



A Mahindra Aerospace Company

PO Box 881, Morwell, Victoria 3840, Australia
Ph + 61 (0) 3 5172 1200
Fax + 61 (0) 3 5172 1201
www.mahindraaerospace.com

SB-GA8-2013-99

Issue 3

MANDATORY

Service Bulletin

Subject:

Inspection and modification of Strut Pick-up ribs – Rib no. 5 and Rib no. 6

Applicability:

This Service Bulletin is applicable to the aircraft identified in Table 1.

Table 1 – Applicability

AIRCRAFT	SERIAL NUMBER(s)
GA8	All up to and including S/N 246
GA8-TC 320	All up to and including S/N 246

Amendments:

Issue 1: Initial Issue.

Issue 2: Not released

Issue 3: Part 1 and 2 enhanced. Parts 3, 4 and 5 added.

Background:

Operators have previously reported that fuselage floor Ribs #5 and #6 develop cracks in service. Metallurgical examination of affected Ribs indicates these cracks are ductile overload failures. Upon receipt of these reports, GippsAero published Service Bulletin (SB) SB-GA8-2013-99, Issue 1. The SB provided instructions to blend away a notch feature under the fuselage to wing strut attachment lug on Rib #5 and Rib #6.

After accomplishing the SB, some operators reported that cracking was subsequently discovered adjacent to the blended area. In response, GippsAero is publishing this Issue 3 of SB-GA8-2013-99.

Service Letter SL-GA8-2016-31, Issue 1, contains a detailed description of the procedures for incorporation of this Service Bulletin. Read SL-GA8-2016-31 before commencing any inspections or work in accordance with any of the following Parts.

Compliance:

This Service Bulletin is **Mandatory** and the inspections in **Part 1** shall be performed within 50 hours or one calendar month of the receipt of this SB, whichever comes first.

Weight and Balance:

The addition of doublers and fasteners represent an increase in aircraft mass of 1lb. This is a negligible change to the aircraft's weight and balance.

Approval:

The airframe and electrical system modification described in this Service Bulletin has been approved pursuant to Australian Civil Aviation Safety Regulation 21.098 (1998) as a major change. GippsAero Reference GAE11#1856.

Parts:

The following parts are required for Part 3, 4 or 5 of the Service Bulletin for aircraft not incorporating the SB-GA8-2008-48, (Crew Seat Rail Extension aircraft S/N 01-006 to 09-149). A kit P/N SB-GA8-2013-99-01 is available.

Table 2 – Parts

ITEM	PART No.	DESCRIPTION	QTY per side	REMARKS
1	GA8-533028-037	Access Hole Template	1	
2	GA8-533028-033	Cover Plate	1	
3	GA8-533028-047	Cover Plate	2	
4	CR3213-4-2	CHERRYMAX® Rivet	44	

The following parts are required for the Temporary Modification in accordance with Part 3 of this Service Bulletin. A kit P/N SB-GA8-2013-99-02 is available.

Table 3 – Parts

ITEM	PART No.	DESCRIPTION	QTY per side	REMARKS
1	GA8-532024-021	Modified Aft Strut Pick-up Strap	1	
2	GA8-532024-023	Modified Fwd Strut Pick-up Strap	1	
3	MS20470AD4-4	Solid Rivet	25	
4	MS20470AD4-4.5	Solid Rivet	25	
5	MS20470AD4-5	Solid Rivet	30	
6	MS20470AD4-5.5	Solid Rivet	25	
7	MS20470AD4-6	Solid Rivet	5	
8	CR3213-4-1	CHERRYMAX® Rivet	15	
9	CR3213-4-2	CHERRYMAX® Rivet	35	
10	CR3213-5-2	CHERRYMAX® Rivet	2	
11	CR3213-5-3	CHERRYMAX® Rivet	28	
12	CR3212-4-2	C/S CHERRYMAX® Rivet	4	
13	CR3212-4-3	C/S CHERRYMAX® Rivet	4	
14	TLED321	Blind Rivets	20	
15	TLED424	Blind Rivets	20	

The following parts are required for the Permanent Modification in accordance with Part 4 of this Service Bulletin. A kit P/N SB-GA8-2013-99-03 is available.

Table 4 - Parts

ITEM	PART No.	DESCRIPTION	QTY per side	REMARKS
1	GA8-532024-025	Gusset Cap	1	
2	GA8-532024-031	Aft Door Gusset Angle	1	
3	GA8-532024-031	Floor Attach Nested Angle	2	
4	GA8-532024-031	Strut Rib Doubler – Large FWD	1	
5	GA8-532024-033	Strut Rib Doubler – Small FWD	1	
6	GA8-532024-034	Strut Rib Doubler – Large AFT	1	
7	GA8-532024-035	Strut Rib Doubler – Small AFT	1	
8	GA8-532024-051	Long Packer	1	
9	GA8-532024-053	Short Packer	1	
10	GA8-532024-055	Tapered Packer	1	
11	MS20470AD4-4	Solid Rivet	40	
12	MS20470AD4-4.5	Solid Rivet	100	
13	MS20470AD4-5	Solid Rivet	85	
14	MS20470AD4-5.5	Solid Rivet	12	
15	MS20470AD4-6	Solid Rivet	10	
16	MS20470AD5-5.5	Solid Rivet	8	
17	MS20470AD5-6	Solid Rivet	18	
18	MS20470AD5-6.5	Solid Rivet	4	
19	MS20470AD5-11	Solid Rivet	6	
20	MS20470AD5-12	Solid Rivet	10	
21	MS20470AD5-13	Solid Rivet	8	
22	MS20470AD6-7	Solid Rivet	8	
23	MS20470AD6-7.5	Solid Rivet	6	
24	MS20470AD6-8	Solid Rivet	6	
25	MS20426AD3-3.5	C/S Solid Rivet	10	
26	MS20426AD3-4	C/S Solid Rivet	24	
27	MS20426AD3-4.5	C/S Solid Rivet	28	
28	MS20426AD3-5	C/S Solid Rivet	6	
29	MS20426AD3-5.5	C/S Solid Rivet	4	
30	MS20426AD4-4	C/S Solid Rivet	4	
31	MS20426AD4-4.5	C/S Solid Rivet	4	
32	MS21047L08	Anchor nut	15	
33	MS21047L3	Anchor nut	22	
34	MS21071L08	Anchor nut	4	
35	MS21071L3	Anchor nut	4	
36	CR3213-4-1	CHERRYMAX® Rivet	15	
37	CR3213-4-2	CHERRYMAX® Rivet	68	
38	CR3213-4-3	CHERRYMAX® Rivet	4	
39	CR3213-5-2	CHERRYMAX® Rivet	30	
40	CR3213-5-3	CHERRYMAX® Rivet	12	
41	CR3212-4-2	C/S CHERRYMAX® Rivet	8	
42	CR3212-4-3	C/S CHERRYMAX® Rivet	8	
43	CCR2643-3	Cherry-Pull Through® rivets	24	
44	CCR2643-4	Cherry-Pull Through® rivets	24	
45	TLED321	Blind Rivets	20	
46	TLED424	Blind Rivets	20	

The following parts are required for the Rib Replacement in accordance with Part 5 of this Service Bulletin. A kit P/N SB-GA8-2013-99-04 is available.

Table 5 - Parts

ITEM	PART No.	DESCRIPTION	QTY per side	REMARKS
1	GA8-532024-027	Aft Door Gusset Angle	1	
2	GA8-532024-031	Strut Rib Doubler – Large Fwd	1	
3	GA8-532024-033	Strut Rib Doubler – Small Fwd	1	
4	GA8-532024-034	Strut Rib Doubler – Large Aft	1	
5	GA8-532024-035	Strut Rib Doubler – Small Aft	1	
6	GA8-532024-041*	Rib #6 LH	1	
7	GA8-532024-042*	Rib #6 RH	1	
8	GA8-532024-043*	Rib #5 LH	1	
9	GA8-532024-044*	Rib #5 RH	1	
10	GA8-532024-051	Long Packer	1	
11	GA8-532024-053	Short Packer	1	
12	GA8-532024-055	Tapered Packer	1	
13	GA8-533028-049	Gusset Cap	1	
14	MS20470AD4-4	Solid Rivet	52	
15	MS20470AD4-4.5	Solid Rivet	132	
16	MS20470AD4-5	Solid Rivet	85	
17	MS20470AD4-5.5	Solid Rivet	12	
18	MS20470AD4-6	Solid Rivet	10	
19	MS20470AD5-5.5	Solid Rivet	36	
20	MS20470AD5-6	Solid Rivet	32	
21	MS20470AD5-6.5	Solid Rivet	4	
22	MS20470AD5-9	Solid Rivet	32	
22	MS20470AD5-10	Solid Rivet	18	
23	MS20470AD5-11	Solid Rivet	6	
24	MS20470AD5-12	Solid Rivet	10	
25	MS20470AD5-13	Solid Rivet	8	
26	MS20470AD6-7	Solid Rivet	8	
27	MS20470AD6-7.5	Solid Rivet	6	
28	MS20470AD6-8	Solid Rivet	6	
29	MS20426AD3-3.5	C/S Solid Rivet	10	
30	MS20426AD3-4	C/S Solid Rivet	36	
31	MS20426AD3-4.5	C/S Solid Rivet	32	
32	MS20426AD3-5	C/S Solid Rivet	8	
33	MS20426AD3-5.5	C/S Solid Rivet	4	
34	MS20426AD4-4	C/S Solid Rivet	4	
35	MS20426AD4-4.5	C/S Solid Rivet	4	
36	MS21047L08	Anchor nut	15	
37	MS21047L3	Anchor nut	22	
38	MS21071L08	Anchor nut	4	
39	MS21071L3	Anchor nut	7	
40	MS21061L3	Anchor Nut	2	
41	CR3213-4-1	CHERRYMAX® Rivet	15	
42	CR3213-4-2	CHERRYMAX® Rivet	68	
43	CR3213-4-3	CHERRYMAX® Rivet	4	
44	CR3213-5-2	CHERRYMAX® Rivet	30	
45	CR3213-5-3	CHERRYMAX® Rivet	12	
46	CR3212-4-2	C/S CHERRYMAX® Rivet	8	
47	CR3212-4-3	C/S CHERRYMAX® Rivet	8	
48	CCR2643-3	Cherry-Pull Through® rivets	24	
49	CCR2643-4	Cherry-Pull Through® rivets	24	
50	TLED321	Blind Rivets	20	
51	TLED424	Blind Rivets	20	

*If modifying only one side, choose applicable Ribs.

Parts Availability:

New parts can be obtained directly from GippsAero.

Tel: +61 (0)3 5172 1200

Fax: +61 (0)3 5172 1201

Email: aircraft.support@mahindraaerospace.com

Labour:

The following labour estimate is provided as a guide for planning purposes only. Variations in aircraft configuration will change the time required to complete sections of work.

Part 1

2 labour hours

Part 2

7 labour hours

Part 3

10 labour hours

Part 4

10 labour hours

Part 5

10 labour hours

Warranty:

Aircraft covered by warranty may claim the direct cost of incorporating the requirements of this Service Bulletin by contacting GippsAero Customer Service:

Tel: +61 (0)3 5172 1200

Fax: +61 (0)3 5172 1201

Email: aircraft.warranty@mahindraaerospace.com

Accomplishment Instructions:

The following instructions are applicable to the Left Hand Side (LHS) of the aircraft. the Right Hand Side (RHS) is opposite, unless noted otherwise.

WARNING:

IT IS THE RESPONSIBILITY OF ALL PERSONNEL TO ENSURE WORK HEALTH AND SAFETY REQUIREMENTS ARE MET AT ALL TIMES. ALL PERSONNEL MUST COMPLY WITH ALL WORK HEALTH AND SAFETY REQUIREMENTS AS DEFINED OR RECOMMENDED BY:

- EQUIPMENT OEM INSTALLATION AND OPERATION MANUALS.
- AIRCRAFT MAINTENANCE AND OPERATION MANUALS.
- ASSOCIATED AIRCRAFT MODIFICATION INSTRUCTIONS.
- RELEVANT NAA REGULATIONS AND ADVISORY DOCUMENTATION.
- ORGANISATION MANUALS, INCLUDING NAA ENDORSED OPERATIONAL AND MAINTENANCE MANUALS. AND
- RELEVANT LOCAL, STATE AND FEDERAL GOVERNMENT REQUIREMENTS.

WARNING:

READ THE APPLICABLE MATERIAL SAFETY DATA SHEET (MSDS) FOR ANY MATERIAL/CONSUMABLE USED DURING THE ACCOMPLISHMENT OF THIS SERVICE BULLETIN AND EMPLOY ANY RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE) CONTAINED THEREIN.

NOTE:

Unless otherwise specified, reference to the GA8/GA8-TC 320 Service Manual and FAA Advisory Circular (AC) 43.13-1B & -2B should be made when carrying out the procedures prescribed in this Service Bulletin. In case of a discrepancy between the Service Manual and the AC, the Service Manual takes precedence.

Part 1 – Rib Inspection

If the inspection reveals Ribs modified at Issue 1 of SB-GA8-2013-99, contact GippsAero using the form on the back page of this Service Bulletin. Otherwise:

- 1) Secure aircraft in location suitable for visual inspection of structure.
- 2) Disconnect the LHS and RHS Strut to Fuselage Fairings (P/N GA8-570017-013 and P/N GA8-570017-015) and slide away from fuselage.
- 3) Clean the visible sections of Ribs #5 and #6 using a cleaning solvent and a clean, lint free cloth to remove any grease, airframe sealant or foreign matter.

NOTE:

Operators may choose to use a High Frequency Eddy Current (HFEC) inspection using a shielded pencil probe calibrated against a reference standard with an EDM notch depth of no less than 0.020" (0.5mm) OR a fluorescent Liquid Penetrant Inspection in accordance with ASTM E-1417-13 (or later approved revision) in lieu of a detailed visual inspection. These Non-Destructive Inspections (NDI) will more reliably detect cracks or crack indications in the Ribs

- 4) Perform a detailed visual inspection, using at least a strong light source and preferably 10x magnification, or a non-destructive inspection, of the radius below the wing strut attachment lug(s) as identified in Figure 1, Figure 2 and Figure 3. Check for any crack indications. Typical cracks are shown in Figure 4.
- 5) If any cracks are detected in the Ribs, determine an approximate crack length and proceed to Part 2; otherwise continue to Step 6.
- 6) If no cracks are detected in the Ribs, then slide LHS and RHS Strut to Fuselage Fairings against the fuselage and fasten using removed fasteners. Inspection is complete.

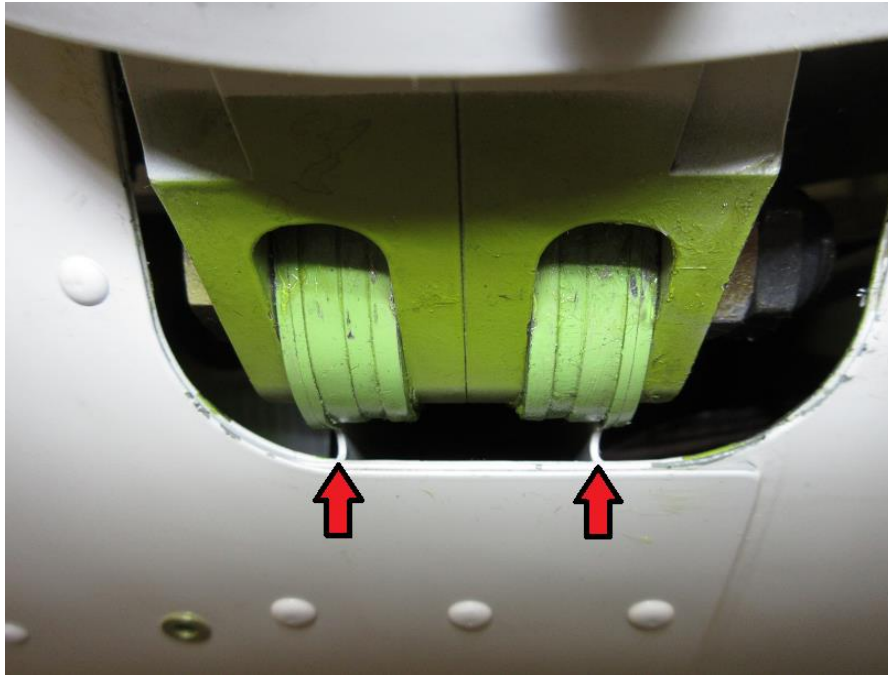


Figure 1: Strut Pickup Rib Inspection Area

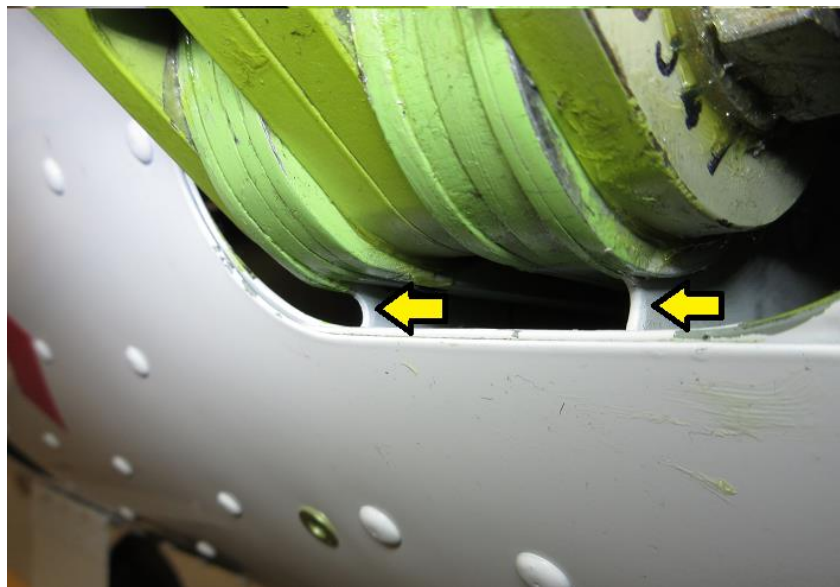


Figure 2: Possible Crack Locations

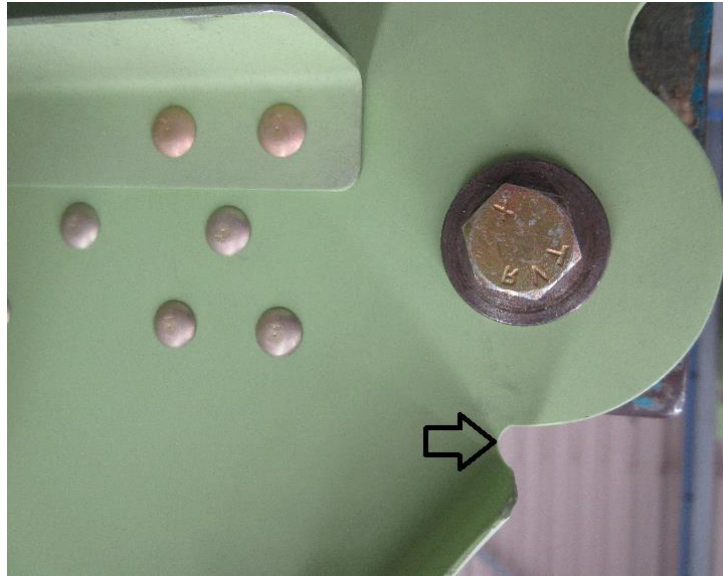


Figure 3: Area of Rib for Inspection
Photograph of partially constructed aircraft – does not show an airworthy configuration



Figure 4: Typical Cracks
Images courtesy of aircraft operators

Part 2 – Modify Rib Profile

The Rib profile modification shall be accomplished in conjunction with either the Temporary Doubler Installation (**Part 3**) or the Permanent Doubler Installation (**Part 4**).

