205-032-828-117	Doubler	1
205-032-828-119	Doubler	1
205-032-828-121	Doubler	1
205-032-828-123	Doubler	1
205-032-828-125	Doubler	1
205-032-828-127	Doubler	1
205-032-828-129	Doubler	1

<b>CT-412-05-203-5</b> consisting of:	<b>Doubler Kit (BS 194.30)</b>	1
205-032-824-115	Doubler	1
205-032-824-117	Doubler	1
205-032-824-119	Doubler	1
205-032-824-121	Doubler	1
205-032-824-123	Doubler	1
205-032-824-125	Doubler	1
205-032-824-127	Doubler	1
205-032-824-129	Doubler	1

A

**Consumable Material:**

The following material is required to accomplish this bulletin, however this material is considered consumable (bench stock) material and may not require ordering depending on the operators consumable material stock levels. This material may be obtained through your Bell Helicopter Textron Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Quantity</u>	<u>Reference</u>
299-947-100TY2CL2PT	Adhesive (1 pint)	A/R	C-317
MS20470AD4 (Grip length to suit)	Rivet	A/R	
MIL-PRF-81733 2.5 OZ	Sealant	A/R	C-392

**SPECIAL TOOLS:**

None required

**WEIGHT AND BALANCE:**

	<u>Weight</u>	<u>Arm</u>	<u>Longitudinal Moment</u>	<u>Arm</u>	<u>Lateral* Moment</u>
Sta. 122.33	+0.1 Lbs +0.04 kg	345.0 in. 8763 mm	+35 in-Lbs +3.5 kg x mm/100	0.0 in. 0 mm	0.0 in-Lbs 0 kg x mm/100

	<u>Weight</u>	<u>Arm</u>	<u>Longitudinal Moment</u>	<u>Lateral* Arm</u>	<u>Lateral* Moment</u>
Sta. 143.28	+0.1 Lbs +0.04 kg	365.8 in. 9291 mm	+37 in-Lbs +3.7 kg x mm/100	0.0 in. 0 mm	0.0 in-Lbs 0 kg x mm/100
Sta. 164.23	+0.1 Lbs +0.04 kg	387.0 in. 9830 mm	+39 in-Lbs +3.9 kg x mm/100	0.0 in. 0 mm	0.0 in-Lbs 0 kg x mm/100
Sta. 185.18	+0.1 Lbs +0.04 kg	407.0 in. 10338 mm	+41 in-Lbs +4.1 kg x mm/100	0.0 in. 0 mm	0.0 in-Lbs 0 kg x mm/100
Sta. 194.30	+0.1 Lbs +0.04 kg	416.0 in. 10566 mm	+42 in-Lbs +4.2 kg x mm/100	0.0 in. 0 mm	0.0 in-Lbs 0 kg x mm/100
Total	+0.5 Lbs +0.2 kg	383.7 in. 9746 mm	+192 in-Lbs +19.5 kg x mm/100	0.0 in. 0 mm	0.0 in-Lbs 0 kg x mm/100

\* In lateral calculations, - is left and + is right.

**ELECTRICAL LOAD DATA:**

Not affected

**REFERENCES:**

BHT-205-IPC Illustrated Parts Breakdown  
 BHT-205-MM Maintenance Manual  
 BHT-MED-SRM-1 Structural Repair Manual

**PUBLICATIONS AFFECTED:**

BHT-205-IPC Illustrated Parts Breakdown

**ACCOMPLISHMENT INSTRUCTIONS:**

1. Make helicopter ready for maintenance.
2. Remove access panels at tailboom lower surface to gain access to bulkheads at Sta. 122.33, 143.28, 164.23, 185.18 and 194.30.
3. Select proper doubler for the location (refer to Figure 1) and remove existing rivets common to outside skin in the area covered by the doubler, noting rivet size, type and location for reinstallation.

