



MANDATORY SERVICE BULLETIN

EFFECTIVITY: BELL 206 & 206L SERIES HELICOPTERS EQUIPPED WITH AIRFILM CAMERA SYSTEMS G1 UTILITY MOUNT

SUBJECT: MANDATORY INSPECTION AND MODIFICATION OF NOSE CONSOLE AT G1 MOUNT FASTENERS

DATE: 1/05/2015

1.0 REASON

Mandatory inspection for cracks on the Nose Console Flange at the forward G1 mount fasteners.

2.0 DESCRIPTION

Instances of cracking have been found on the Bell 206 airframe at the Airfilm G1 Utility Mount forward fasteners location. This bulletin describes the internal airframe inspection and subsequent repair and modification required for continued safe operation of the G1 Mount.

3.0 COMPLIANCE

MANDATORY – Within the next 40 flight hours

4.0 MANPOWER

Inspection: Estimated 3 man-hours
Repair: Estimated 20 man-hours

5.0 WEIGHT AND BALANCE

N/A

6.0 MATERIALS

Inspection:

½” Socket, Flashlight, Inspection Mirror, 10X Magnifying Lens, Measuring Device (Scale, or Calipers) Capable of 2 Place (X.XX inch) Dimensional Accuracy.

Repair/Modification:

Standard sheet metals tools, standard riveting tool, marking pen, #30 Drill, #4 Clecocs, Airfilm modification kit P/N G1-201-1

7.0 REFERENCES

STC No. SR01654LA – G1 Utility Mount, Airfilm Camera Systems

AF-G1-006 – Installation Instructions, G1 Utility Mount.

AF-G1-008 – Instructions for Continued Airworthiness, G1 Utility Bracket

AF-G1-300 - Repair Drawing, Bell 206 Nose Console

AF-G1-400 - Modification Drawing, Bell 206 Nose Console

G1-201 – Modification Kit

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8.0 ACCOMPLISHMENT INSTRUCTIONS

NOTE

Ensure that standard practices per AC43.13-1B and manufacturer's manuals are complied with.

- (1) Remove G1-1 Utility Mount to gain access to the Internal Nose Console (airframe) by removing the 8 AN3 mounting bolts on the outboard upper flanges of the G1 Mount. Reference Install Instruction (AF-G1-006) for detailed description of removal procedures.

NOTE

Washers may be present as shims between G1 mount and airframe. Note the location and quantity of the shims for reinstallation.