If the Rib profile was modified at Issue 1 of SB-GA8-2013-99, contact GippsAero using the form on the back page of this Service Bulletin.

A. Prepare Aircraft For Modification

- 1) Jack and shore the aircraft and support the wing for wing strut removal in accordance with Chapter 7 of the applicable aircraft Service Manual.
- 2) Disconnect the wing strut at the fuselage attachment in accordance with Chapter 57 of the applicable aircraft Service Manual.

B. Confirm Length of Crack

NOTE:

Operators may choose to use a High Frequency Eddy Current (HFEC) inspection using a shielded pencil probe calibrated against a reference standard with an EDM notch depth of no less than 0.020" (0.5mm) OR a fluorescent Liquid Penetrant Inspection in accordance with ASTM E-1417-13 (or later approved revision) in lieu of a detailed visual inspection. These Non-Destructive Inspections (NDI) will more reliably detect cracks or crack indications in the Ribs

- 1) Perform a detailed visual inspection using a strong light source and at least 10x magnification, or a non-destructive inspection of the suspected area of crack indication to confirm the length of any crack(s).
- 2) Check the length of any crack(s) is/are less than the maximum rework dimensions shown in Figure 6. If the crack(s) is/are shorter, proceed to the next section. Otherwise you may either contact GippsAero or do **Part 5** of this Service Bulletin.

C. Modify Fuselage Skin

CAUTION:

WHEN MODIFYING THE FUSELAGE SKIN MAKE SURE ANY SURROUNDING STRUCTURE REMAINS DAMAGE FREE

- 1) Enlarge the cut out in the Forward Cabin Belly Skin (P/N GA8-533021-113), Aft Cockpit Belly Skin (P/N GA8-533021-111) and Fuselage Strut Skin Doubler (P/N GA8-533022-095) to the dimensions shown in Figure 5. De-burr and finish all blended edges with a Scotch-Brite® pad or similar to achieve a surface finish of at least 125 microinch Ra (3.2 micron Ra).

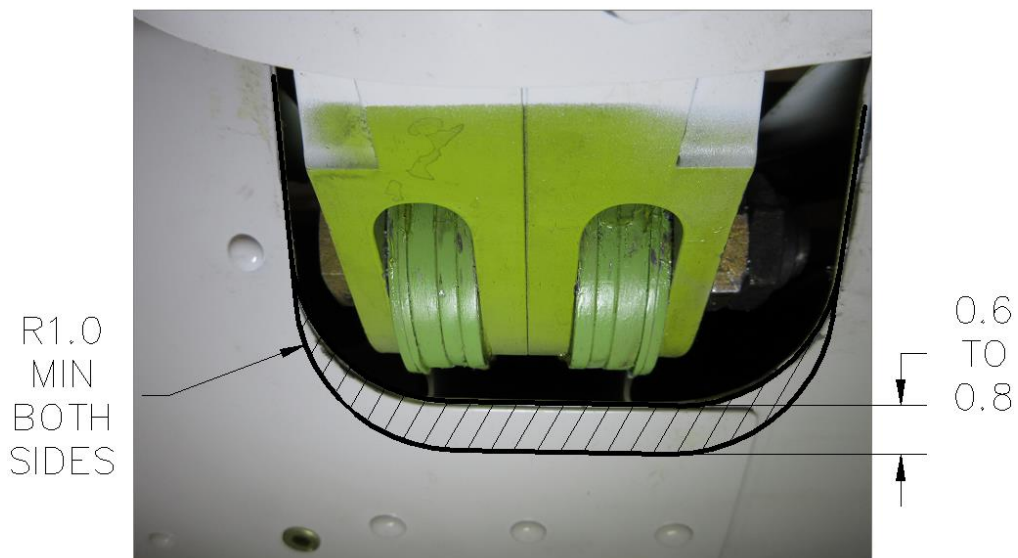


Figure 5: Fuselage Skin Modification

D. Modify Rib Profile

CAUTION:

WHEN MODIFYING THE RIB PROFILE MAKE SURE ADJACENT CARRY-THROUGH STRAPS REMAIN DAMAGE FREE

NOTE:

Modify both Rib #5 (forward) and Rib #6 (aft) at the same time

- 1) Remove material in the shaded area by blending to achieve the dimensions shown in Figure 6.

De-burr and finish all blended edges with a Scotch-Brite® pad or similar to achieve a surface finish of at least 125 microinch Ra (3.2 micron Ra).

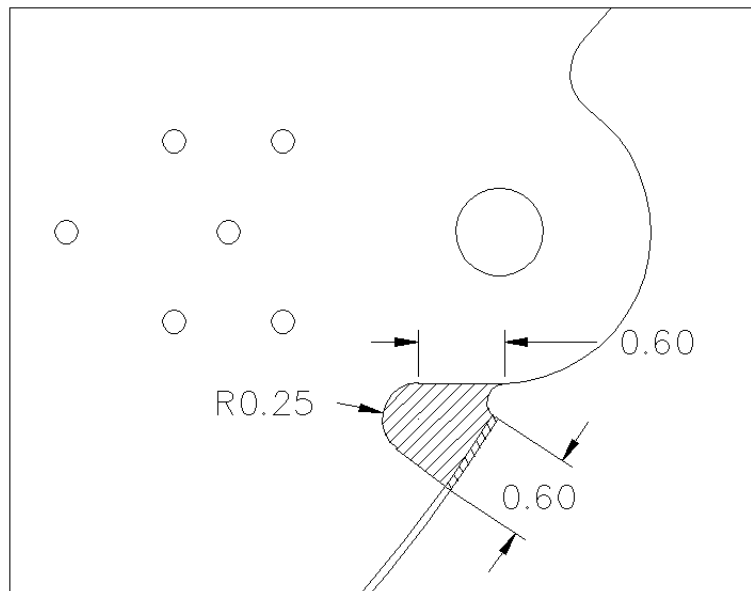


Figure 6: Fuselage Rib Modification.
Tolerance on dimensions +/-0.01"

E. Inspect Reworked Area

NOTE:

Operators may choose to use a High Frequency Eddy Current (HFEC) inspection using a shielded pencil probe calibrated against a reference standard with an EDM notch depth of no less than 0.020" (0.5mm) OR a fluorescent Liquid Penetrant Inspection in accordance with ASTM E-1417-13 (or later approved revision) in lieu of a detailed visual inspection. These Non-Destructive Inspections (NDI) will more reliably detect cracks or crack indications in the Ribs

- 1) Perform a detailed visual inspection using a strong light source and at least 10x magnification, or a non-destructive inspection, of the reworked area to confirm the crack has been removed.
- 2) If crack indications remain, contact GippsAero or do **Part 5** of this Service Bulletin.
- 3) If cracking has been fully removed, apply a primer that conforms to MIL-PRF-23377F (or later approved revision) or FED-SPEC-TT-P-1757B (or later approved revision) and do **Part 3** or **Part 4** of this Service Bulletin.

G. Clean Up

- 1) Clean any foreign material and swarf from the under-floor area.

Part 3 – Install Temporary Doubler

The Temporary Doubler Installation will require some disassembly of structure around Rib 5 and 6 as well as disconnection of the LHS and RHS fuel system lines to provide access for blind fastener installation into Rib 5 and 6 above and below the floor line.

A. Prepare Aircraft For Modification

- 1) Jack and shore the aircraft and support the wing for wing strut removal in accordance with Chapter 7 of the applicable aircraft Service Manual.
- 2) Disconnect the wing strut at the fuselage end in accordance with Chapter 57 of the GA8 or GA8-TC 320 Service Manual.

B. Remove seats and Restraint Equipment

- 1) Remove Crew Restraint System and Crew Seats in accordance with Section 25-10-01 and 25-10-03 of the GA8 or GA8-TC 320 Service Manual.
- 2) Remove Occupant Restraint System and Passenger Seats in accordance with Section 25-20-01 and 25-20-02 of the GA8 or GA8-TC 320 Service Manual.

C. Remove Floor Coverings and Cabin Wall Trim on LH side

- 1) Remove floor coverings forward and aft of Rib #5 and #6.
- 2) Remove Fwd LH Wall Panel Assembly (GA8-252014-051) (See Figure 7).
- 3) Remove Cabin Side-wall insulation.
- 4) Remove the Upper Fwd LH Wall Panel (GA8-252024-153) (See Figure 7).

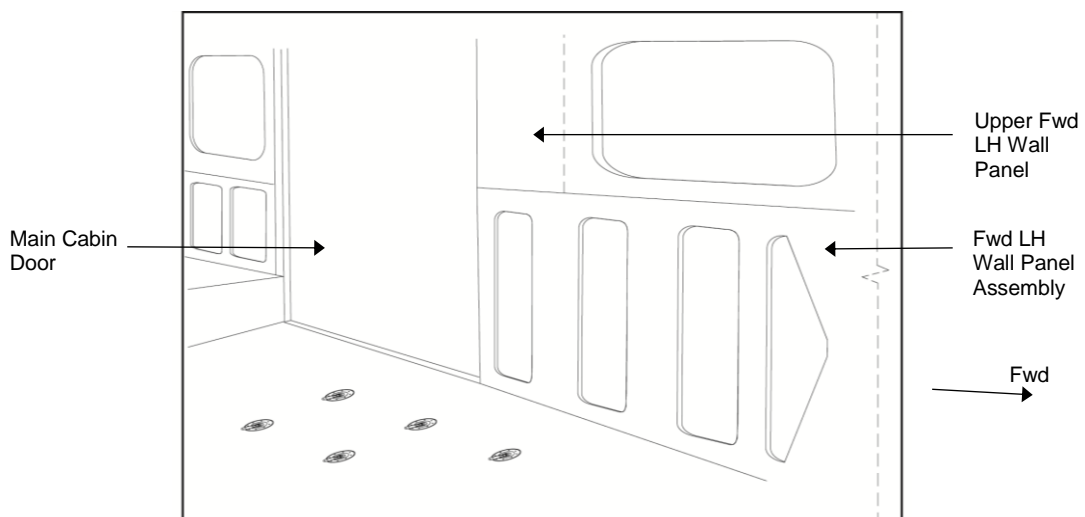


Figure 7: LH Interior Trim Panels

D. Remove Floor Coverings and Cabin Wall Trim on RH side

- 1) Remove floor coverings forward and aft of Rib #5 and #6.
- 2) Remove Fwd RH Wall Panel (GA8-252014-052) (See Figure 8).
- 3) Remove Cabin Side-Wall Insulation.
- 4) Remove the RH Large Window Surrounds Assembly (GA8-252014-037) (See Figure 8).

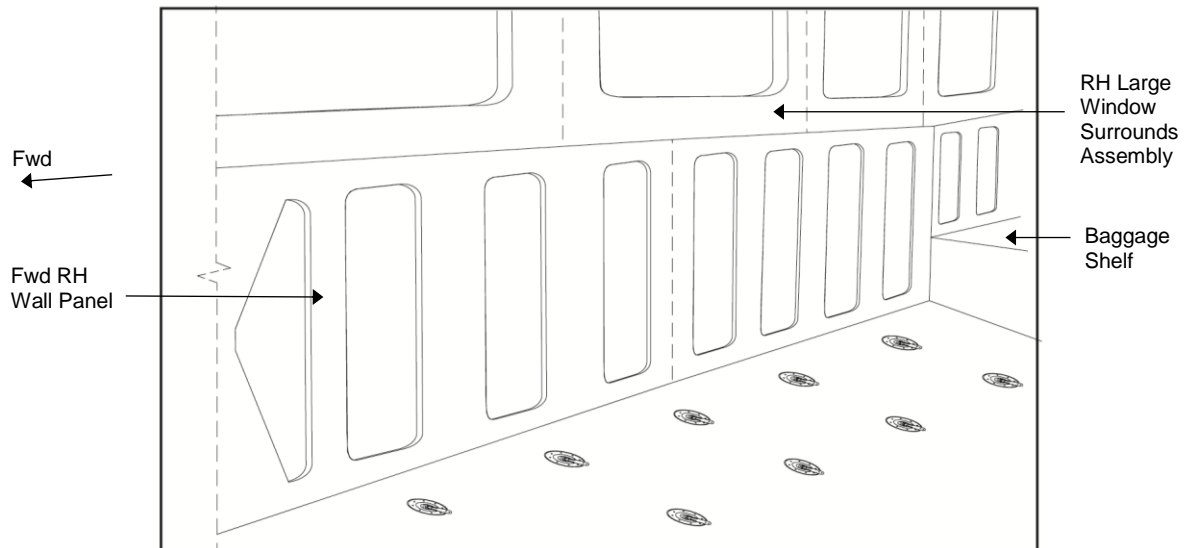


Figure 8: RH Interior Trim Panels

E. Remove Battery

- 1) Remove battery from the aircraft in accordance with Section 24-00-10 of the GA8 or GA8-TC 320 Service Manual.

F. Remove Fuselage Floor Access Panels

- 1) Remove Closing Panel LH (GA8-533022-037) and Closing Panel RH (GA8-533022-151) (See Figure 9).
- 2) Remove Centre Floor Inspection Plate (GA8-533022-155) (See Figure 9).
- 3) Remove the Fuel Pump Cover Assembly (GA8-533017-011) (See Figure 9).
- 4) Remove the Cover Plate (GA8-533028-033), if fitted (See Figure 9).
- 5) Remove the LH and RH Cover Plates (GA8-533028-047), if fitted (See Figure 9).

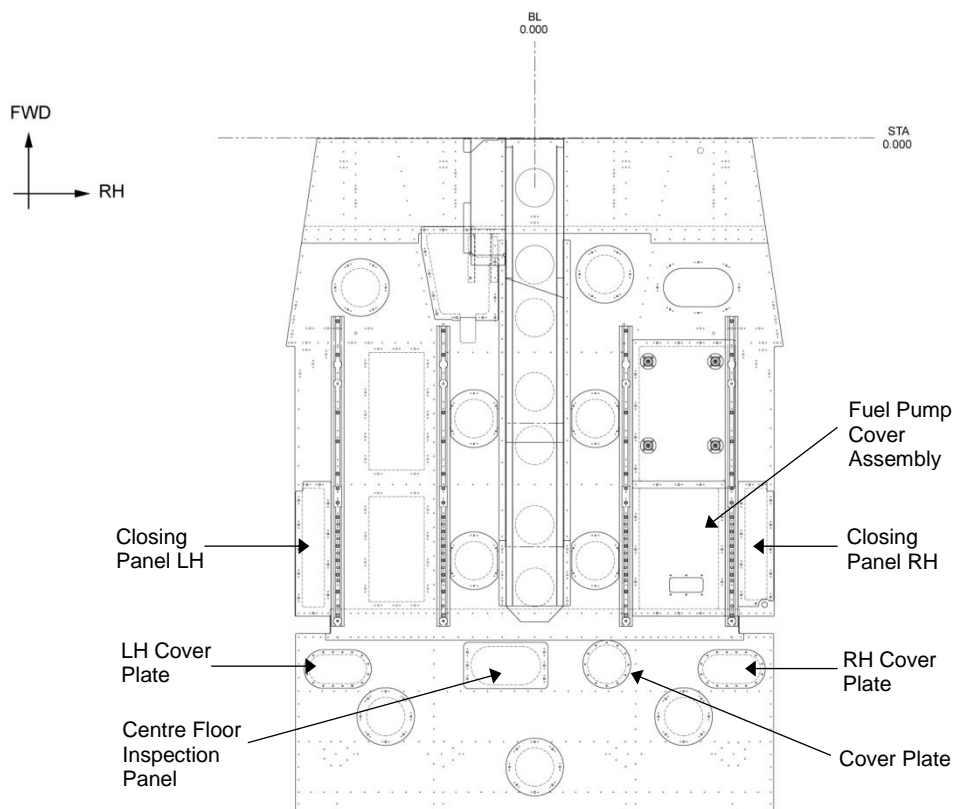


Figure 9: Fuselage Floor Inspection Panels

G. Modify Centre Floor Skin

Access is required to the aft side of Rib #6. For aircraft not incorporating the SB-GA8-2008-48 (Crew Seat Rail Extension aircraft S/N 01-006 to 09-149), the Centre Floor Skin (GA8-533022-147) must be modified to incorporate three access holes.

NOTE:

Position Access Hole Template on either side of floor skin to make sure the oval-shaped hole is closer to Rib #7 than to Rib #6. The Access Hole Template has rows of 0.250" diameter holes which are to line up with the rivet line attaching the Centre Floor Skin to Rib #6 and the Keel Beam upper flange.

- 1) Position P/N GA8-533028-037 Access Hole Template Centre on the Floor Skin as shown in Figure 10.
- 2) Mark the locations of the oval-shaped access hole and adjacent fastener holes on LHS of the Centre Floor Skin using Access Hole Template. (See Figure 10).
- 3) Mark the locations of both the round and oval-shaped access hole and adjacent fastener holes on RHS of the Centre Floor Skin. (See Figure 10).

CAUTION:

ENSURE THAT STRUCTURE, FUEL SYSTEMS AND ELECTRICAL SYSTEMS REMAIN DAMAGE FREE WHEN CUTTING THE FLOOR SKIN

- 4) Remove template. Cut access holes and drill satellite holes using a #30 drill, to a diameter of 0.129".
- 5) De-burr and finish all blended edges with a Scotch-Brite® pad or similar to achieve a surface finish of at least 125 microinch Ra (3.2 micron Ra).

NOTE:

Assess the access provided to the aft side of Rib #6 by the oval access holes. If hole size is not sufficient for tooling required to install blind rivet, a rectangular hole is optional. If required, do Section H.

- 6) Apply a primer to the edges that conforms to MIL-PRF-23377F (or later approved revision) or FED-SPEC-TT-P-1757B (or later approved revision).