**-NOTE-**

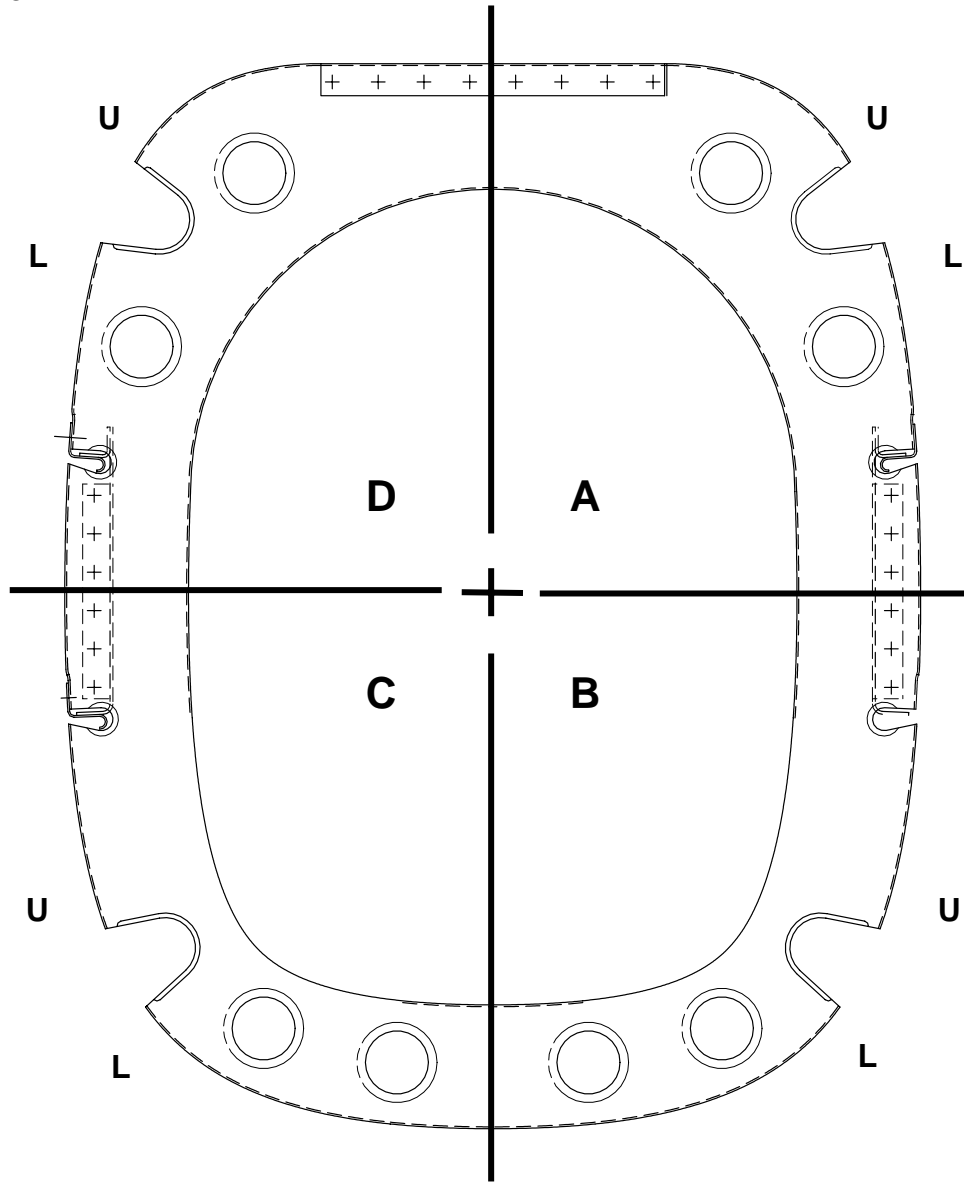
Locations already repaired in accordance with repair 5-6-2 of the Structural Repair Manual (SRM) do not qualify as being reinforced in accordance with this bulletin. All 40 locations shown in this bulletin must be reinforced for this bulletin to be considered accomplished.

4. Inspect bulkhead for cracks and repair as required. If a crack is found in the area covered by the intended doubler(s), replace bulkhead.

**-NOTE-**

All doublers are installed on the forward face of the existing bulkhead. Doublers may need slight reshaping to properly nest in radius without inducing stress to the bulkhead.