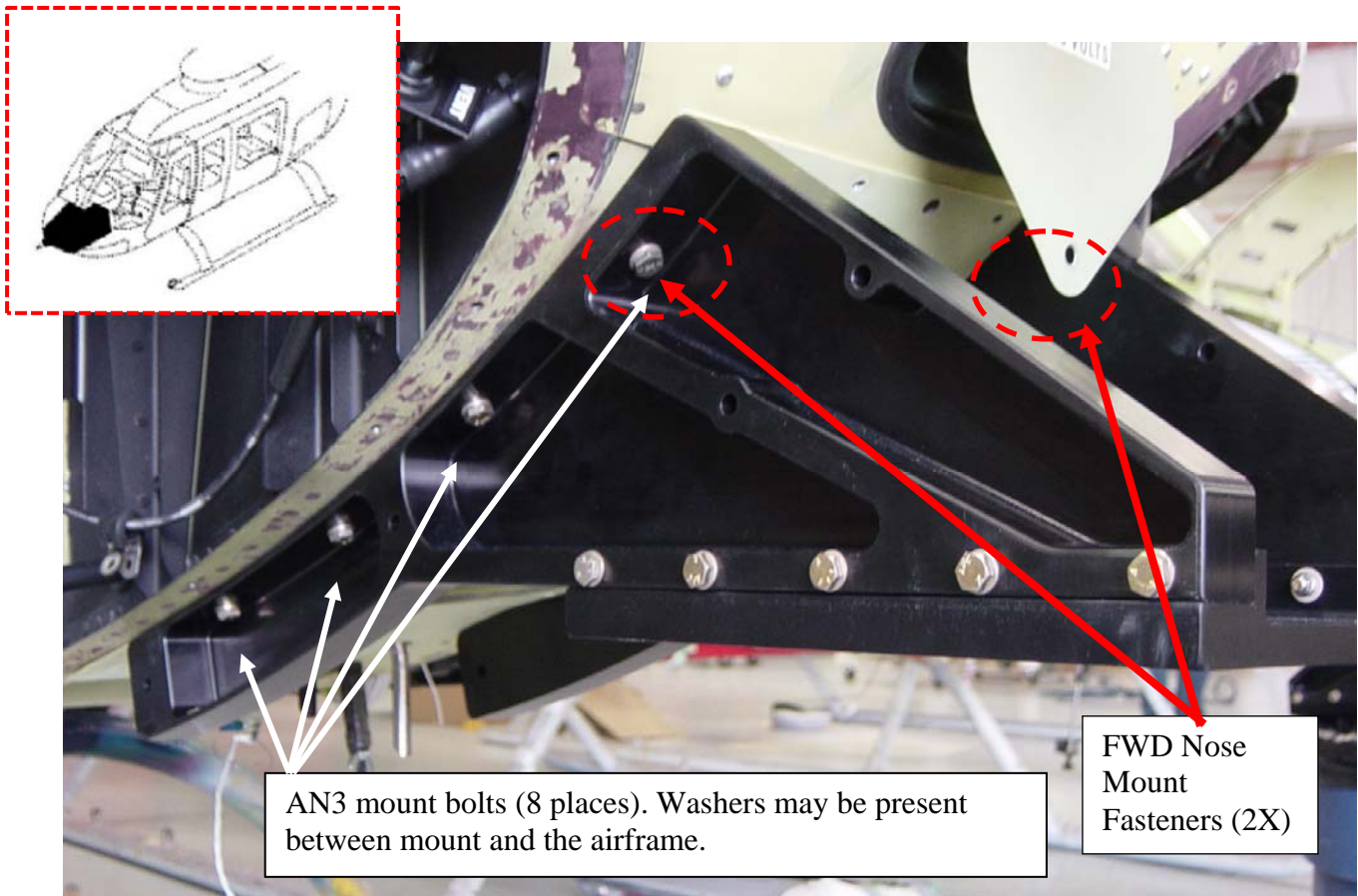


Figure 1 G1 Mount Fastener Locations

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- (2) Once the G1 Mount is removed, gain access to the internal nose console structure near the forward G1's forward fasteners location.