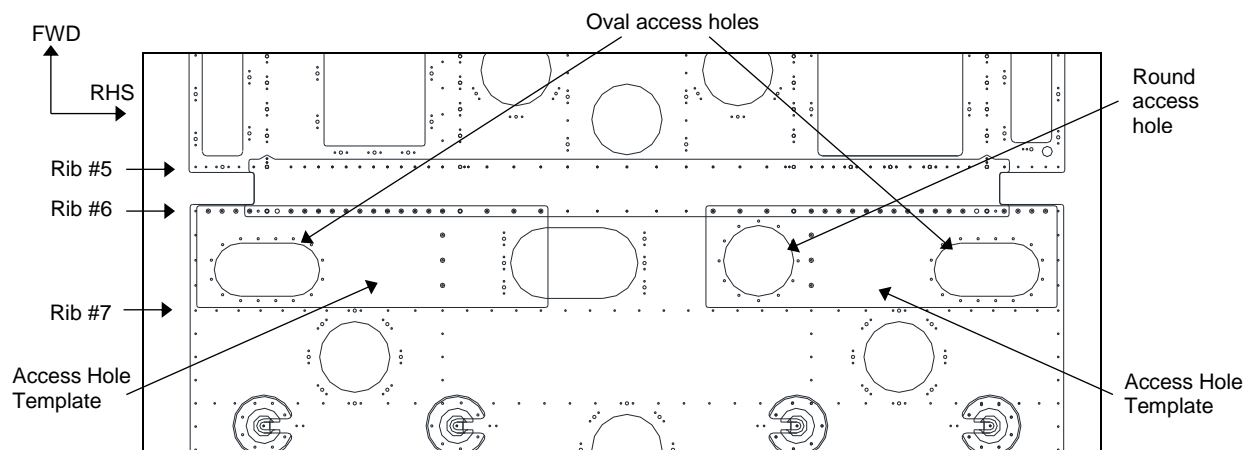


Figure 10: Centre Floor Skin Access Holes

H. Modify Centre Floor Skin (Optional)

If access provided by oval access holes is not sufficient:

CAUTION:

ENSURE THAT STRUCTURE, FUEL SYSTEMS AND ELECTRICAL SYSTEMS REMAIN DAMAGE FREE WHEN CUTTING THE FLOOR SKIN

- 1) Cut the LHS and RHS floor skin in the shaded region shown in Figure 11. Make sure the edge of the cut-out remains at least 0.350" from any rivets.
- 2) De-burr and finish all blended edges with a Scotch-Brite® pad or similar to achieve a surface finish of at least 125 microinch Ra (3.2 micron Ra).
- 3) Apply a primer to the edges that conforms to MIL-PRF-23377F (or later approved revision) or FED-SPEC-TT-P-1757B (or later approved revision).

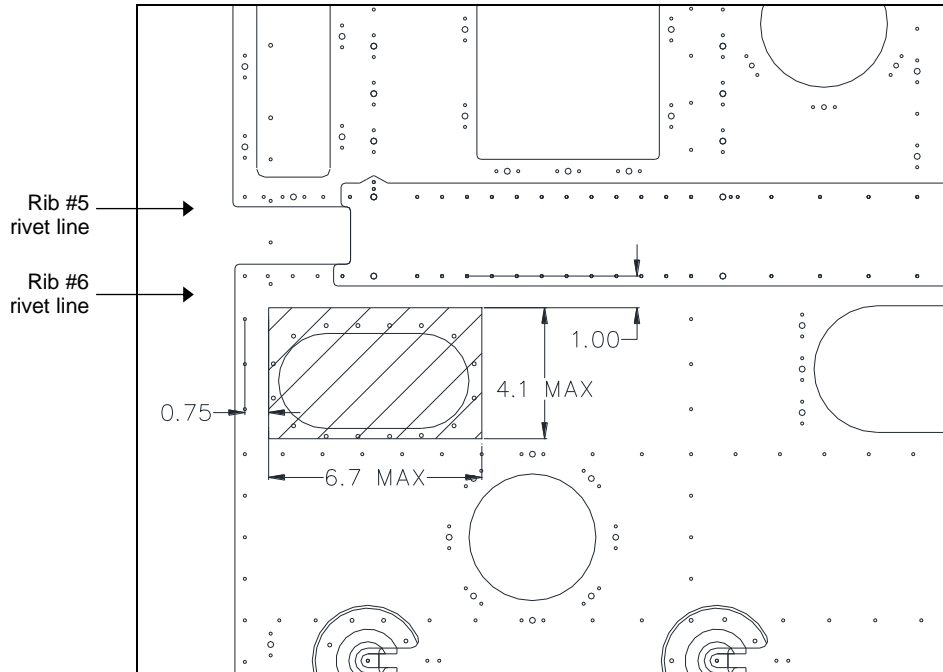


Figure 11: Centre Floor Cut-Out Region – LHS viewed from above

- 4) Note the type and diameter of fasteners highlighted in Figure 12. Remove fasteners around the cut-out.

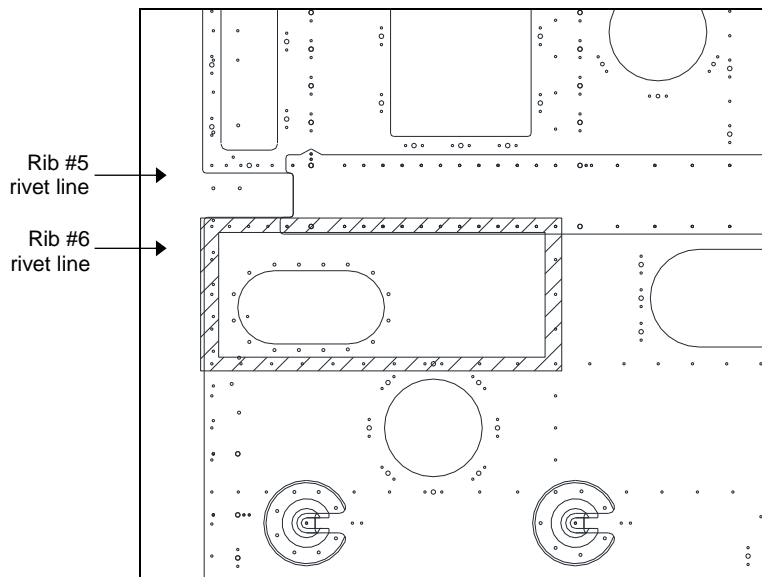


Figure 12: Fasteners to be removed – viewed from above

I. Disconnect Fuel Inlet Lines for access to Rib #6 LH

WARNING:

ENSURE THAT ANY FUEL CONTAINED WITHIN THE LINE IS DRAINED PROPERLY AND THE AREA IS WELL VENTILATED. ELECTRIC POWER TOOLS SHOULD NOT BE USED WITHIN THE AREA CONTAINING FUEL AND FUEL FUMES. SEE SERVICE MANUAL CHAPTER 28-00-10 FOR GENERAL PRECAUTIONS REGARDING FUEL SYSTEM MAINTENANCE

CAUTION:

CAP DISCONNECTED LINES AND COVER CONNECTIONS TO PREVENT THREAD DAMAGE OR ENTRANCE OF ANY FOREIGN MATERIAL

- 1) Drain the wing fuel tanks and sump tank.
- 2) Disconnect the upper and lower AN818 coupling nuts on the Wall Lower Fuel Line LH (GA8-282015-065) (See Figure 13).
- 3) Remove the Wall Lower Fuel Line, LH.
- 4) Disconnect the AN818 nut on the Inlet Left Cabin Underfloor Line (GA8-282013-109) from the AN833 Elbow fitting on the underfloor side of the RH Floor Attach Angle (GA8-533022-063) (See Figure 14).
- 5) Disconnect and remove the AN924 nut and the AN833 Elbow fitting from the GA8-533022-063 Floor Attach Angle (See Figure 14).
- 6) Disconnect the LH Inlet to RH Fuel Bowl Fuel Line (GA8-282013-107) from the sump tank service valves (See Figure 15).
- 7) Disconnect the AN818 nuts from either side of the AN832 union at the RH Keel Beam penetration (See Figures 14 and 15).
- 8) Remove the LH inlet to RH Fuel Bowl Line (GA8-282013-107) (See Figures 14 and 15).
- 9) Disconnect and remove the AN924 Nut and AN832 union at the RH keel beam penetration (See Figures 14 and 15).
- 10) Slide the Inlet Left Cabin Underfloor Line (GA8-282013-109) through the Keel Beam penetration to the RH side as required to ensure clear access to the lower web of Rib #6 LH.

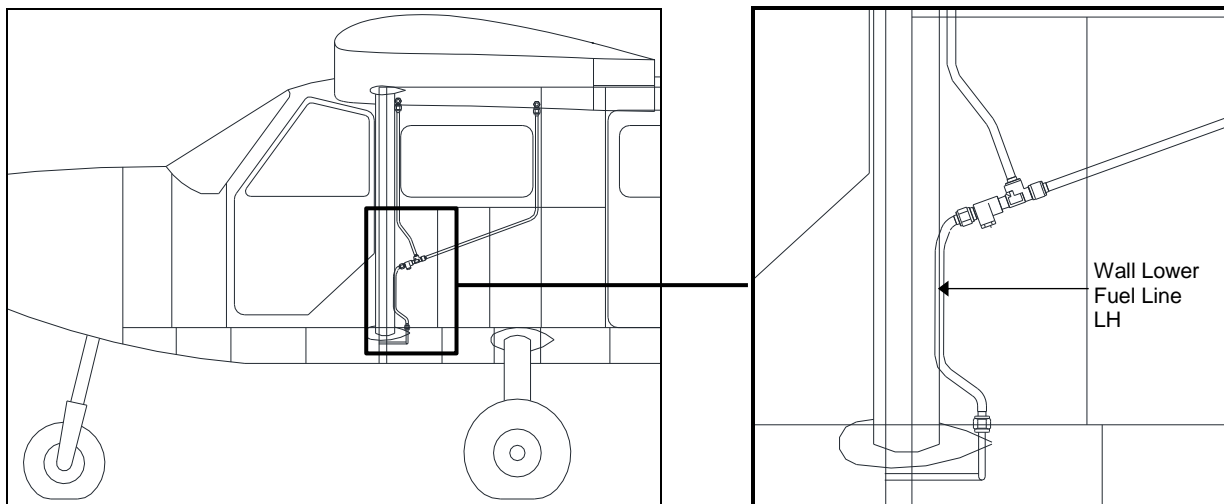


Figure 13: LH Wall Lower Fuel Line location (RH Wall similar)

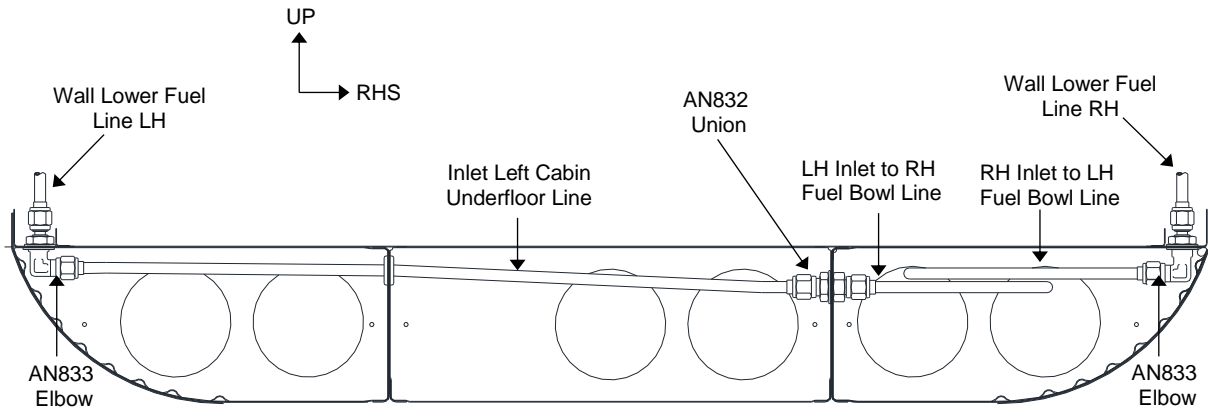


Figure 14: Fuel Lines - view looking forward toward Rib #6. (Mk II Fuel system shown, Mk I similar)

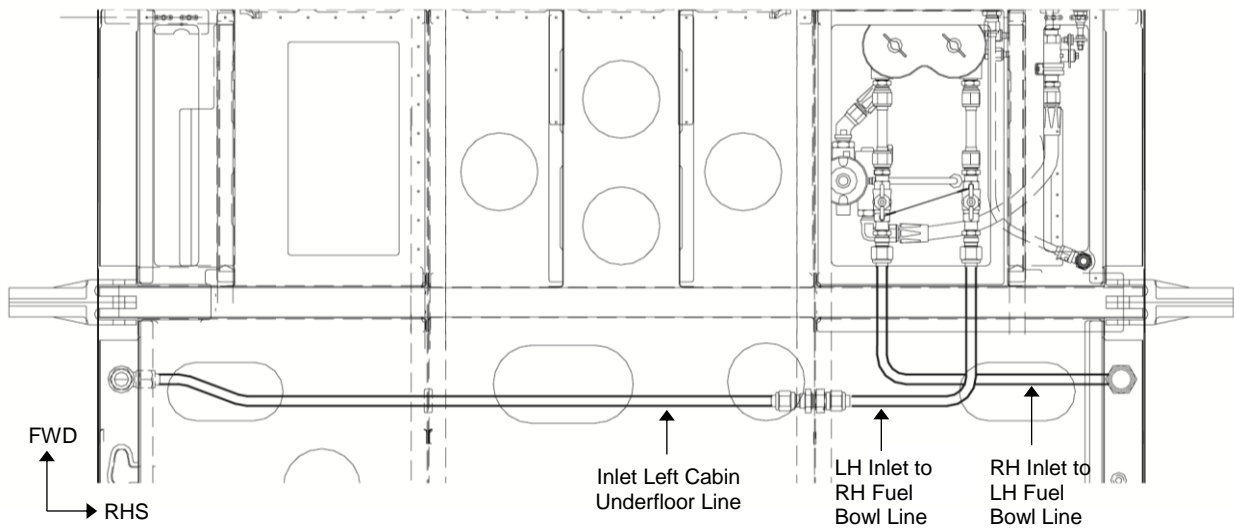


Figure 15: Fuel Lines - view looking from above (MK II Fuel system shown, MK I similar)

J. Disconnect Fuel Inlet Lines for access to Rib #6 RH

WARNING:

ENSURE THAT ANY FUEL CONTAINED WITHIN THE LINE IS DRAINED PROPERLY AND THE AREA IS WELL VENTILATED. ELECTRIC POWER TOOLS SHOULD NOT BE USED WITHIN THE AREA CONTAINING FUEL AND FUEL FUMES. SEE SERVICE MANUAL CHAPTER 28-00-10 FOR GENERAL PRECAUTIONS REGARDING FUEL SYSTEM MAINTENANCE

CAUTION:

CAP DISCONNECTED LINES AND COVER CONNECTIONS TO PREVENT THREAD DAMAGE OR THE ENTRANCE OF ANY FOREIGN MATERIAL

- 1) Drain the wing fuel tanks and sump tank.
- 2) Disconnect the upper and lower AN818 coupling nuts on the Wall Lower Fuel Line RH (GA8-282015-067) (See Figure 13).
- 3) Remove the Wall Lower Fuel Line RH.
- 4) Disconnect the AN818 nut of the RH Inlet to LH Fuel Bowl Line (GA8-282013-105) from the AN833 Elbow fitting on the underfloor side of the RH Floor Attach Angle (GA8-533022-064) (See Figure 14).
- 5) Disconnect this fuel line from the sump tank service valves (See Figure 15).
- 6) Remove the RH Inlet to LH Fuel Bowl Line (See Figures 14 and 15).
- 7) Disconnect and remove the AN924 nut and the AN833 Elbow fitting from the RH Floor attach angle (See Figure 14).

K. Remove Sidewall and Floor Components at Rib #5 LHS

NOTE:

Note the types and diameters of any fasteners removed as the same fasteners types must be used during re-installation.

- 1) Remove the LH Fwd Pillar Trim (GA8-252025-093) (See Figure 16).
- 2) Remove the Rear Seal Angle (GA8-534027-023), Lower Seal Angle (GA8-534027-025) and the seals attached to them, to provide access to the Aileron Pulley Bracket Cover -LH (GA8-533022-091) (See Figure 16).
- 3) Remove the upper CR3212-4 rivet(s) attaching the Aileron Pulley Bracket Cover-LH to the Main Spar Side Pillar Assembly.
- 4) Remove the Aileron Pulley Access Cover (GA8-533022-171) (See Figure 16).
- 5) Remove the AN5 bolt from aileron pulley bracket, and remove spacer at rear of the Cockpit Door Aft Gusset – LH (GA8-533022-087) (See Figure 16).
- 6) Remove the solid rivets (MS20470AD4-3.5) attaching the lower edge of the Cockpit Door Aft Gusset – LH to the Aft Cockpit Floor Attach Angle (GA8-533022-059).
- 7) Remove the blind rivets (CR3213-4-2) attaching the forward edge of the Cockpit Door Aft Gusset – LH to the Aileron Pulley Bracket Cover (GA8-533022-091).
- 8) Remove the blind rivets (CR3213-5-3 and CR3213-5-2) attaching the aft flange of the Cockpit Door Aft Gusset – LH to Rib #5 (GA8-532023-038 or -303).
- 9) Remove the Cockpit Door Aft Gusset - LH (See Figure 16).
- 10) For additional access to Rib #5 and #6, if required, remove:
 - a. Aileron Pulley Bracket Cover – LH (GA8-533022-091) as shown in Figure 16 and Figure 17;
 - b. Aileron Cable Cover - LH (GA8-531021-041); and
 - c. Aileron Pulley Bracket Cover - LH (GA8-531021-043).
- 11) Remove the terminals connected to the Ground Power Receptacle in the floor cavity forward of Rib #5 LH.
- 12) Remove grounding strap from the Ground Power Receptacle (See Figure 18).
- 13) Disconnect the bolts attaching the Ground Power Receptacle to the Fwd and Rear Support Brackets.
- 14) Remove the Ground Power Receptacle (See Figure 18).
- 15) De-rivet and remove the Aft Support Bracket (See Figure 18).