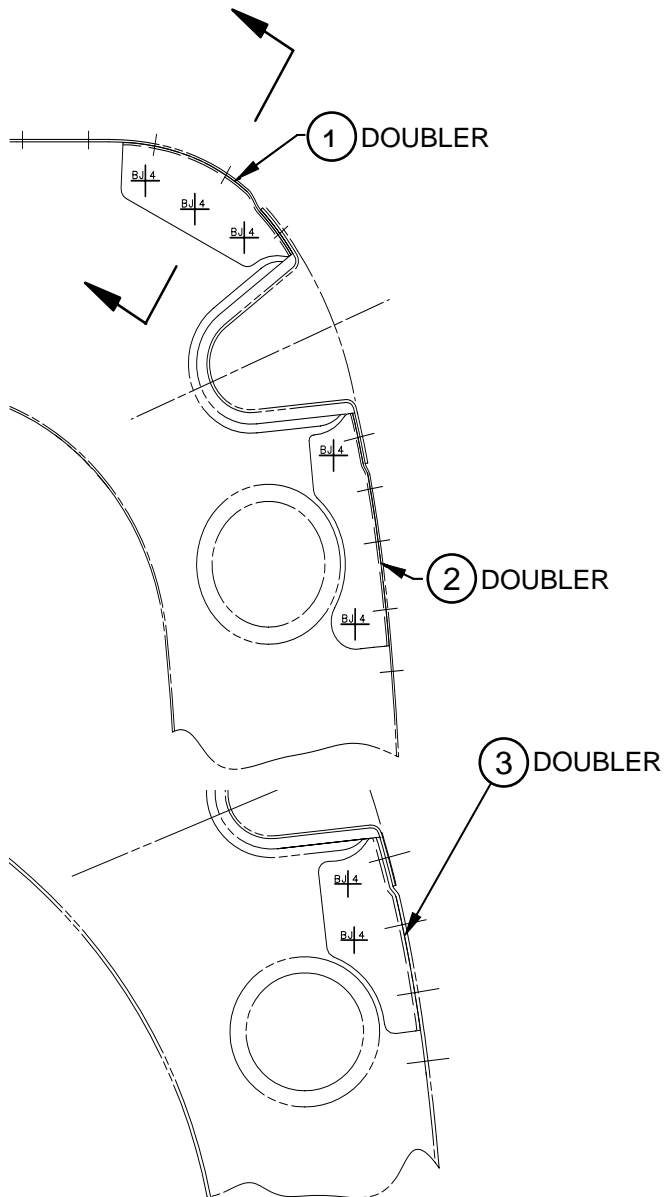
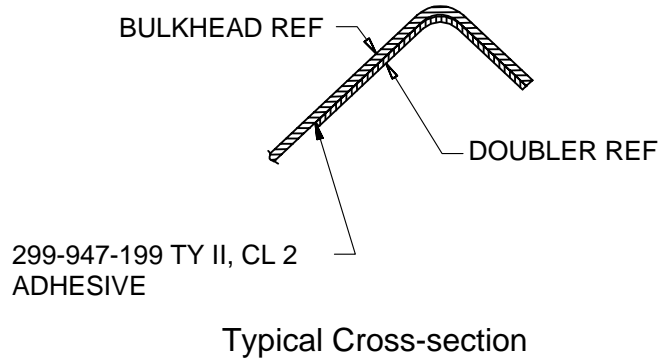
5. Position doubler selected at step 3 and transfer existing rivet holes. Attach with Clecos. Mark for two or three additional rivet holes, depending on location, through doubler and existing bulkhead as shown on Figure 2. Remove doubler and deburr all parts.
6. Lightly sand faying surfaces and apply adhesive (C-317). Attach doubler with existing-type rivets of appropriate length. All new rivets are MS20470AD4 rivets. Remove excess adhesive squeeze out and allow to dry.
7. Seal doubler edges using sealant (C-392) and apply a coat of primer (C-204).
8. Repeat above steps for all other applicable locations.
9. Reinstall access panels at lower surface of tailboom.
10. Make helicopter ready for flight.
11. Make an entry in helicopter historical records indicating compliance with this technical bulletin.



**TYPICAL BULKHEAD  
LOOKING FORWARD**

Sta.	Bulkhead	A		B		C		D	
		UPPER	LOWER	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER
122.33	205-032-821	-116	-118	-121	-125	-119	-123	-115	-117
143.28	205-032-820	-116	-118	-121	-125	-119	-123	-115	-117
164.23	205-032-827	-116	-118	-121	-125	-119	-123	-115	-117
185.18	205-032-828	-117	-121	-125	-129	-123	-127	-115	-119
194.30	205-032-824	-117	-121	-125	-129	-123	-127	-115	-119

**Figure 1**  
Doubler Selection



Parts List

1. 205-032-820-115  
205-032-820-116  
205-032-820-119  
205-032-820-121  
205-032-820-123  
205-032-820-125  
205-032-821-115  
205-032-821-116  
205-032-821-117  
205-032-821-118  
205-032-821-119  
205-032-821-121  
205-032-821-123  
205-032-821-125  
205-032-824-115  
205-032-824-117  
205-032-824-123  
205-032-824-125  
205-032-824-127  
205-032-824-129  
205-032-827-115  
205-032-827-116  
205-032-827-123  
205-032-827-125  
205-032-828-115  
205-032-828-117  
205-032-828-127  
205-032-828-129
2. 205-032-824-119  
205-032-824-121  
205-032-827-117  
205-032-827-118  
205-032-827-119  
205-032-827-121  
205-032-828-119  
205-032-828-121  
205-032-828-123  
205-032-828-125
3. 205-032-820-117  
205-032-820-118

Note: Shape and size of doublers may vary. Maintain 2D edge distance on end fasteners. Fastener pattern typical

**Figure 2**  
Typical Installation