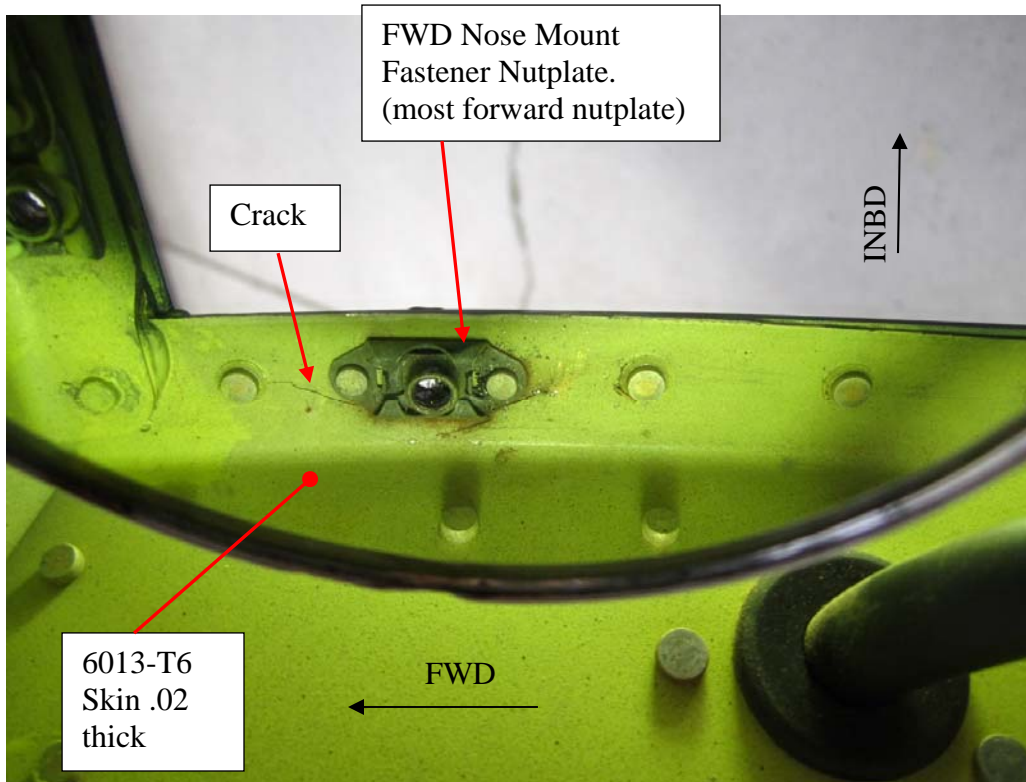


Figure 2 View (looking Down) Showing the LH Side Forward Fastener with Crack Damage

- (3) Inspect for cracks in the Nose Console area at the G1 mount forward fastener nutplates (RH & LH sides). Figure 3 shows a typical crack near the nutplate at the radius of the formed flange.

Use 10X magnified visual inspection or fluorescent penetrant inspection (per ASTM E1417) to inspect for cracks in the areas noted.

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- (4) If no cracks are found, proceed to step 5. If cracks are present, repair in accordance with Airfilm Drawing AF-G1-300.

WARNING

If any cracks or loose rivets are found during this inspection, the aircraft must be repaired before returning to service.

CAUTION

If the damage is outside the maximum damage criteria defined in the repair drawing, contact Airfilm Camera Systems for Engineering Support.

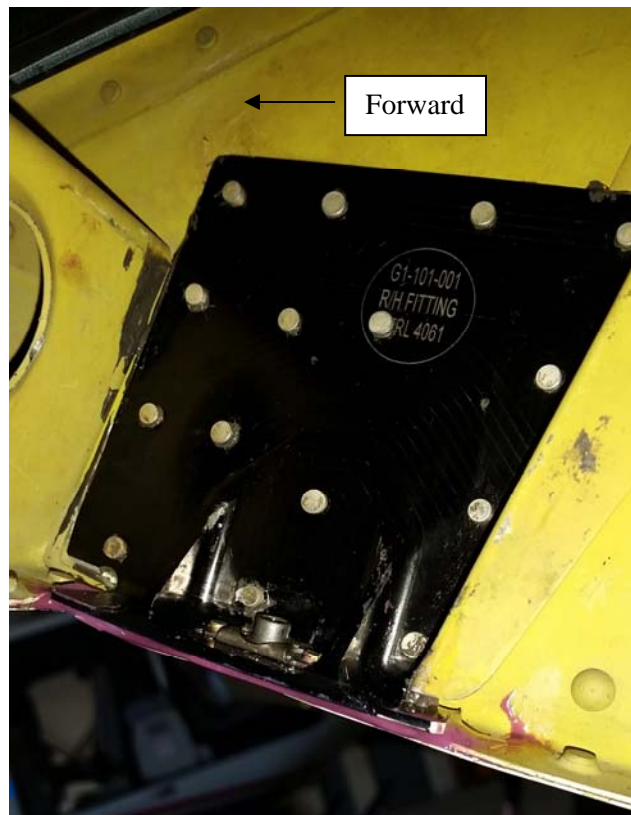


Figure 3 View Showing the Repair Fitting Installed (RH Side)

- (5) If no cracks are found, install Airfilm modification kit P/N G1-201-1 in accordance with Airfilm Drawing AF-G1-400.
- (6) Before reinstalling the G1 Utility Mount, perform 1000 hr inspection on the G1 Mount Assembly in accordance with AF-G1-008 (ICA) as noted below.



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The mount must be removed from the helicopter and disassembled.