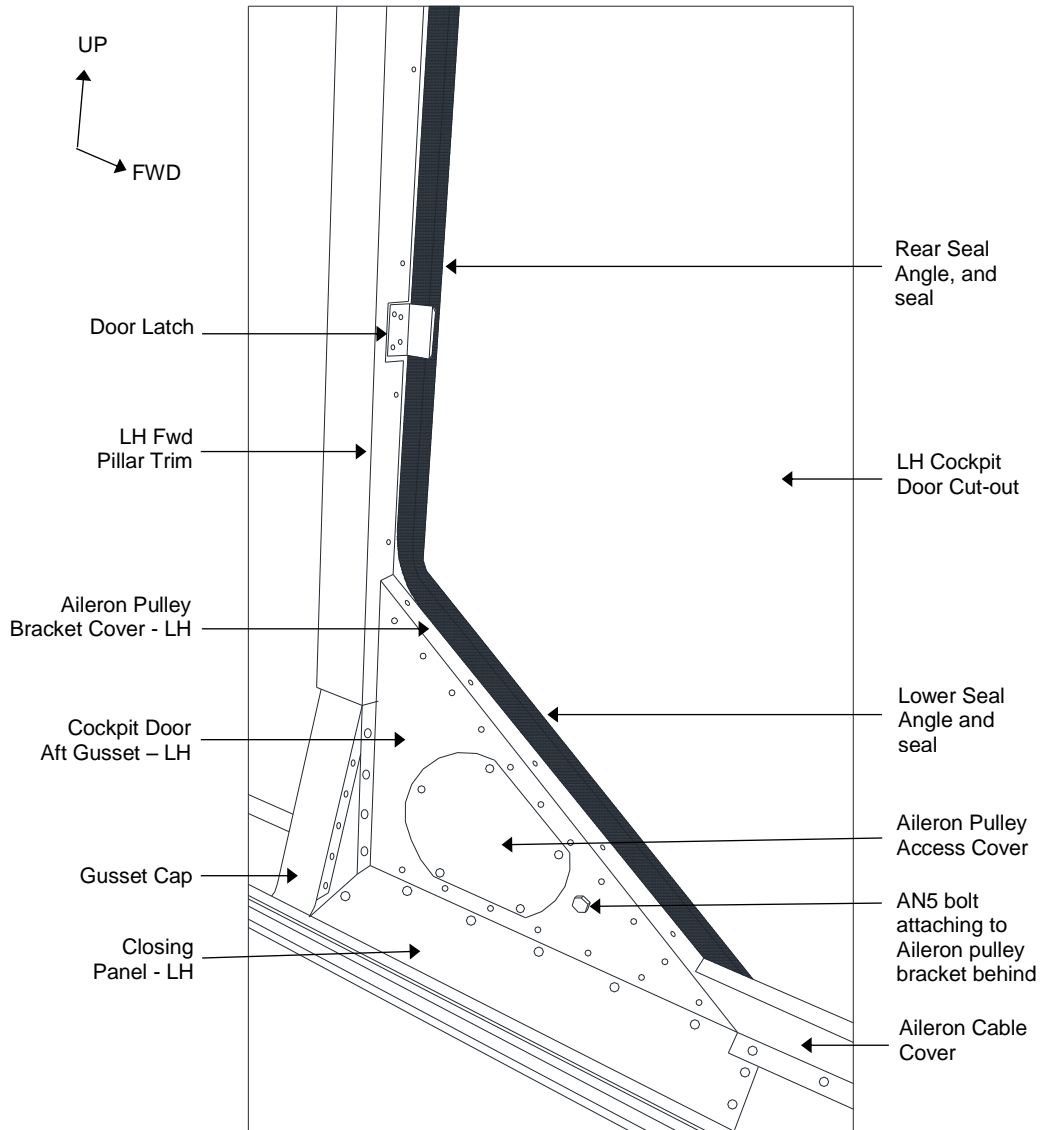


Figure 16: Cockpit Door Aft gusset – Component Removal at Rib 5 LHS
(Aircraft with Seat Rail Extension is shown – other aircraft similar)

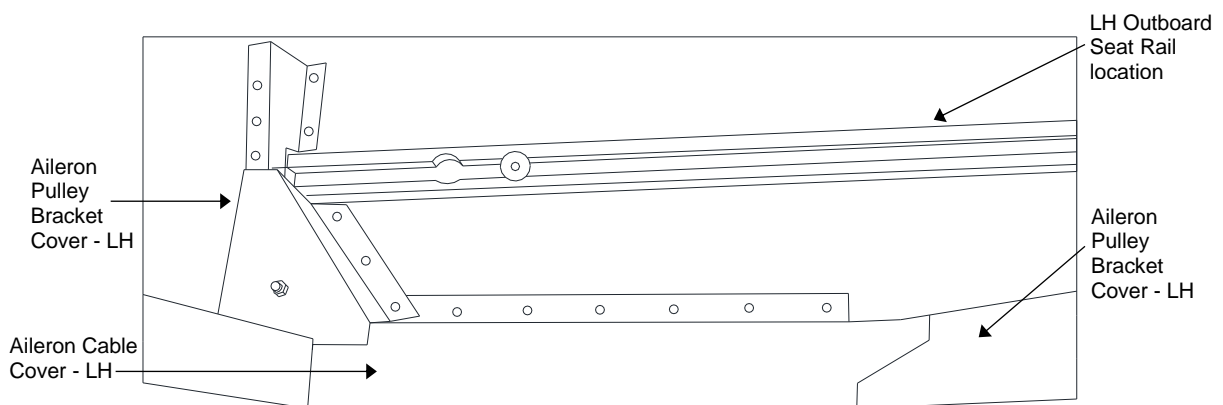


Figure 17: Structure forward of Aileron Pulley bracket cover which may need to be removed.
Viewed from above, various detail removed for clarity. LHS shown, RHS is opposite.

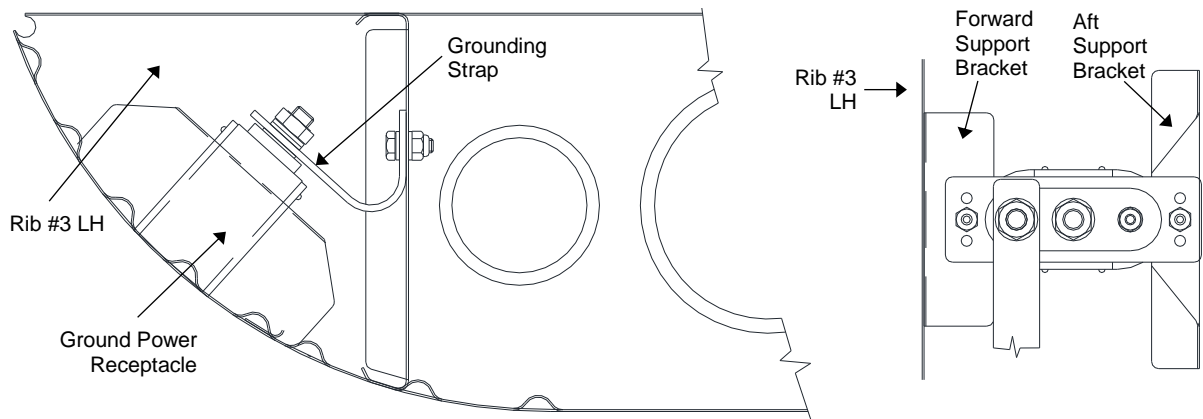


Figure 18: Ground Power Receptacle location - view looking Fwd to Rib #4 (left) and above view (right)

L. Remove Sidewall and Floor Components at Rib #5 RHS

WARNING:

ENSURE THAT ANY FUEL CONTAINED WITHIN THE LINE IS DRAINED PROPERLY AND THE AREA IS WELL VENTILATED. ELECTRIC POWER TOOLS SHOULD NOT BE USED WITHIN THE AREA CONTAINING FUEL AND FUEL FUMES. SEE SERVICE MANUAL CHAPTER 28-00-10 FOR GENERAL PRECAUTIONS REGARDING FUEL SYSTEM MAINTENANCE

CAUTION:

CAP DISCONNECTED LINES AND COVER CONNECTIONS TO PREVENT THREAD DAMAGE OR ENTRANCE OF ANY FOREIGN MATERIAL

NOTE:

Note the types and diameters of any fasteners removed as the same fasteners types must be used during re-installation

- 1) Remove the Pilot Grab Handle (GA8-531022-013) on the RHS of the aircraft (See Figure 19).
- 2) Remove the Fwd Wing Root Fairing RH (GA8-571019-014) (See Figure 19).

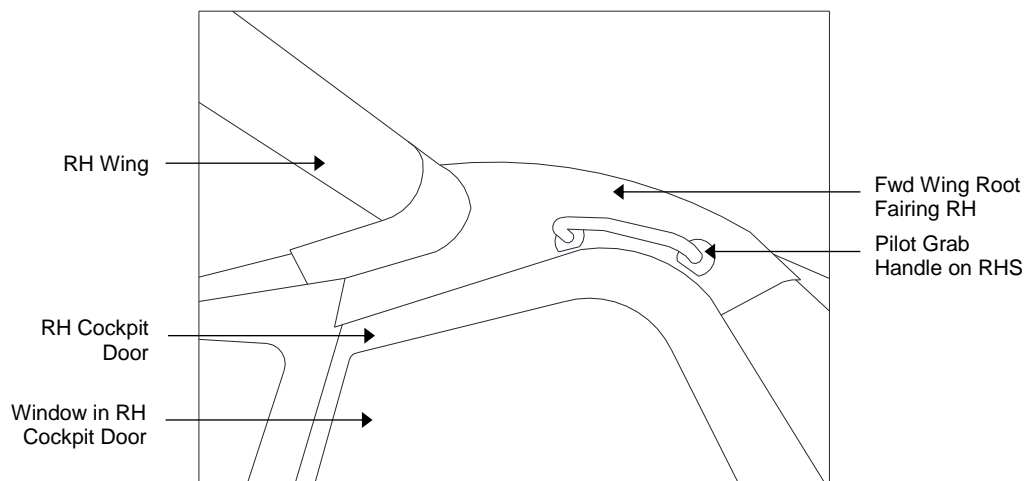


Figure 19: RHS Fwd Ring Root Fairing and Pilot Grab Handle locations

- 3) Remove the RH Fwd Pillar Trim (GA8-252025-095) (See Figure 20).
- 4) Disconnect the AN818 nuts attaching the Sump Tank Wall Vent Line (GA8-282015-029) at the cockpit floor and wing root areas (See Figure 20).
- 5) Remove the Sump Tank Wall Vent Line.
- 6) Disconnect the AN818 nuts attaching the Sump Tank Floor Vent Line Tube Assy (GA8-282013-119), which is in the sub-floor area directly below the Sump Tank Wall Vent Line location. (See Figure 21).
- 7) Remove the Sump Tank Floor Vent Line Tube Assy (See Figure 21).
- 8) Remove the AN833 Elbow Fitting and AN924 nut from the floor skin.
- 9) Remove the Aileron Pulley Access Cover (GA8-533022-171) (See Figure 20).
- 10) Remove the Rear Seal Angle (GA8-534027-024), Lower Seal Angle (GA8-534027-026) and the seals attached to them, to provide access to the Aileron Pulley Bracket Cover - RH (GA8-533022-092) (See Figure 20).
- 11) Remove the upper CR3212-4 rivet(s) attaching the Aileron Pulley Bracket Cover to the Main Spar Side Pillar Assembly.
- 12) Remove the AN5 bolt from aileron pulley brackets, and remove spacer at rear of the Cockpit Door Aft Gusset – RH (GA8-533022-088).

- 13) Remove the solid rivets (MS20470AD4-3.5) attaching the lower edge of the Cockpit Door Aft Gusset – RH to the Aft Cockpit Floor Attach Angle (GA8-533022-060).
- 14) Remove the blind rivets (CR3213-4-2) attaching the forward edge of the Cockpit Door Aft Gusset – RH to the Aileron Pulley Bracket Cover (GA8-533022-092).
- 15) Remove the blind rivets (CR3123-5-3 and CR3213-5-2) attaching the aft edge of the Cockpit Door Aft Gusset – RH to Rib #5 (GA8-532023-39 or -304).
- 16) Remove the Cockpit Door Aft Gusset – RH (See Figure 20).
- 17) For additional access to Rib #5 and #6, if required, remove:
 - a. Aileron Pulley Bracket Cover – RH (GA8-533022-092) as shown in Figure 17 and Figure 20;
 - b. Aileron Cable Cover - RH (GA8-531021-042); and
 - c. Aileron Pulley Bracket Cover - RH (GA8-531021-044).

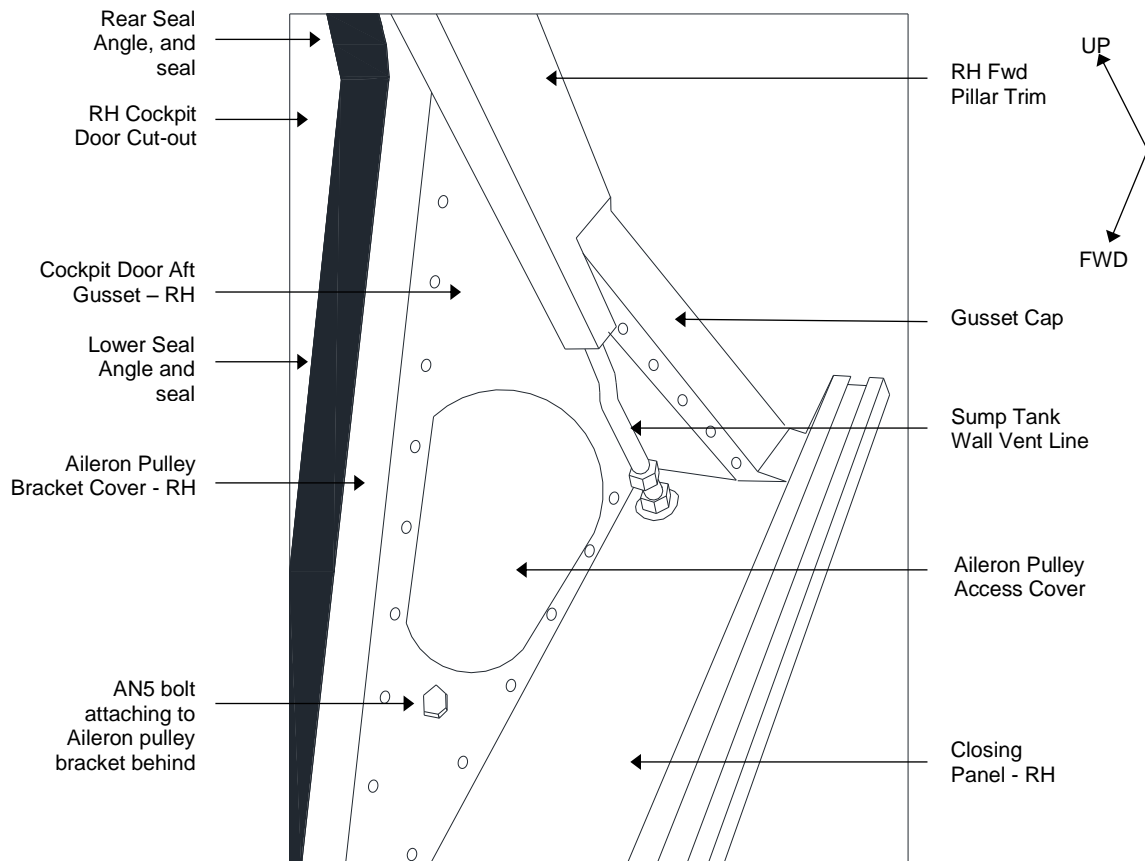


Figure 20: Cockpit Door Aft gusset – Component Removal at Rib 5 RHS
(Aircraft with Seat Rail Extension is shown – other aircraft similar)

- 18) Remove the Eye Bolt – Modified (GA8-282029-025) attaching the Fuel Firewall Cut-off Cable Assembly (GA8-762012-011) from Fuel Shut-off Valve Assembly (See Figure 21).
- 19) Disconnect the nut attaching the Fuel Pump Shut-Off Fuel Line to the Fuel Pump (See Figure 21).
- 20) Disconnect the nut attaching the Fuel Shut-Off Valve Assembly from Rib #4 RH (See Figure 21).
- 21) Remove the Fuel Shut-Off Valve Assembly and Fuel Pump Shut-off Fuel Line.

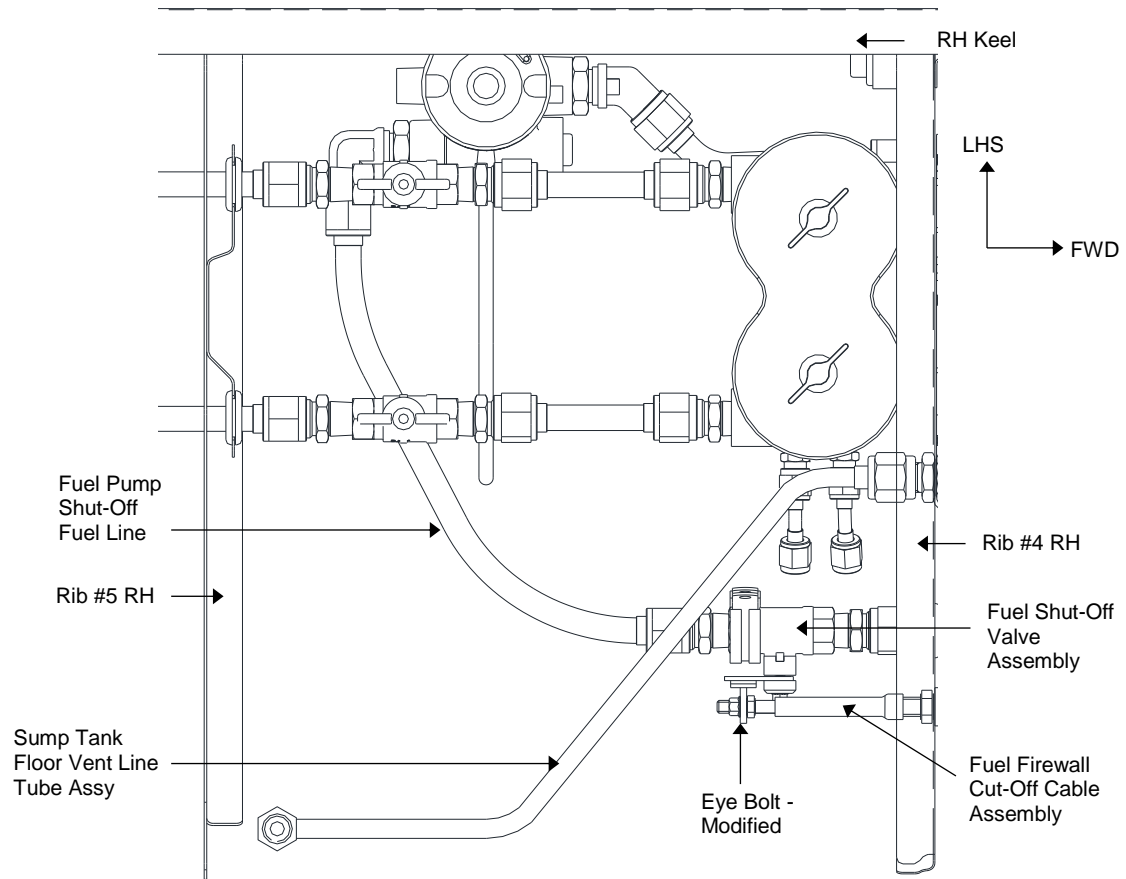


Figure 21: Sump Tank Floor Vent Line Tube Assy location – viewed from above (MK II fuel system shown, MK I fuel system similar, some detail is removed for clarity)

M. Remove Forward Aileron Cable and Conduit

- 1) Carefully disconnect the forward aileron control cables (GA8-271011-011) from the turnbuckle barrel in the wall structure. Pull cable through the conduit and forward of Floor Rib # 5 (See Figure 22).

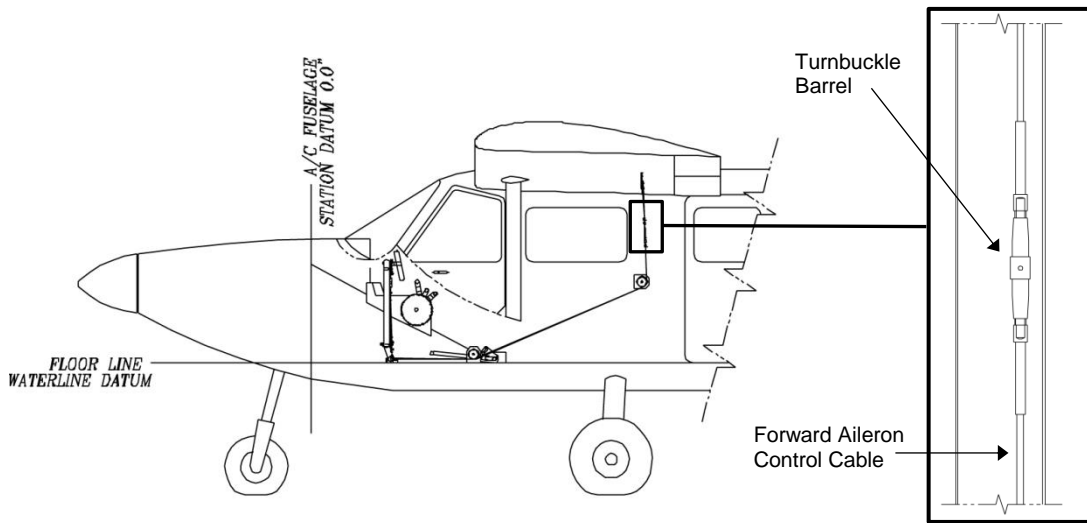


Figure 22: Aileron cable disconnect location

- 2) Remove the sealant surrounding the conduit at the penetrations of Rib #5 and #6 (See Figure 23) and at the aft end of the conduit.
- 3) Remove conduit and retain.

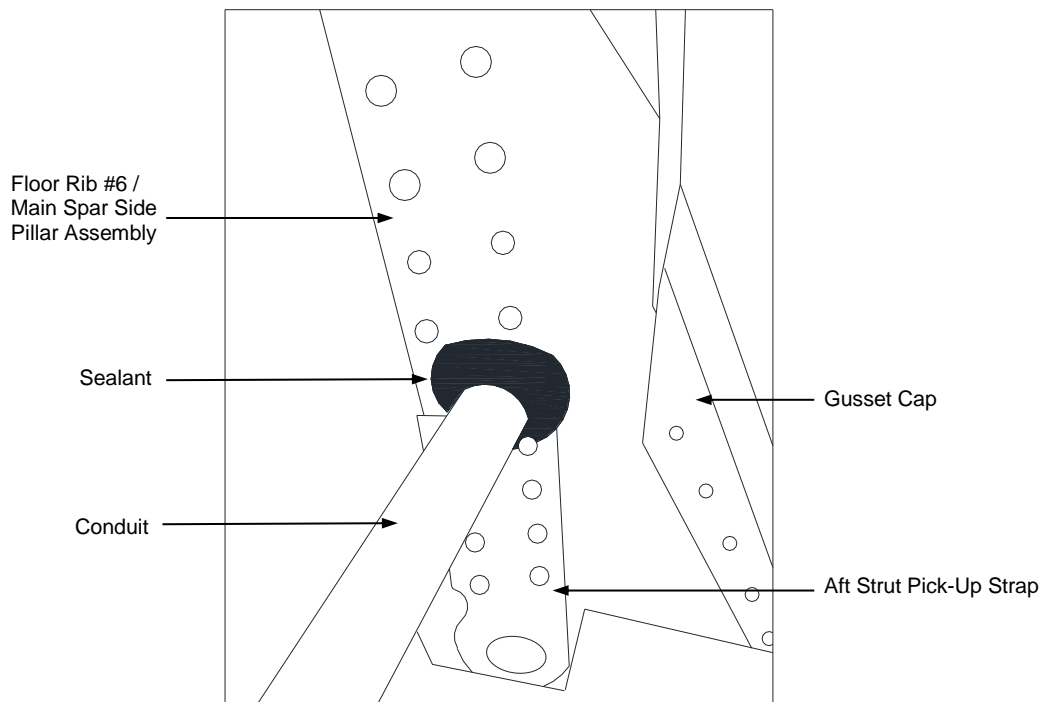


Figure 23: Forward Aileron Cable Conduit and Sealant

N. Remove Pick-Up Straps from Rib #5 and #6

CAUTION:

ENSURE THAT RIBS AND MAIN SPAR SIDE PILLAR REMAIN DAMAGE FREE WHEN REMOVING THE PICK-UP STRAPS. WHEN REMOVING ALUMINIUM RIVETS FROM THE RIB OR STRAPS, DO NOT DRILL THROUGH THE RIB OR STRAPS. DRILL THROUGH THE RIVET HEAD ONLY AND CAREFULLY DRIVE THE RIVET SHANK OUT OF THE PART WITH A PIN PUNCH OF A SMALLER DIAMETER THAN THE RIVET SHANK.

- 1) Remove the Fwd and Aft Strut Pick-Up Straps (GA8-532021-023 and -137) (See Figure 24) and retain.

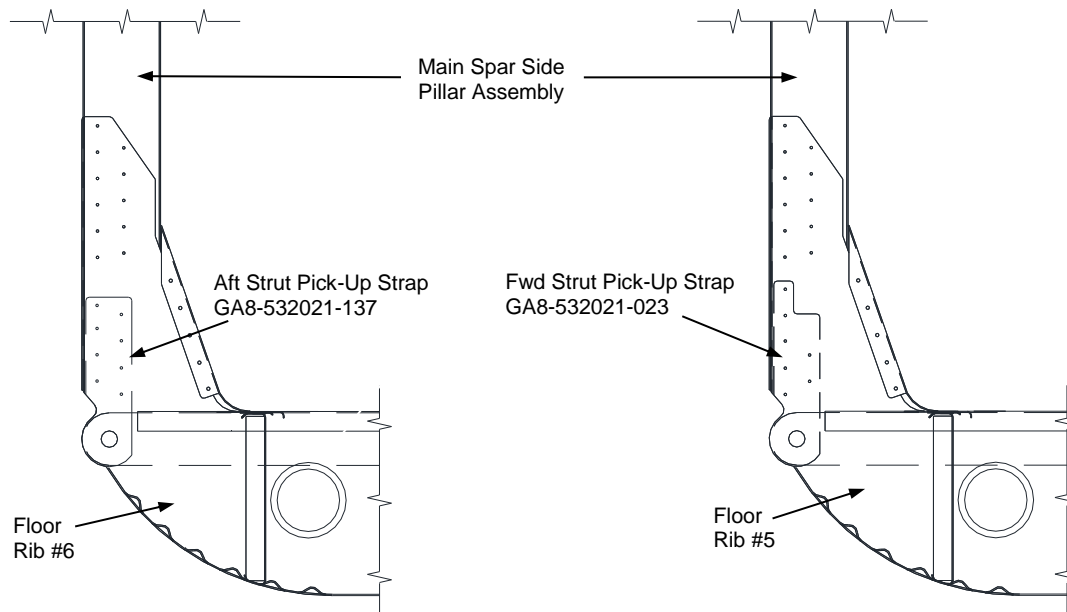


Figure 24: Strut Pick-up Strap locations

O. Install Temporary Doublers

NOTE:

Installation of temporary doublers on one side of the aircraft is permitted, but both the forward and aft doublers must be installed

NOTE:

Use the 0.625" hole as the primary datum to locate and position a Pick-Up Strap. Keep the vertical edges of two Pick-Up Straps parallel when locating and transferring fastener holes.

Do not use the vertical edge of the Strut Pick-Up Strap as edges may be different to original Strut Pick-Up Straps.

- 1) Put the removed Fwd Pick-Up Strap together with a Modified Fwd Pick-Up Strap so the 0.625" holes align.
- 2) Put the removed Aft Pick-Up Strap together with a Modified Aft Pick-Up Strap so the 0.625" holes align.
- 3) Match drill fastener hole locations using a #20 drill at a diameter of 0.161" from the Fwd and Aft Strut Pick-Up Straps removed in Part 3-L to the Modified Fwd and Aft Strut Pick-Up Straps (GA8-532024-023 and -021).
- 4) Position the Modified Fwd and Aft Strut Pick-Up Straps on Rib 5 and 6 (See Figure 25).
- 5) Temporarily install the wing strut attachment bolt to ensure the 0.625" holes of the Modified Fwd and Aft Strut Pick-Up straps are concentric with the Rib and Carry-Through Straps.
- 6) Verify adequate structural clearance is obtained from adjacent structure including the Floor Attach Angle (GA8-532021-033), cabin sidewall skins and the Cockpit Door Aft Gusset (See Figure 25).
If adequate clearance exists proceed to Step (12) otherwise continue with Steps (7) through (11) as necessary.
- 7) If required, trim the outboard end of Floor Attach Angle (GA8-532021-033) to ensure clearance from Modified Fwd and Aft Strut Pick-Up Straps (See Figure 25).
- 8) If required, trim the upper edges of the Modified Fwd and Aft Strut Pick-Up Straps to ensure adequate structural clearance from the cabin wall side skin (See Figure 25).
- 9) If required, trim the upper edges of the Modified Fwd Strut Pick-Up Strap to provide clearance for the aileron cable conduit penetration (See Figure 25).
- 10) If required, trim the upper edges of the Modified Fwd Strut Pick-Up Strap to ensure clearance from the "as installed" location of the Cockpit Door Aft Gusset.
- 11) De-burr all reworked edges and apply a primer that conforms to MIL-PRF-23377F (or later approved revision) or FED-SPEC-TT-P-1757B (or later approved revision).
- 12) Install Modified Fwd and Aft Strut Pick-Up Straps using the Wing Strut attachment bolt to locate bores concentrically. Clamp or pin the Modified Strut Pick-Up Straps in position to prevent movement during fastener installation.
- 13) Drill fastener holes using a #20 drill to a diameter of 0.161" through the web of Rib 5 and 6 using the pilot hole locations in the lower leg of the Modified Fwd and Aft Strut Pick-Up Straps (See Figure 25). De-burr holes.
- 14) Install CR3213-5-03 rivets (confirm grip length prior to installation) at the existing hole locations in the Rib and Main Spar Side Pillar Assembly (See Figure 25).
- 15) Install CR3213-5-03 rivets (confirm grip length prior to installation) at the new hole locations in the Rib and Modified Fwd and Aft Strut Pick-Up Straps (Qty 5 per Rib, See Figure 25).

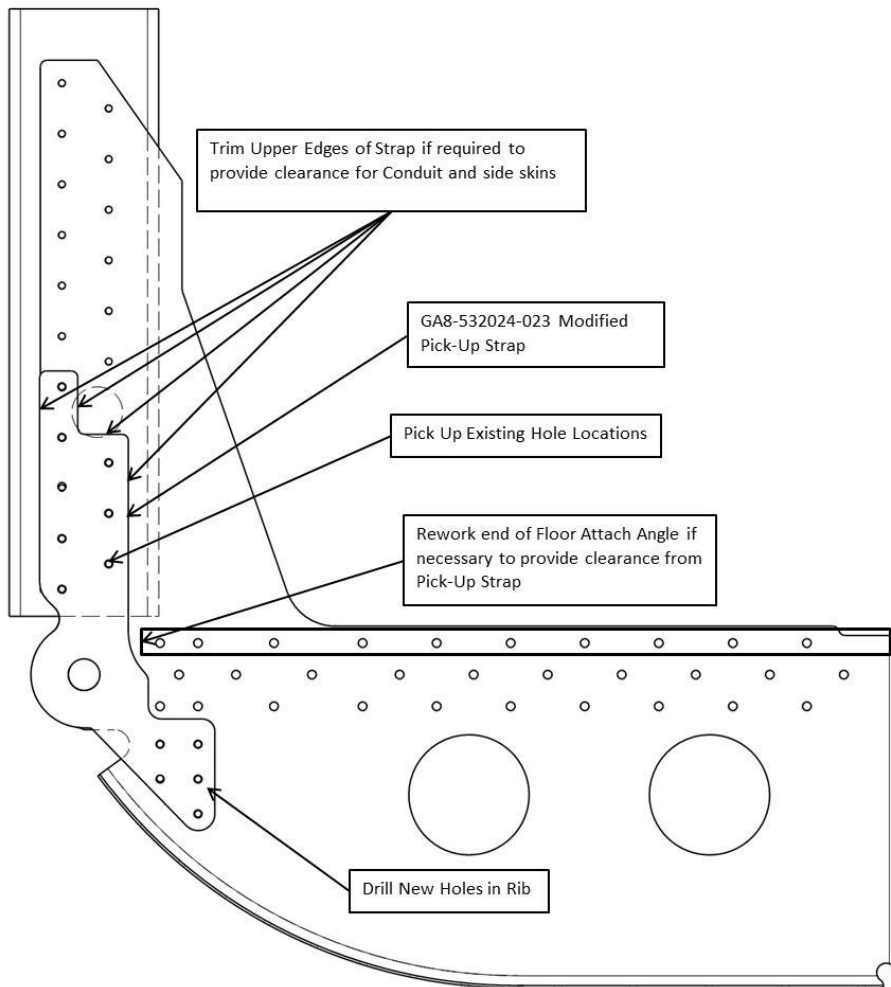


Figure 25: Typical installation of Temporary Doublers (Rib #5 and GA8-532024-021 shown)

P. Manufacture and Install Floor Skin Patch

If additional rectangular access holes were done in Part 3-H:

- 1) Manufacture a Floor Skin Patch for each side using 2024-T3 clad aluminium per SAE-AMS-QQ-A-250/5 with a thickness of 0.040" to the dimensions shown in Figure 26 for aircraft with extended seat rails or in Figure 27 for aircraft with regular seat rails.
- 2) De-burr the part(s).

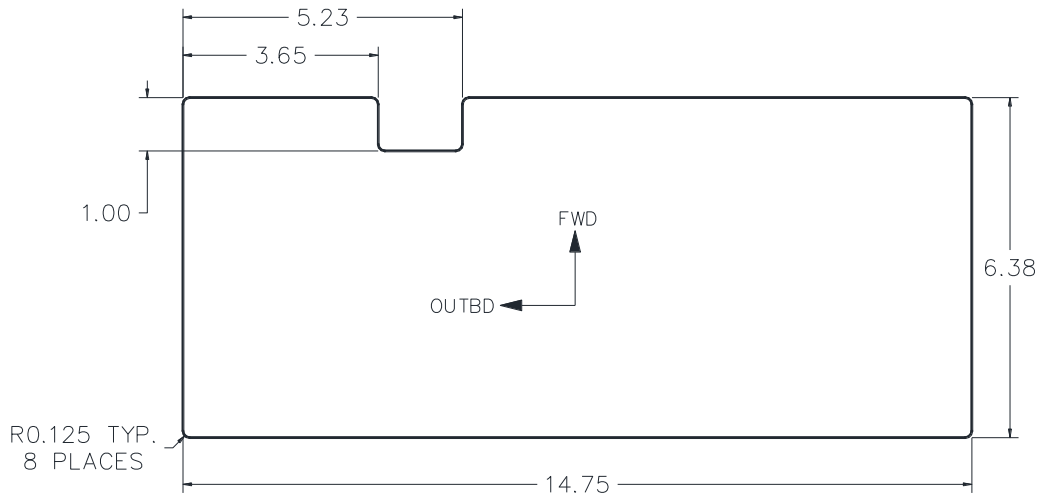


Figure 26: Floor Skin Patch – Extended Seat Rails (dimensions in inches)

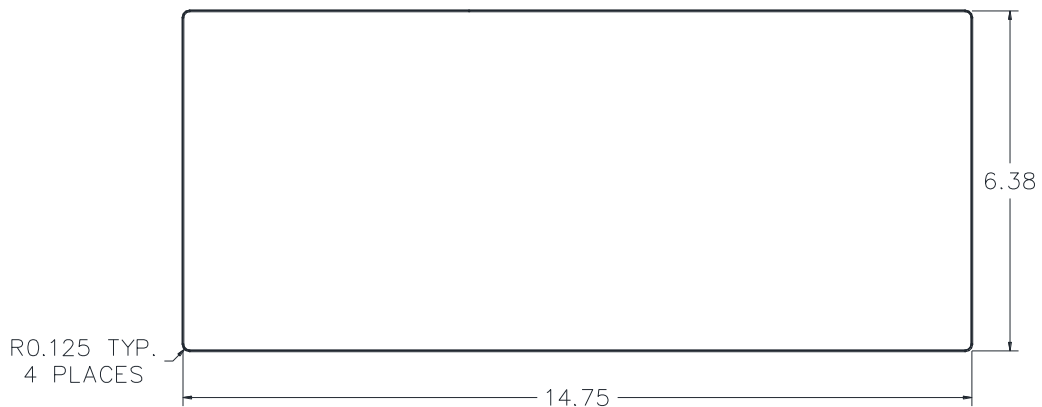


Figure 27: Floor Skin Patch – Regular Seat Rails (dimensions in inches)

- 3) Apply a primer to the part(s) that conforms to MIL-PRF-23377F (or later approved revision) or FED-SPEC-TT-P-1757B (or later approved revision).
- 4) Select the surface of the part(s) that will be visible when installed and apply a paint conforming to MIL-PRF-85285E (or later revision) Type I Class H, or an aviation urethane, in a colour to match the surrounding area.

NOTE:

*When installing the patch, the channel within the patch should be aligned such that the seat rails will not be raised as a result of the patch installation.
Trial fit the seat rails, and trim patch as required.*

- 5) Put the Floor Skin Patch over the cut-out aft of Rib 6. Make sure 0.25" or greater edge distance is maintained for all fastener holes.
- 6) Put Seat Rail(s) in and make sure Patch does not touch Seat Rails. If Patch does touch Seat Rail(s), trim Patch to make sure a minimum gap of 0.050" to Rail(s).
- 7) Match drill holes from the floor skin into the Floor Skin Patch using a #30 drill, to a diameter of 0.129".