FITTING INSPECTIONS

Inspect. Interval Hours	Inspection	Maintenance Personnel Initial
1000	Visually inspect bolt holes for damage	
	Visually inspect brackets for cracks, nicks or deep scratches	

INSPECTION LIMITS

The G1-1 Universal Mount is to be removed from service and returned to Airfilm Camera Systems if the following inspection limits are exceeded.

Cracks:	Any indication
Bolt hole elongation:	Any Indication
Dents, scratches or nicks:	Greater than 0.010 inches

- (7) Reinstall the G1 Utility Mount in accordance with Airfilm Camera Systems Installation Instructions AF-G1-006.

9.0 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

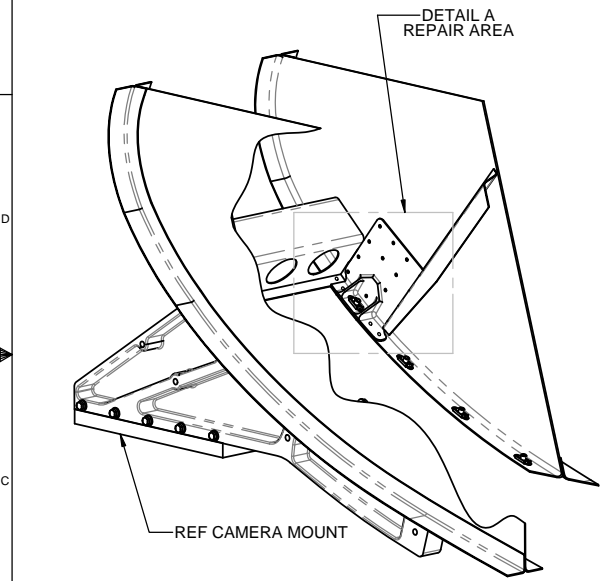
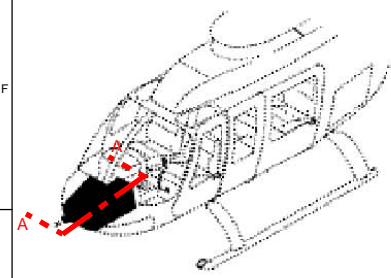
The structural repair/modification and adjacent structure identified in this Bulletin should be visually inspected 100 flight-hours after installation. After the initial inspections, the repair should be inspected in the same interval as the STC'ed Airfilm Nose Mount. The inspection should verify that there are no cracks, or loose rivets in the repair and the adjacent structure. Special attention should be given to the formed radius in the original skin, forward of the repair.

Airfilm Camera Systems Support Contact:

(530) 333-0193
info@airfilm.com

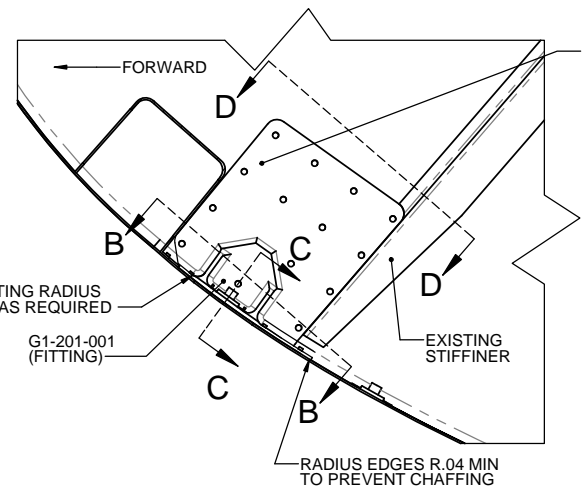
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REV.	DESCRIPTION	DATE	APPROVED
N/C	INITIAL RELEASE	12/1/2015	