Q. Systems and Equipment Re-installation and Checks

- 1) Install the aileron cable and conduit removed in Part 3-M and apply a neutral cure sealant at the conduit penetration through Ribs 5 and 6.
- 2) Attach the wing strut to the fuselage in accordance with Section 57-10-10 of the GA8 or GA8-TC 320 Service Manual, and check wing rigging.
- 3) Install the fittings and fuel vent lines removed in Part 3-L.
- 4) Install the Wing Root Fairing and Pilot's Grab Handle on the RHS of aircraft, if RHS was affected.
- 5) Install the Sidewall and Floor Components removed in Part 3-K and/or 3-L and make sure of correct routing of aileron cables through pulley behind the Cockpit Door Aft Gusset(s).
- 6) Conduct a Ground Power Test in accordance with Appendix 1 of this Service Bulletin.
- 7) Rig the aileron control system and carry out a functional check including free play and travel limits as specified in Section 27-10-70 of the GA8 or GA8-TC 320 Service Manual.
- 8) Install the fittings and fuel lines removed in Part 3-I and/or 3-J. Make sure the installed Wall Lower Fuel Line(s) are outboard of the aileron cable conduit.
- 9) Perform a fuel system flow rate check in accordance with Section 28-20-50 of the GA8 or GA8-TC 320 Service Manual. Make sure there are no leaks.
- 10) Install the battery removed in Part 3-E and conduct an electrical systems check in accordance with Section 24-00-10 of the GA8 or GA8-TC 320 Service Manual.
- 11) Install the floor access panels and covers removed in Part 3-F using same fasteners as original.
- 12) If Part 3-G was implemented, and Part 3-H was not implemented: Install a GA8-533028-033 Cover Plate over the round access hole made in Part 3-G using CR3213-4 Cherry-max rivets. Install a GA8-533028-047 Cover Plates over the oval-shaped access hole using CR3213-4 Cherry-max rivets into the satellite holes. Assess all rivet lengths on installation.
- 13) If Parts 3-H and 3-P of this Service Bulletin were implemented: Install the Floor Skin Patch using CR3213-4 Cherry-max rivets. Assess rivet length on installation.
- 14) Install the cabin wall trim and floor coverings removed in Parts 3-C and 3-D.
- 15) Install the seats and restraint equipment removed in Part 3-B in accordance with Sections 25-10-01, 25-10-03, 25-20-01 and 25-20-02 of the GA8 or GA8-TC 320 Service Manual.
- 16) Apply a paint conforming to MIL-PRF-85285E (or later revision) Type I Class H, or an aviation urethane, in a colour to match the surrounding area to surfaces and rivet heads as required.

Part 4 – Install Permanent Doublers

The Permanent Doubler Installation will require some disassembly of structure around Ribs 5 and 6 as well as disconnecting the LHS and RHS fuel supply lines and RHS sump tank ventilation line to provide access for fastener installation into Ribs #5 and #6 above and below the floor line.

The centre and forward floor skins will be partially de-riveted forward and aft of Ribs #5 and #6. Depending on the build configuration of the aircraft (e.g. Crew Seat Rail Modification SB-GA8-2008-48), some variation to the accomplishment sequence and details may be necessary.

Some rework of parts interfacing with Rib 5 and 6 will be required to accommodate the doublers' combined thickness of 0.080" (e.g. floor attach angles, Cockpit Door Aft Gusset and floor skins).

NOTE:

Installation of permanent doublers on one side of the aircraft is permitted, but both the forward and aft doublers must be installed.

A. Prepare Aircraft For Modification

- 1) Jack and shore the aircraft and support the wing for wing strut removal in accordance with Chapter 7 of the applicable aircraft Service Manual.
- 2) Disconnect the wing strut at the fuselage attachment in accordance with Chapter 57 of the GA8 or GA8-TC 320 Service Manual.

B. Remove seats, Restraint Equipment, Floor Coverings and Cabin Wall Trim

- 1) Do Part 3-B of this Service Bulletin to remove all Seats and Restraint Systems.
- 2) If LH side is to be modified, do Part 3-C of this Service Bulletin to remove applicable floor coverings and cabin wall trim.
- 3) If RH side is to be modified, then do Part 3-D of this Service Bulletin, to remove applicable floor coverings and cabin wall trim.

C. Remove Battery

- 1) Remove the battery from the aircraft in accordance with Section 24-00-10 of the GA8 or GA8-TC 320 Service Manual.
- 2) Remove the battery box, located below the battery.

D. Remove Fuselage Floor Access Panels

- 1) Do Part 3-F of this Service Bulletin to remove all applicable Fuselage Floor Access Panels.
- 2) Remove the four Fwd Floor Access Panels (GA8-533022-045) (See Figure 28).
- 3) Remove the two Floor Inspection Panels – 8 Hole (GA8-533022-285) (See Figure 28).

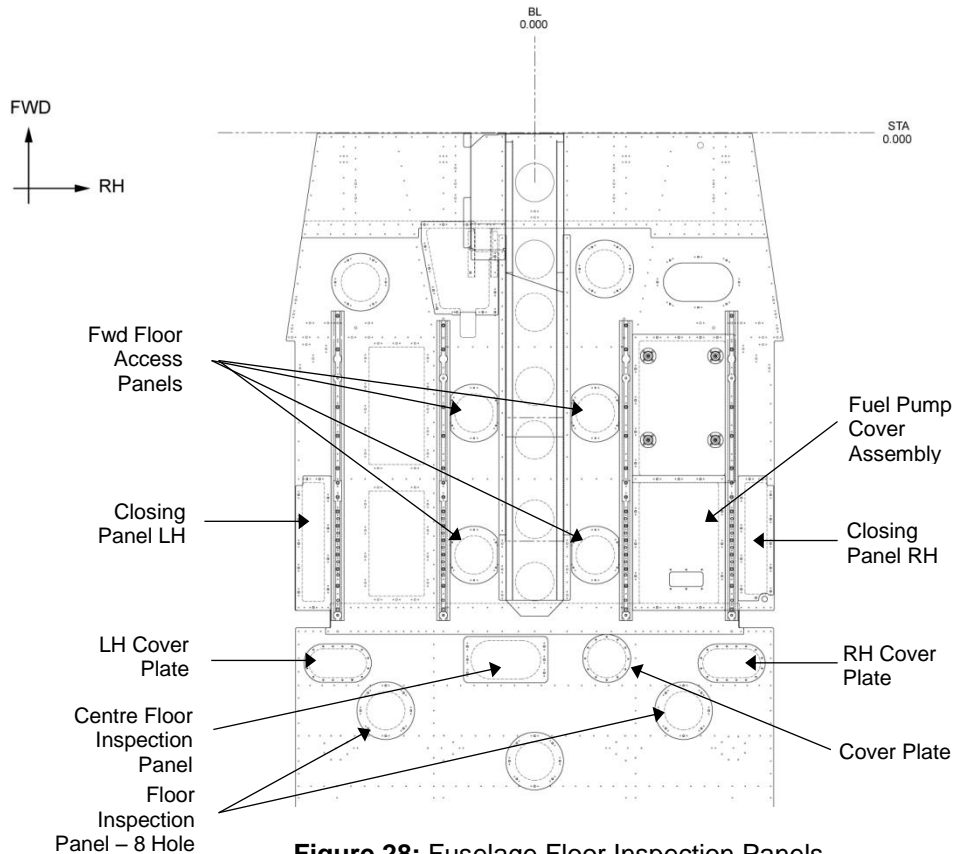


Figure 28: Fuselage Floor Inspection Panels

E. Remove Crew Seat Rails

- 1) Remove all crew seat rails. Label the seat rails to make sure they are re-installed in the same location.

F. Remove Flap Lever Assembly

- 1) Support or remove the flaps in accordance with Section 27-50-20 of the GA8 or GA8-TC 320 Service Manual.
- 2) Remove the Console Recess Assembly (GA8-534072-015) and Fire Extinguisher.

NOTE:

The aft centre screw on the Console Recess Assembly is attached to the SCAT hose using a nut.

- 3) Loosen the Turnbuckle barrels for the Flap Cables in the side-wall structure (See Figure 29).
- 4) Remove the screws attaching the Flap Lever Assembly (GA8-275013-011) to the cockpit floor and the centre console.
- 5) Lift Flap Lever Assembly, and disconnect the Flap Operating Cable - Floor (GA8-275011-013) and the Flap Return Cable - Floor (GA8-275011-017) from the Flap Lever Assembly (See Figure 30).
- 6) Remove Flap Lever Assembly.

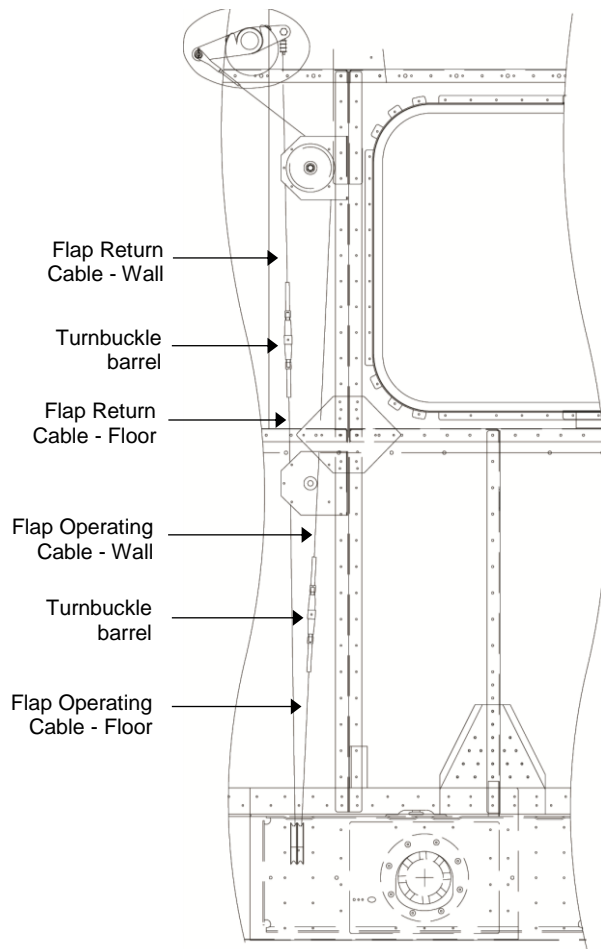


Figure 29: Flap Cable routing in LH Sidewall, RH similar

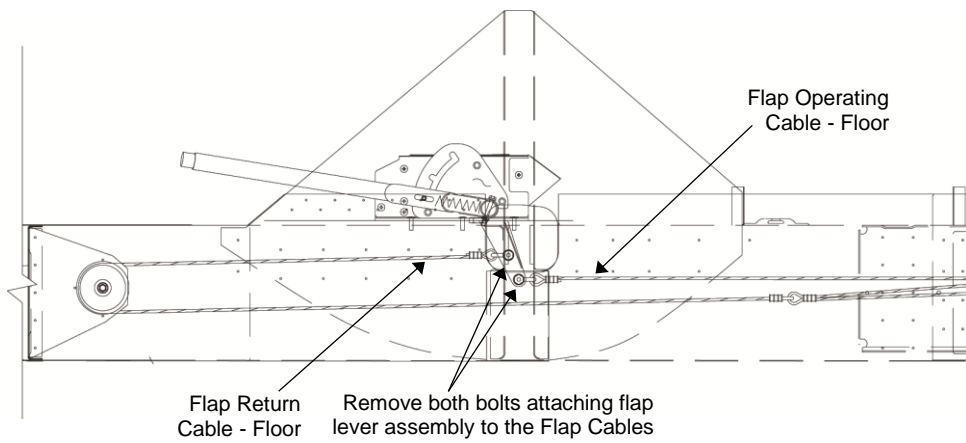


Figure 30: Flap Lever – Cable disconnection

G. De-riquet Cockpit Floor Skin and Seat Rail Intercostal Rib

CAUTION:

ENSURE THAT STRUCTURE, FUEL SYSTEMS AND ELECTRICAL SYSTEMS REMAIN DAMAGE FREE WHEN REMOVING RIVETS.

NOTE:

Note the rivet types used to fasten Cockpit Floor Skin and Seat Rail Intercostal Rib. These rivet types must be used during re-installation.

NOTE:

If installing doubler to only one side, then the floor rivets are to be removed on that side of the centre-line of the aircraft.

- 1) De-riquet the Cockpit Floor Skin at Rib #5 and Rib #6 along entire skin width as shown in Figure 31.
- 2) De-riquet the Cockpit Floor Skin at the underfloor intercostal locations between Rib # 4 and Rib #6 as shown in Figure 31. For the centre most two ribs, de-riquet only aft of the Centre Console Side Panels from where the Flap Lever Assembly was removed.
- 3) De-riquet the LH Outboard, LH Inboard, RH Inboard and RH outboard seat rail attachment fasteners (nut-plate rivets) between Rib #4 and Rib #6 as shown in Figure 31.
- 4) De-riquet and remove the Seat Rail Intercostal rib on the affected side. (See Figure 32).

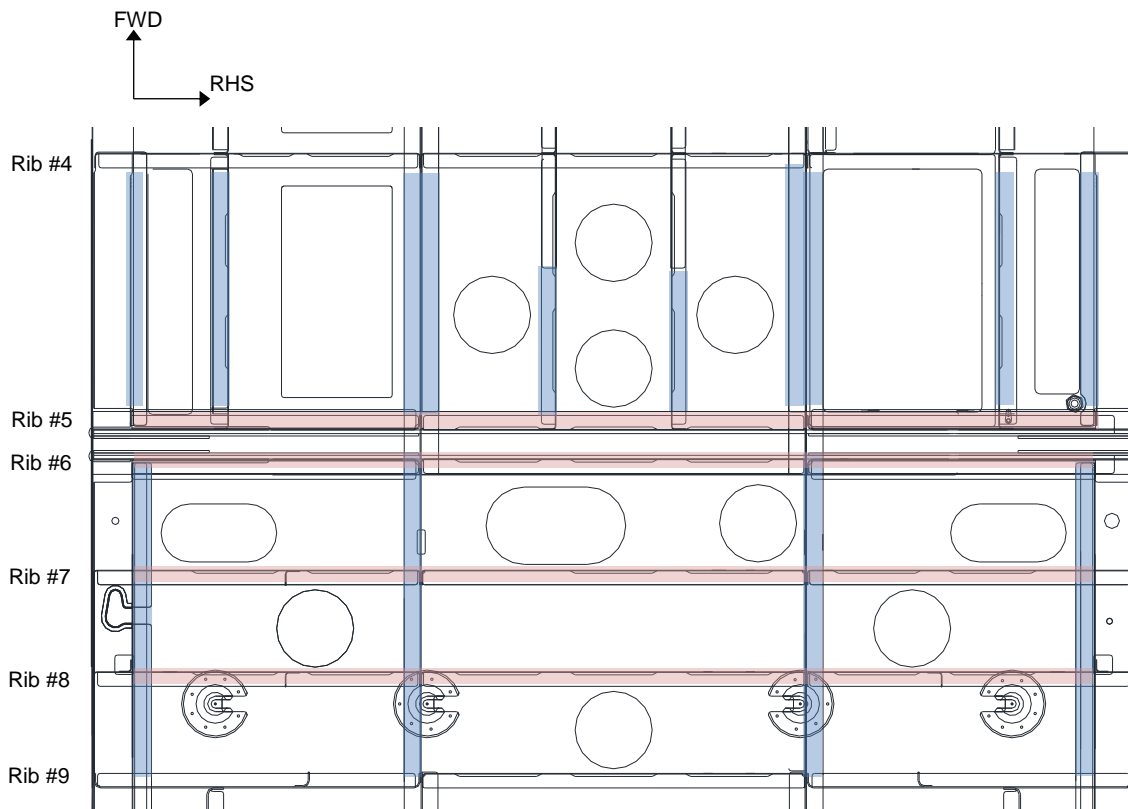


Figure 31: Forward and Centre Floor Skin Rivet Removal.

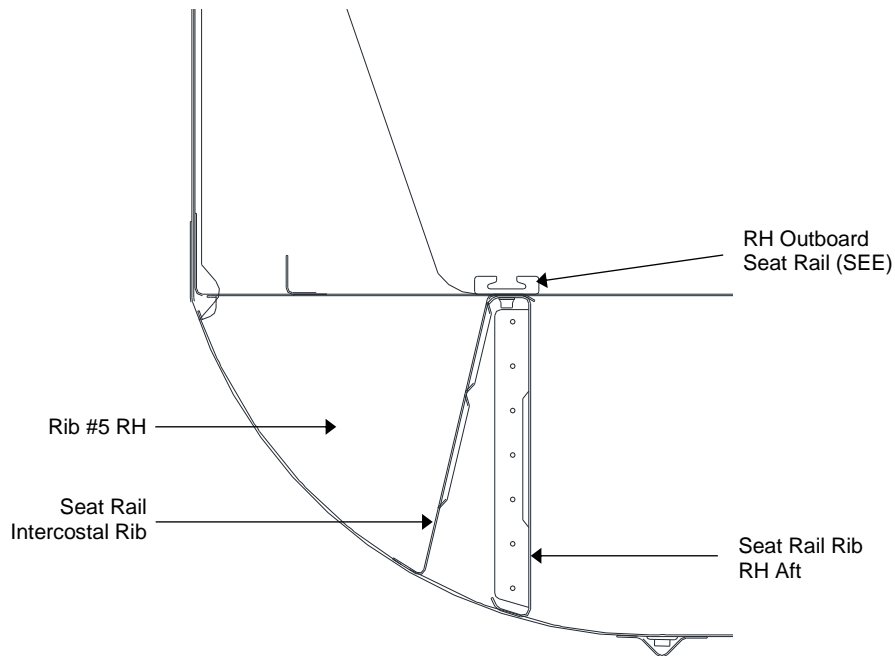


Figure 32: Intercostal Rib location (RH shown, LH similar)

H. De-riquet Centre Floor Skin and Rib#7 Assy

CAUTION:

WHEN DRILLING OUT RIVETS THROUGH CENTRE FLOOR SKIN ENSURE NO CABLES, FUEL LINES OR BRAKE LINES ARE DAMAGED.

NOTE:

Before de-riqueting, note the rivet types used to fasten Centre Floor Skin and Rib #7 Assy. These rivet types must be used during re-installation.

- 1) De-riquet the Centre Floor Skin at Rib #6 and Rib #8 across entire width as shown in Figure 31.
- 2) De-riquet the Centre Floor Skin at the Keel Beam and along the skin edge between Rib #6 and Rib #9 as shown in Figure 31.
- 3) Note the location of the four seat anchor plates as shown in Figure 31 and carefully remove.
- 4) Remove rivets from Belly Skin and Keel to de-riquet the outboard Rib #7 Assy (GA8-532013-021/-022) on affected side. If cables, fuel lines or brake lines penetrate Rib#7 Assy then slide the Rib Assy aft without damaging these items to provide further access to Rib#6. Otherwise remove the Rib #7 Assy.

I. Disconnect Fuel Inlet Lines

WARNING:

ENSURE THAT ANY FUEL CONTAINED WITHIN THE LINE IS DRAINED PROPERLY AND THE AREA IS WELL VENTILATED. ELECTRIC POWER TOOLS SHOULD NOT BE USED WITHIN THE AREA CONTAINING FUEL AND FUEL FUMES. SEE SERVICE MANUAL CHAPTER 28-00-10 FOR GENERAL PRECAUTIONS REGARDING FUEL SYSTEM MAINTENANCE

CAUTION:

CAP DISCONNECTED LINES AND COVER CONNECTIONS TO PREVENT THREAD DAMAGE OR THE ENTRANCE OF ANY FOREIGN MATERIAL

- 1) If LH side is to be modified, then do Part 3-I of this Service Bulletin to disconnect applicable fuel lines.
- 2) If RH side is to be modified, then do Part 3-J of this Service Bulletin to disconnect applicable fuel lines.