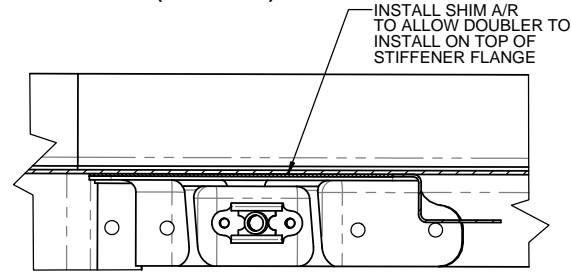


NOSE VERTICAL SUPPORTS AND BULKHEAD VIEW LOOKING FORWARD

SPOTFACE REPAIR FITTING RADIUS FOR RIVET BUCKTAIL - AS REQUIRED



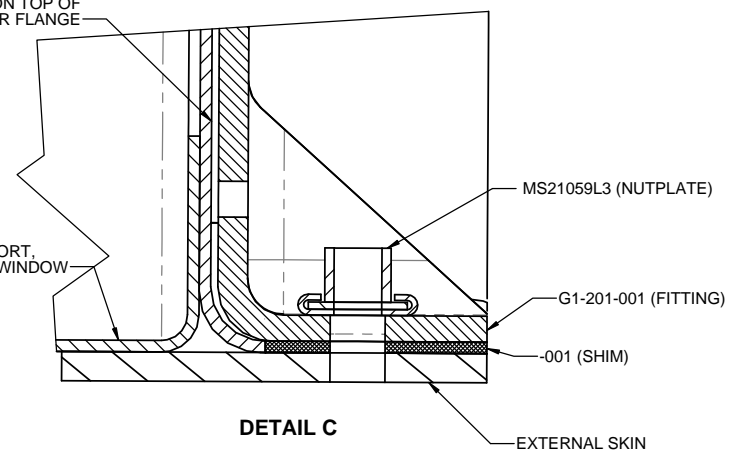
**DETAIL A
RH SHOWN (LH SIMILAR)**



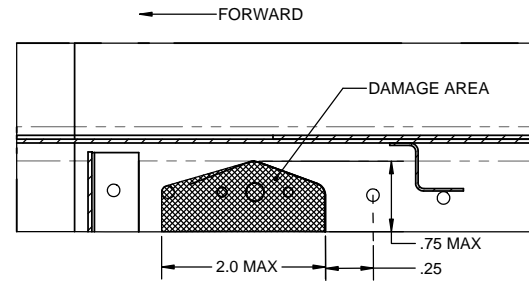
SECTION D-D

INSTALL SHIM A/R TO ALLOW DOUBLER TO INSTALL ON TOP OF STIFFENER FLANGE

SUPPORT CHIN WINDOW



DETAIL C



**SECTION B-B
DOUBLER FITTING REMOVED TO SHOW DAMAGE LIMITS**

NOTES:

DAMAGE REMOVAL:

1. REMOVE RIVETS IN REPAIR AREA
2. REMOVE DAMAGED FLANGE BY CUTTING/GRINDING.
3. ALL INTERNAL RADII .125 MIN.
4. POLISH CUT SURFACES, 63 RHR MAX (MILL FINISH).
5. INSPECT DAMAGE AREA AND ADJACENT RIVET HOLES USING 10X MAGNIFIED VISUAL INSPECTION OR FLUORESCENT PENETRANT (PER ASTM E1417).
6. FABRICATE SHIM FROM .016 THICK 2024-T3 CLAD PER AMS-QQ-A-250/5.

REPAIR INSTALLATION:

7. TRIM REPAIR FITTING AS REQUIRED TO CAPTURE THE REQUIRED NUMBER OF FASTENERS AND MAINTAIN 2D EDGE DISTANCE ON ALL FEATURES.
8. LAYOUT NEW REPAIR FASTENERS APPROX AS SHOWN ⊗. MAINTAIN A MINIMUM OF 2D EDGE DISTANCE ON ALL FEATURES. MINIMUM 6 FASTENERS ON EITHER SIDE OF DAMAGE AREA
9. DRY FIT REPAIR FITTING AND SHIM.
10. MATCH DRILL FASTENER HOLES INTO DOUBLER, SHIMS, AND SKIN.
11. DEBURR ALL HOLES.
12. TREAT EFFECTED AIRFRAME AND REPAIR COMPONENTS FOR CORROSION PREVENTION IAW BTH-ALL-SPM.
13. INSTALL SHIMS, REPAIR FITTING, AND RIVETS WET WITH CORROSION INHIBITING SEALANT (P/S 890 OR EQUIVALENT).
14. USE MS20426AD4 RIVETS FOR FLUSH INSTALLATION ON THE EXTERIOR AND MS20470AD4 (OR CR3213-4) RIVETS IN WEB.

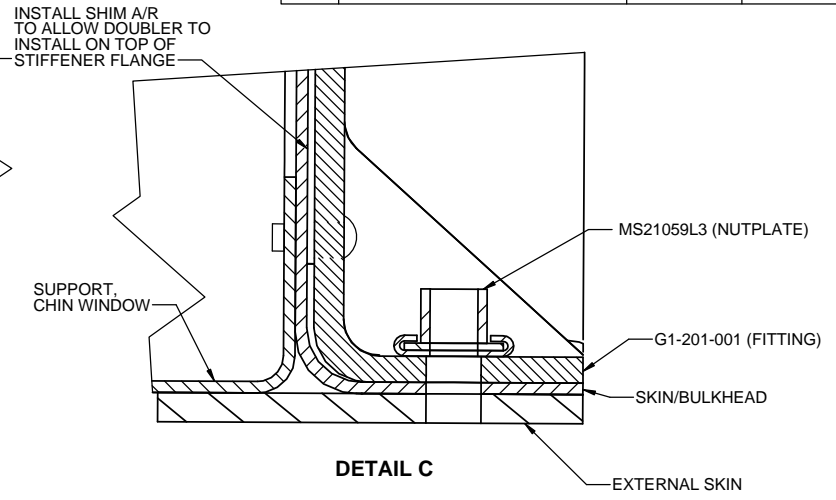
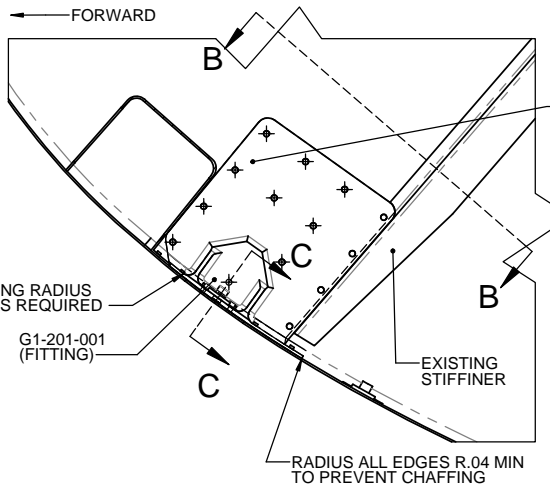
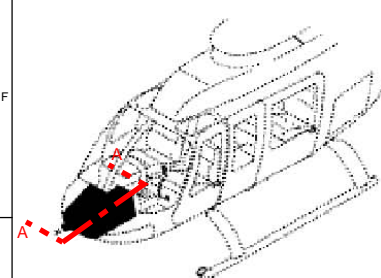
ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL
1	G1-201-1	MODIFICATION KIT	N/A
2	-001	SHIM	.016 2024-T3 CLAD

DRAWING		Airfilm Camera Systems	
NAME	DATE	www.airfilm.com	Georgetown CA
J. MUELLER	12/1/2015	TITLE: BELL 206 NOSE CONSOLE REPAIR DRAWING	
CHECKED			
APPROVED			
PROPRIETARY NOTICE THIS DRAWING AND SPECIFICATION IS THE PROPERTY OF AIRFILM CAMERA SYSTEMS, INC AND SHALL NOT BE COPIED OR DIVULGED IN WHILE IN PART AS THE BASIS FOR MANUFACTURING OR SALE OF THE ITEM OR ITEMS DISCLOSED.		SIZE: C DWG. NO.: AF-G1-300 SCALE: 1:3	REV: N/C DO NOT SCALE DRAWING SHEET 1 OF 1