J. Remove Sidewall and Floor Components at Rib #5 LHS

NOTE:

*Note the rivet types removed for the various components.
These rivet types must be used during re-installation.*

- 1) Do Part 3-K of this Service Bulletin to remove applicable sidewall and floor components.
- 2) The Aileron Pulley Bracket Cover – LH (GA8-533022-091), Aileron Cable Cover – LH (GA8-531021-041) and the Aileron Pulley Bracket Cover – LH (GA8-531021-043) must be removed (See Figures 16 and 17) This will involve removing the attaching screws and rivets (including rivets from the Cockpit Side Skin).
- 3) Remove the Gusset Cap (GA8-533028-049) (See Figure 16).

K. Remove Sidewall and Floor Components at Rib #5 RHS

NOTE:

*Note the rivet types removed for the various components.
These rivet types must be used during re-installation.*

- 1) Do Part 3-L of this Service Bulletin to remove applicable side-wall and floor components.
- 2) The Aileron Pulley Bracket Cover – RH (GA8-533022-092), Aileron Cable Cover – RH (GA8-531021-042) and the Aileron Pulley Bracket Cover – RH (GA8-531021-044) must be removed (See Figures 17 and 20) This will involve removing the attaching screws and rivets (including rivets from the Cockpit Side Skin).
- 3) Remove the Gusset Cap (GA8-533028-049) (See Figure 20).

L. Remove Forward Aileron Cable and Conduit

- 4) Do Part 3-M of this Service Bulletin to disconnect the forward aileron control cable(s) and remove conduit(s) from the Rib #5 and #6 locations.

M. Remove Pick-Up Straps from Rib #5 and #6

CAUTION:

ENSURE THAT RIBS AND MAIN SPAR SIDE PILLAR REMAIN DAMAGE FREE WHEN REMOVING THE PICK-UP STRAPS. WHEN REMOVING ALUMINIUM RIVETS FROM THE RIB OR STRAPS, DO NOT DRILL THROUGH THE RIB OR STRAPS. DRILL THROUGH THE RIVET HEAD ONLY AND CAREFULLY DRIVE THE RIVET SHANK OUT OF THE PART WITH A PIN PUNCH OF A SMALLER DIAMETER THAN THE RIVET SHANK.

- 1) Do Part 3-N of this Service Bulletin to remove the Fwd and Aft Pick-Up Straps.

N. Remove Rivets from Rib #5 and #6, and Main Spar Side Pillar Assembly

- 1) Remove the blind rivets (CR3213-5) attaching Rib #5 and #6 to the Main Spar Side Pillar Assembly, above the Fwd and Aft Pick-Up Strap locations as shown in Figure 33.

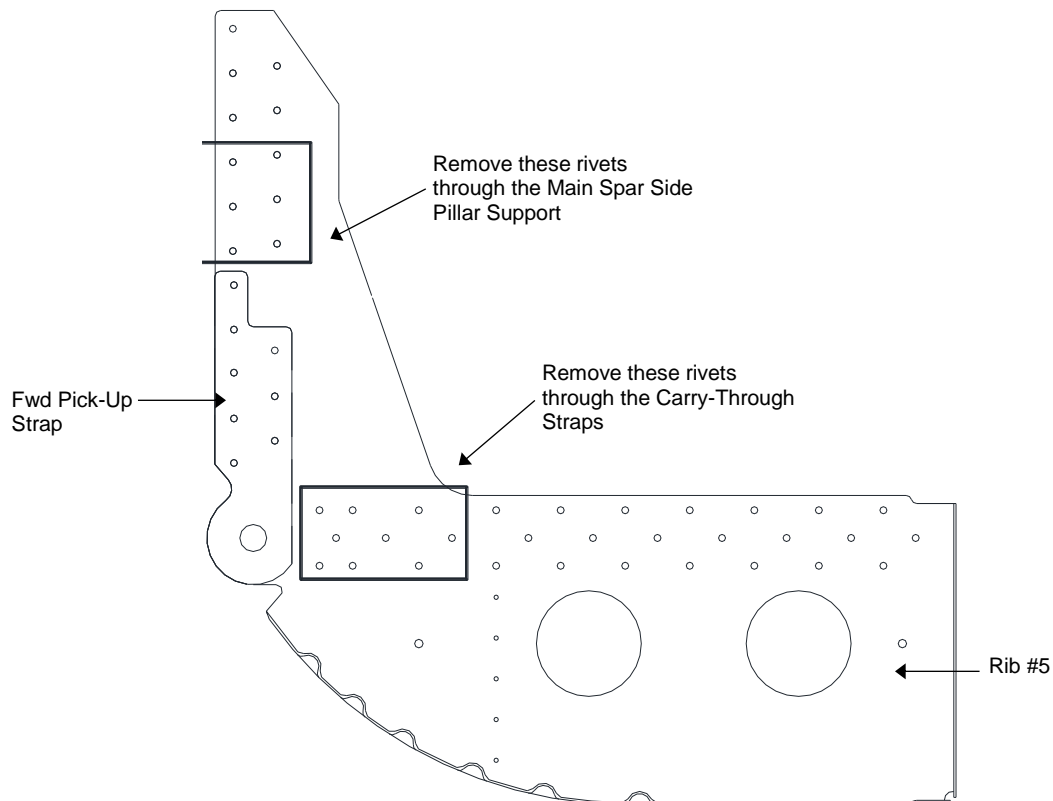


Figure 33: Rivets to be removed. Rib 5 shown, Rib 6 similar.

O. Remove Rivets from Rib #5 and #6, and Carry-Through Straps

CAUTION:

ENSURE THAT RIBS AND CARRY THROUGH STRAPS REMAIN DAMAGE FREE WHEN REMOVING THE RIVET. WHEN REMOVING ALUMINIUM RIVETS FROM THE RIB OR STRAPS, DO NOT DRILL THROUGH THE RIB OR STRAPS. DRILL THROUGH THE RIVET HEAD ONLY AND CAREFULLY DRIVE THE RIVET SHANK OUT OF THE PART WITH A PIN PUNCH OF A SMALLER DIAMETER THAN THE RIVET SHANK.

- 1) Carefully remove the solid rivets (MS20470AD5) attaching Rib #5 and #6 to the Long, Intermediate and Short Carry-Through Straps as shown in Figure 33.

P. Trim Floor Attach Angle

CAUTION:

ENSURE THAT THE RIB AND CARRY-THROUGH STRAPS ARE NOT DAMAGED WHEN TRIMMING THE FLOOR ATTACH ANGLE.

NOTE:

Carefully slide a thin steel sheet between the Floor Attach Angle and the Ribs to protect them whilst trimming the vertical leg of the Floor Attach Angle.

- 1) Trim away $0.100'' \pm 0.005''$ on the outboard end of the vertical leg of the Floor Attach Angle (GA8-532021- 33/34) as shown in hatched area of Figure 35 for a length of $5.0'' \pm 0.100''$ inboard of the rib lug end bore (See Figures 34 and 35).
- 2) De-burr and finish all blended edges with a Scotch-Brite® pad or similar to achieve a surface finish of at least 125 microinch Ra (3.2 micron Ra).
- 3) Apply a primer to the edges that conforms to MIL-PRF-23377F (or later approved revision) or FED-SPEC-TT-P-1757B (or later approved revision).

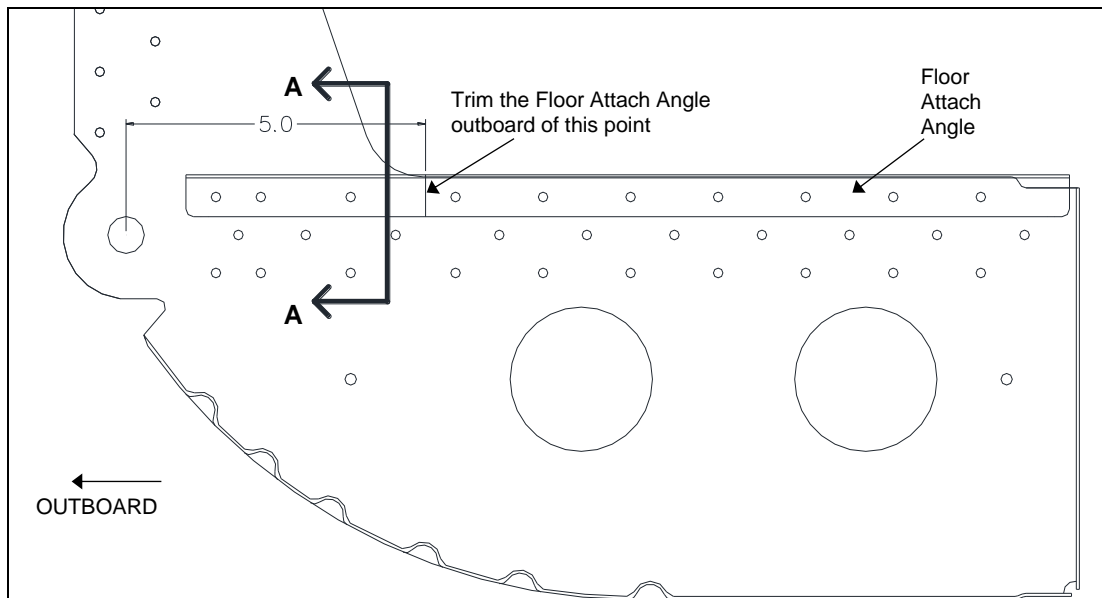


Figure 34: Trimming of Floor Attach Angle.

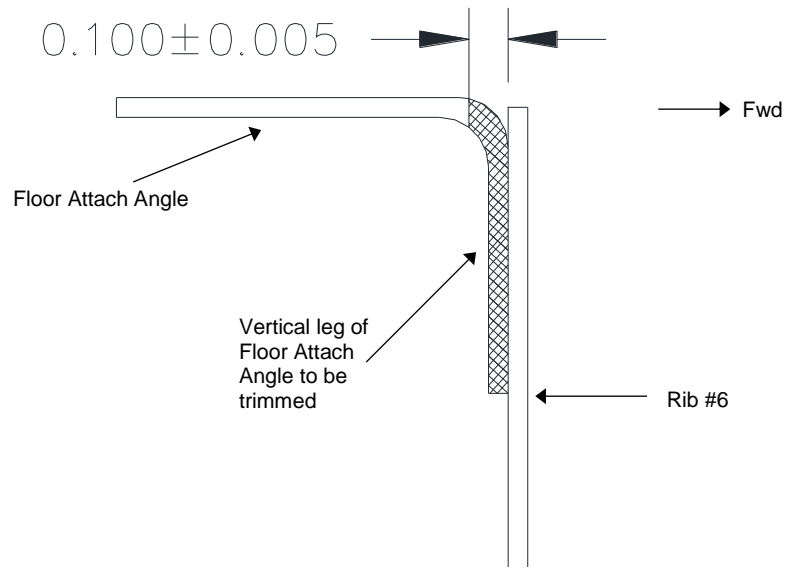


Figure 35: Section A-A. Trimming of Floor Attach Angle - Side view of Rib #6.

Q. Trim Floor Skin around Main Spar Side Pillar Assembly

- 1) Trim aft edge of Cockpit Floor Skin by 0.100" +/- 0.005" as shown in Figure 36.
- 2) Trim forward edge of Centre Floor Skin by 0.100" +/- 0.005" as shown in Figure 36.
- 3) De-burr and finish all blended edges with a Scotch-Brite® pad or similar to achieve a surface finish of at least 125 microinch Ra (3.2 micron Ra).
- 4) Apply a primer to the edges that conforms to MIL-PRF-23377F (or later approved revision) or FED-SPEC-TT-P-1757B (or later approved revision).

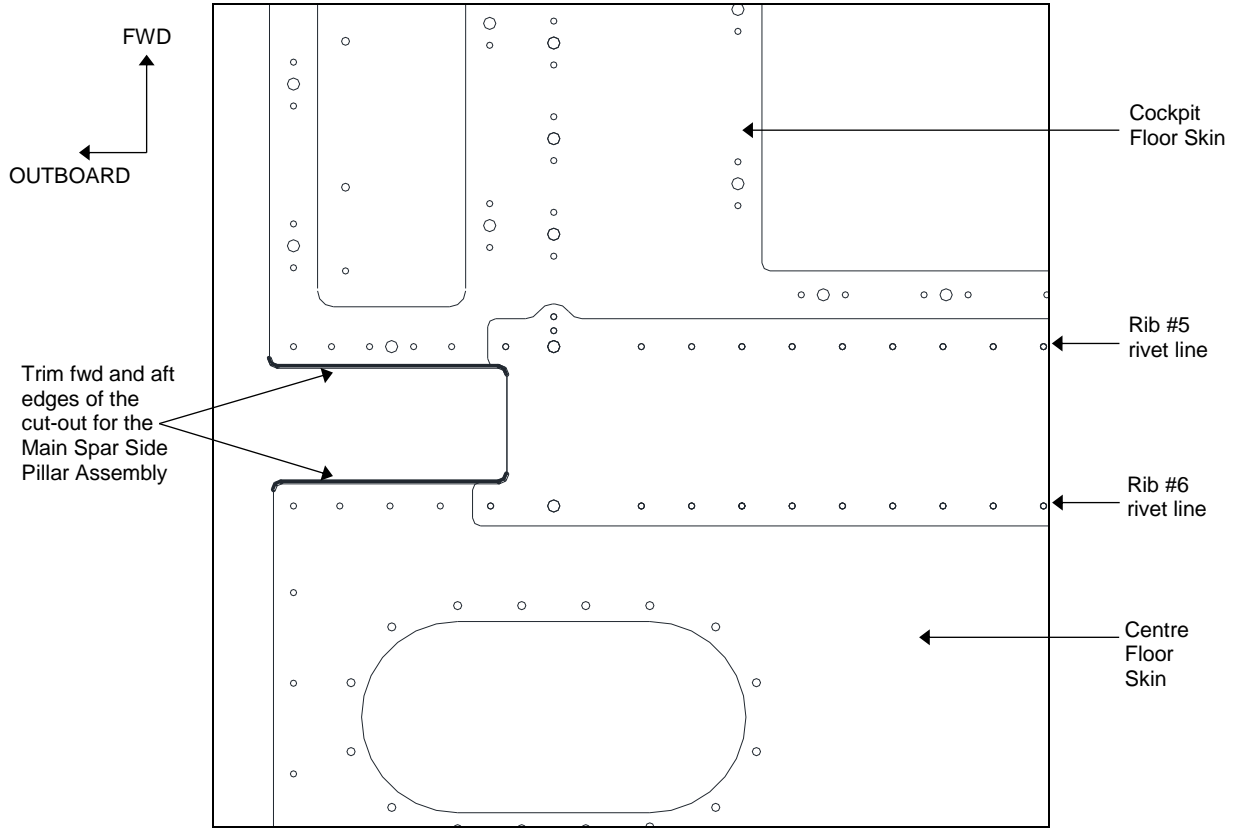


Figure 36: Floor skin to be trimmed. LHS shown, RHS is opposite.

R. Transfer Holes to Large and Small Doublers

NOTE:

Use the 0.625" hole as the primary datum to locate and position a Pick-Up Strap. Keep the vertical edge of a Pick-Up Strap parallel to the Large and Small Doubler edges when locating and transferring fastener holes.

- 1) Put the removed Fwd Pick-Up Strap removed in Part 4-M together with Large and Small Doublers (GA8-532024-031/-033/-035/-037) so the 0.625" holes align.
- 2) Put the removed Aft Pick-Up Strap removed in Part 4-M together with Large and Small Doublers (GA8-532024-031/-033/-035/-037) so the 0.625" holes align.
- 3) Match drill fastener hole locations and diameters from the Fwd and Aft Strut Pick-Up Straps to the Large and Small Doublers (GA8-532024-031/-033/-035/-037).
- 4) Position the Large Doublers on Rib #5 or #6 (See Figure 37) and temporarily install the wing strut attachment bolt to ensure the lug bore of the doublers are concentric with the Rib and Carry-Through Straps. Clamp the doubler in position.

NOTE:

*5/32" fastener hole diameter: 0.161" (#20 drill)
1/8" fastener hole diameter: 0.129" (#30 drill)*

- 5) Match drill fastener holes in the Large Doubler from the Carry Through Strap locations in the Rib.
- 6) Mark location of the Conduit Hole in the rib onto the Large Doubler.
- 7) Drill new holes using a #20 drill to a diameter of 0.161", into the Rib using the two pilot hole locations in the Large Doublers which exist above the floor skin water-line (See Figure 37).
- 8) Drill 15 new holes using a #30 drill to a diameter of 0.129", through the lower web of Ribs #5 and #6 using the pilot hole locations in the Large Doublers below the floor skin water-line (See Figure 37).
- 9) Remove the Large Doublers. Create the Conduit hole in each Large Doubler and deburr all new holes.
- 10) Transfer hole locations from the Large Doubler to the Small Doubler, ensuring that the lug bores of each doubler are concentric and the outboard vertical edges are parallel.
- 11) De-burr all new holes.

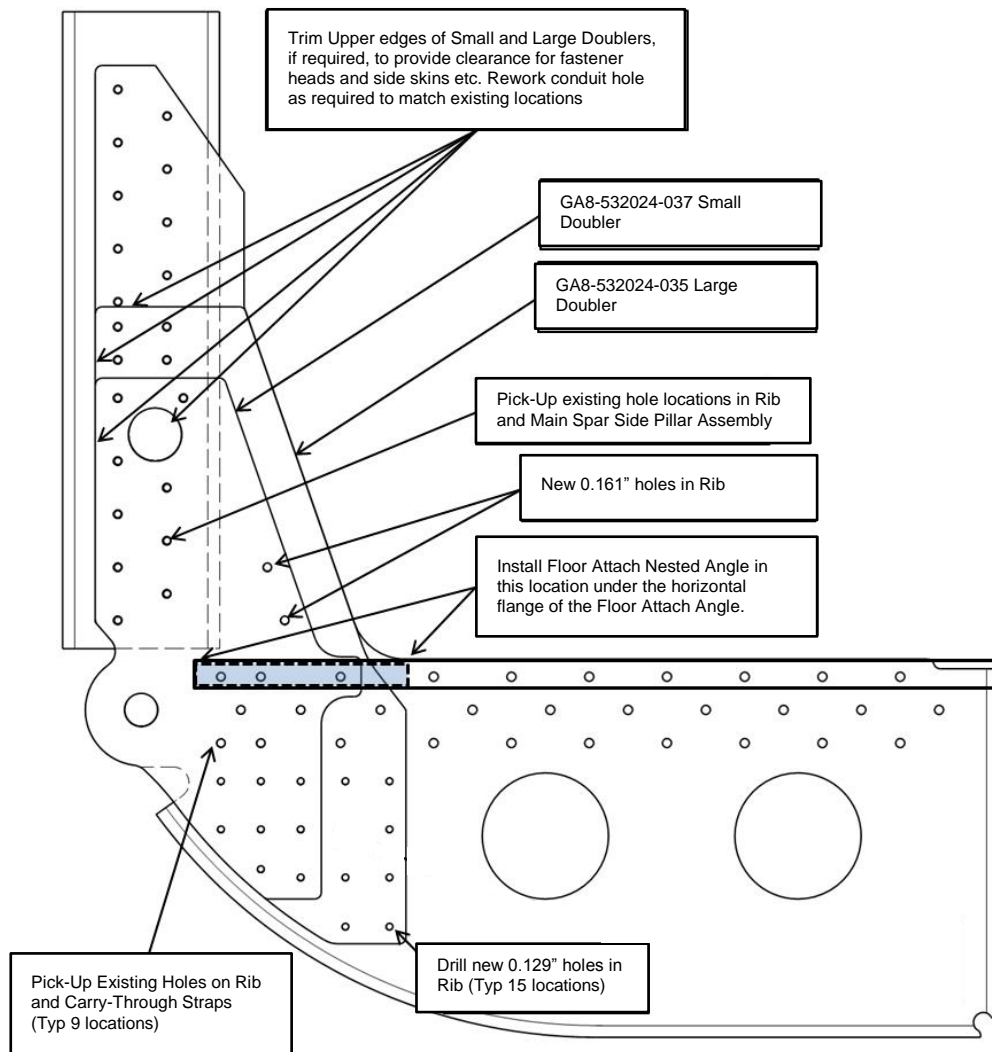


Figure 37: Typical installation of Permanent Doublers.