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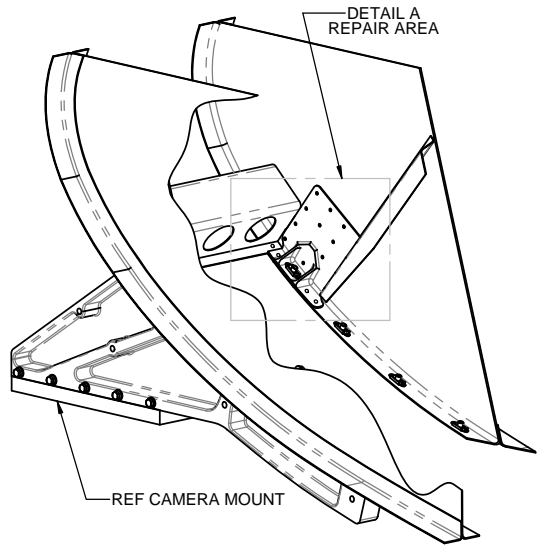
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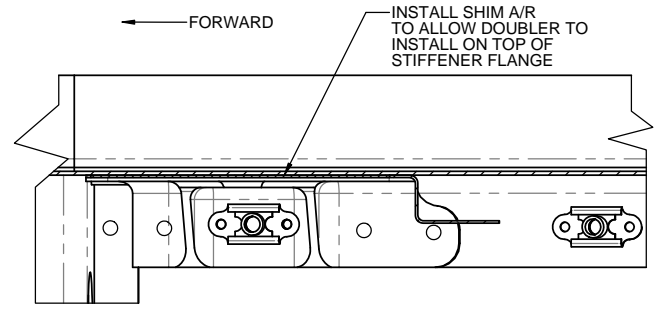


SPOTFACE REPAIR FITTING RADIUS FOR RIVET BUCKTAIL - AS REQUIRED

DETAIL A
RH SHOWN (LH SIMILAR)



NOSE VERTICAL SUPPORTS AND BULKHEAD
VIEW LOOKING FORWARD



SECTION B-B

- NOTES:
- TRIM REPAIR FITTING AS REQUIRED TO CAPTURE THE REQUIRED NUMBER OF FASTENERS AND MAINTAIN 2D EDGE DISTANCE ON ALL FEATURES.
 - FABRICATE SHIM FROM 2024-T3 CLAD PER AMS-QQ-A-250/5 (SAME THICKNESS AS STIFFENER).
 - LAYOUT NEW REPAIR FASTENERS APPROX AS SHOWN . MAINTAIN A MINIMUM OF 2D EDGE DISTANCE ON ALL FEATURES. MINIMUM 6 FASTENERS ON EITHER SIDE OF DAMAGE AREA DRY FIT REPAIR FITTING AND SHIM.
 - MATCH DRILL FASTENER HOLES INTO DOUBLER, SHIMS, AND SKIN.
 - DEBURR ALL HOLES.
 - TREAT EFFECTED AIRFRAME AND REPAIR COMPONENTS FOR CORROSION PREVENTION IAW BTH-ALL-SPM.
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ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL
1	G1-201-1	MODIFICATION KIT	N/A

DRAWING		Airfilm Camera Systems	
UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES	NAME	www.airfilm.com Georgetown CA	
	J. MUELLER		
	DATE	TITLE: BELL 206 NOSE CONSOLE MODIFICATION DRAWING	
	12/1/2015		
TOLERANCES:	CHECKED	SIZE	DWG. NO.
.X ± .1		C	AF-G1-400
.XX ± .03	APPROVED	SCALE 1:3	DO NOT SCALE DRAWING
.XXX ± .010			
ANGULAR: ± .5°			
BREAK ALL SHARP EDGES	PROPRIETARY NOTICE THIS DRAWING AND SPECIFICATION IS THE PROPERTY OF AIRFILM CAMERA SYSTEMS, INC AND SHALL NOT BE COPIED OR DIVULGED IN WHILE IN PART AS THE BASIS FOR MANUFACTURING OR SALE OF THE ITEM OR ITEMS DISCLOSED.		REV N/C
		SHEET 1 OF 1	

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