S. Transfer Holes to Floor Attachment Nested Angle

- 1) Position the Large and Small doublers on Rib #5 and #6 (See Figure 37) and temporarily install the wing strut attachment bolt to ensure the lug bore of the Doublers are concentric with the Rib and Carry-Through Straps. Pin the doublers in position.
- 2) Position the Floor Attach Nested Angle (GA8-532024-029) under the horizontal flange of the floor attach angle at each Rib location (See Figure 37).
- 3) Match drill the 5/32" holes, at 0.161" diameter, (See Figure 37) from the Rib to Carry-Through Strap attachment locations to the vertical flange of the Floor Attach Nested Angle.
- 4) Match drill the holes from the Floor Attach Angle horizontal flange to the horizontal flange of the Floor Attach nested Angle.
- 5) Remove the Floor Attach Nested Angle and de-burr holes.

T. Install Permanent Doublers and Nested Floor Attach Angle

- 1) Position the Small and Large Doublers on Rib #5 and #6 (See Figure 37) and temporarily attach the Wing Strut attachment bolt to ensure the lug bores of the Doublers are concentric with the Rib and Carry-Through Straps.
- 2) Verify adequate clearance is provided from adjacent structure including: the Floor Attach Angle, Cabin Side-Wall Skins (See Figure 37). Also ensure that the Large Doubler inboard vertical edge does not project beyond the Rib #5 and #6 inboard edge profile. If adequate clearance exists with Large and Small doublers in position then proceed to Step (10) otherwise continue with Steps (4) through (9) as necessary.
- 3) Trim, if required, the outboard end of Floor Attach Angle to ensure clearance from the Large and Small Doublers (See Figure 37).

- 4) Trim, if required, the upper edges of the Large and Small Doublers to ensure adequate structural clearance from the Cabin Side-Wall Skins and to avoid fouling on any rivet heads (See Figure 37).
- 5) Trim, if required, the penetration holes in the Large and Small Doublers to provide clearance for the aileron cable conduit penetration (See Figure 37).
- 6) Trim, if required, the inboard upper edge of the Large Doubler to ensure it is flush with the Rib #5 and #6 inboard edge profile.
- 7) Apply a primer to the edges that conforms to MIL-PRF-23377F (or later approved revision) or FED-SPEC-TT-P-1757B (or later approved revision).
- 8) Re-attach the Large and Small Doublers using the wing strut attachment bolt to locate bores concentrically. Clamp the doublers in position.

NOTE:

Note the location where the rear flange of the Cockpit Door Aft Gusset – LH or RH was installed into Rib # 5, and also the location of Rib #5 and #6 where the Gusset Cap is installed. DO NOT install rivets into these holes at this stage.

- 9) Install CR3213-5 rivets (confirm grip length prior to installation) at the existing hole locations in the Rib and Main Spar Side Pillar Assembly above the Floor Skin waterline.
- 10) Position and clamp the Floor Attach Nested Angle (GA8-532024-029) under the horizontal flange of the floor attach angle and over the Large and Small doubler at each applicable Rib location.
- 11) Install three MS20470AD5 rivets through the Floor Attach Nested Angle, Rib #5 and #6, Carry-Through Straps and the Large and Small Doublers (rivet grip length to be verified on installation) (See Figure 37).
- 12) Install quantity of four MS20470AD5 rivets through the Large and Small Doublers, Rib #5 and #6 and the Carry-Through Straps (rivet grip length to be verified on installation) (See Figure 37).
- 13) Install quantity of two MS20470AD5 rivets through the Large Doubler, Rib #5 and #6 and the Carry-Through Straps (rivet grip length to be verified on installation) (See Figure 37).
- 14) Install quantity of fifteen MS20470AD4 rivets through the lower web of Rib 5 and 6 and the Large and Small Doublers (rivet grip length to be verified on installation) (See Figure 37).

U. Modify Cockpit Door Aft Gusset

- 1) Trim the aft end of the Cockpit Door Aft Gusset(s) by 0.100" +/- 0.005" in the hatched area of Section A-A of Figure 38.
- 2) Apply a primer to the edges that conforms to MIL-PRF-23377F (or later approved revision) or FED-SPEC-TT-P-1757B (or later approved revision).

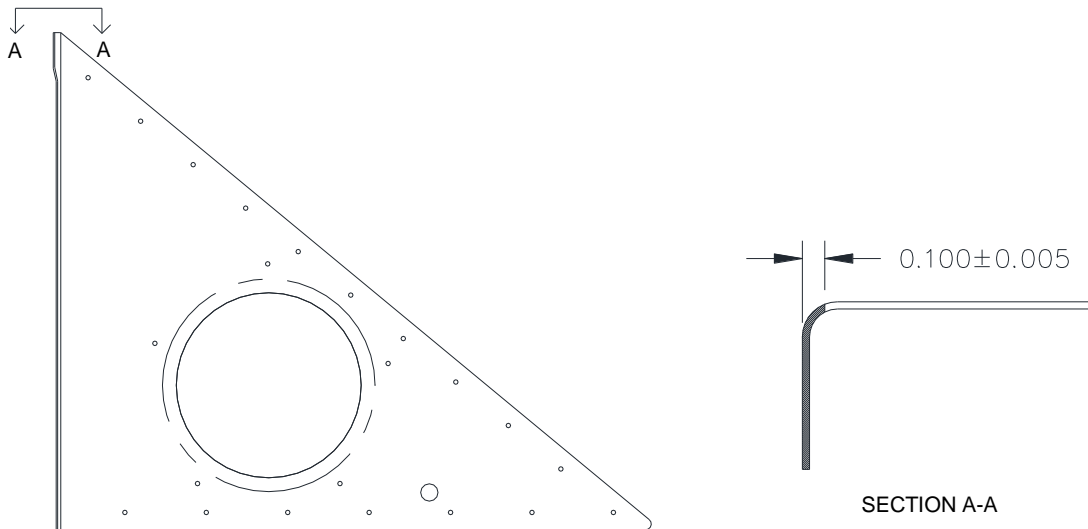


Figure 38: Cockpit Door Aft Gusset modification.

- 3) Clamp the Cockpit Door Aft Gusset in position.

NOTE:

The Long Packer (GA8-532024-051), Short Packer (GA8-532024-053) and Tapered Packer (GA8-532024-055) will be required to ensure the Cockpit Door Aft Gusset Angle will have a pull-up distance of 0.005" or less when attached to the Main Spar Side Pillar Assembly.

If supplied packers are not sufficient, locally fabricate packers to suit from 2024-T3 clad aluminium per SAE-AMS- QQ-A-250/5, to match the Aft Door Gusset Angle profile. Make sure a pull-up distance of less than 0.005" is achieved. Apply a primer to the packer(s) that conforms to MIL-PRF-23377F (or later approved revision) or FED-SPEC-TT-P-1757B (or later approved revision).

- 4) Locate the Aft Door Gusset Angle (GA8-532024-027) against the Cockpit Door Aft Gusset and the Main Spar Side Pillar Assembly, using packers as required.
- 5) Match drill holes from the Main Spar Side Pillar Assembly into the Aft Door Gusset Angle and packer(s), using a #20 drill to a diameter of 0.161" ensuring 0.35", or greater, edge distance is maintained for all holes. (See Figure 39).
- 6) Trim packers as required to match Aft Door Gusset Angle profile, as required.
- 7) Back-drill holes from the Aft Door Gusset Angle into the Cockpit Door Aft Gusset using a #20 drill to a diameter of 0.161" ensuring 0.35", or greater, edge distance is maintained for all holes. (See Figure 39).
- 8) Install CR3213-5 fasteners to attach the Aft Door Gusset Angle to the Cockpit Door Aft Gusset (Assess rivet length on installation).

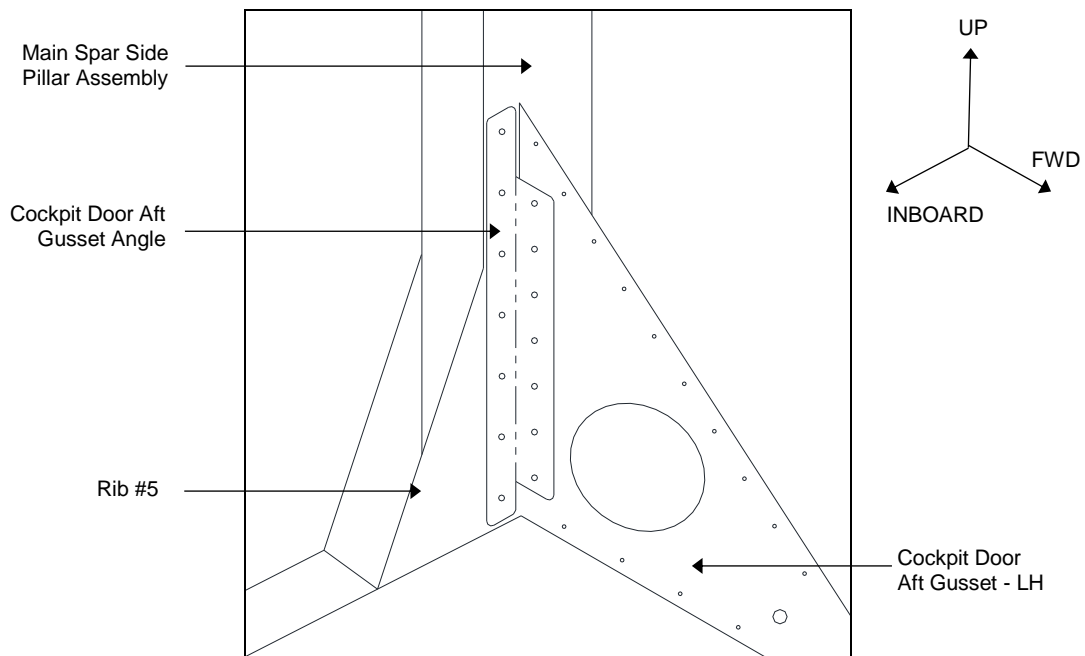


Figure 39: Cockpit Door Aft Gusset Angle attachment (LH shown, RH similar)

V. Replacement Gusset Cap Installation

If seat rail extension is installed:

- 1) Locate replacement Gusset Cap (GA8-532024-025) in position where previous Gusset Cap was located (See Figure 16 and 20). Trim as required to avoid fouling on the Small Doubler(s) or Cockpit Door Aft Gusset Angle. De-burr newly exposed edges and prime using MIL-PRF-23377 or equivalent primer.
- 2) Ensure edge distance is 0.325" or greater for all holes, and match drill the holes from Rib#5 and #6 into the flanges of the replacement Gusset Cap, and.
- 3) Install the Gusset Cap using CR3213-5 rivets (assess rivet length on installation).

If seat rail extension is not installed:

- 4) Install removed Gusset Cap using the same fasteners.

W. Modify Centre Floor Skin

For aircraft not incorporating the crew seat rail extension SB-GA8-2008-48, (e.g. SN 01-006 to 09-149), the Centre Floor Skin (GA8-533022-147) must be modified to permit re-installation of solid rivets along its edges.

CAUTION:

ENSURE THAT THE UNDERFLOOR STRUCTURE, FUEL SYSTEM AND ELECTRICAL SYSTEMS ARE NOT DAMAGED WHEN CUTTING OUT THE FLOOR SKIN.

- 1) Do Part 3-G of this Service Bulletin to incorporate the three access holes.

X. Systems and Equipment Re-installation and Checks

- 1) Install the aileron cable and conduit removed in Part 4-L and apply a neutral cure sealant at the conduit penetration through Ribs #5 and #6.
- 2) Place removed/moved Rib #7 Assy(s) back in position and install using MS20470AD4 rivets. Ensure correct orientation of Rib #7 Assy(s).
- 3) Place removed Intercostal Rib(s) in position and install to the belly skin using MS20470AD4 rivets.
- 4) Install Cockpit Floor Skin and Centre Floor Skin using the same type of rivets as were removed, and ensuring to reinstall the same type of anchor nuts as applicable.
- 5) Install the fittings and fuel vent lines removed in Part 4-K.

- 6) Install the fittings and fuel lines removed in Part 4-I. Ensure the re-installed Wall Lower Fuel Line(s) are outboard of the aileron cable conduit.
- 7) Perform a fuel system flow rate check in accordance with Section 28-20-50 of the GA8 or GA8-TC 320 Service Manual, ensuring there are no leaks.
- 8) Install the Wing Root Fairing and Pilot's Grab Handle on the RHS of aircraft, if RHS was affected.
- 9) Install the Sidewall Components removed in Part 4-J and/or 4-K, including the modified Cockpit Door Aft Gusset(s), ensuring correct pulley installation and routing of aileron cables through pulleys behind the Cockpit Door Aft Gusset(s) and the Aileron Pulley Bracket Covers(s).
- 10) Conduct a Ground Power Test in accordance with Appendix 1 of this Service Bulletin.
- 11) Rig the aileron control system and carry out a functional check including free play and travel limits as specified in Section 27-10-70 of the GA8 or GA8-TC 320 Service Manual.
- 12) Attach the Flap Lever cables disconnected in Part 4-F. Re-install the Flap Lever Assembly.
- 13) Rig the Flap Control System and carry out a functional check including travel limits as specified in Section 27-50-15 of the GA8 or GA8-TC 320 Service Manual.
- 14) Install the Console Recess Assembly and ensure Fire Extinguisher is in correct position.
- 15) Attach the Wing Strut to the fuselage in accordance with Section 57-10-10 of the GA8 or GA8-TC 320 Service Manual, and check wing rigging.
- 16) Install the Battery Box, and then install the Battery removed in Part 4-C. Conduct an electrical systems check in accordance with Section 24-00-10 of the GA8 or GA8-TC 320 Service Manual.
- 17) Install the floor access panels and covers removed in Part 4-D using same fasteners.
- 18) If Part 4-W was implemented, then install the GA8-533028-033 Cover Plate over the round access hole created in Part 4-W, and the GA8-533028-047 Cover Plates over the oval-shaped access hole using CR3213-4 Cherry-max rivets into the satellite holes (assess rivet length on installation).
- 19) Install the seat rail removed in Part 4-E of this Service Bulletin. Ensure seat rails are installed in correct position and orientation.
- 20) Install the seats and restraint equipment removed in Part 4-B in accordance with Sections 25-10-01, 25-10-03, 25-20-01 and 25-20-02 of the GA8 or GA8-TC 320 Service Manual.
- 21) Apply a paint conforming to MIL-PRF-85285E (or later revision) Type I Class H, or an aviation urethane, in a colour to match the surrounding area to surfaces and rivet heads as required.
- 22) Install the Cabin Wall Trim and Floor Coverings removed in Part 4-B of this Service Bulletin.
- 23) Complete the logbook entries as required in the documentation section.

Part 5 – Rib Replacement

NOTE:

Installation of replacement Ribs on one side of the aircraft is permitted, but both the forward and aft doublers must be installed.

A. Prepare Aircraft For Modification

- 1) Jack and shore the aircraft and support the wing for wing strut removal in accordance with Chapter 7 of the applicable aircraft Service Manual.
- 2) Disconnect the wing strut at the fuselage attachment in accordance with Chapter 57 of the GA8 or GA8-TC 320 Service Manual.

B. Remove seats, Restraint Equipment, Floor Coverings and Cabin Wall Trim

- 1) Do Part 4-B of this Service Bulletin to remove all Seats and Restraint Systems.

C. Remove Battery, Fuselage Floor Access Panels and Crew Seat Rails

- 1) Do Parts 4-C, 4-D and 4-E of this Service Bulletin to remove the Battery, Fuselage Floor Access Panels and Crew Seat Rails.

D. Remove Flap Lever Assembly

- 1) Do Part 4-F of this Service Bulletin to remove the Flap Lever Assembly.

E. De-riquet Cockpit Floor Skin and Seat Rail Intercostal Rib

CAUTION:

ENSURE THAT THE UNDERFLOOR STRUCTURE, FUEL SYSTEM AND ELECTRICAL SYSTEMS ARE NOT DAMAGED WHEN CUTTING OUT THE FLOOR SKIN.

NOTE:

Note the rivet types removed for the Cockpit Floor Skin, Seat Rail Intercostal Ribs and Seat Rail Rib Aft LH and RH. These rivet types must be used during re-installation.

- 1) Do Part 4-G of this Service Bulletin to de-riquet the Cockpit Floor Skin and Seat Rail Intercostal Rib.
- 2) De-riquet and remove the Seat Rail Rib Aft LH and RH (GA8-532023-253 and -257) (See Figure 32). This may require the removal of some PR1422 sealant on the forward flange. Ensure no damage to surrounding structure when removing sealant.

F. De-riquet Centre Floor Skin and Rib#7 Assy

CAUTION:

ENSURE THAT THE UNDERFLOOR STRUCTURE, FUEL SYSTEM AND ELECTRICAL SYSTEMS ARE NOT DAMAGED WHEN CUTTING OUT THE FLOOR SKIN.

NOTE:

Note the rivet types removed for the Centre Floor Skin and Rib #7 Assemblies. These rivet types must be used during re-installation.

- 1) Do Part 4-H of this Service Bulletin to de-riquet the Centre Floor Skin and Rib #7 Assy.
- 2) Bleed Brake system.
- 3) Remove the nuts attaching the brake lines aft of outboard Rib #7. Remove the brake lines. Cap the ends to avoid foreign material entering the lines.
- 4) Remove Rib #7 Assemblies, if not already removed.

G. Disconnect Fuel Inlet Lines

WARNING:

ENSURE THAT ANY FUEL CONTAINED WITHIN THE LINE IS DRAINED PROPERLY AND THE AREA IS WELL VENTILATED. ELECTRIC POWER TOOLS SHOULD NOT BE USED WITHIN THE AREA CONTAINING FUEL AND FUEL FUMES. SEE SERVICE MANUAL CHAPTER 28-00-10 FOR GENERAL PRECAUTIONS REGARDING FUEL SYSTEM MAINTENANCE

CAUTION:

CAP DISCONNECTED LINES AND COVER CONNECTIONS TO PREVENT THREAD DAMAGE OR THE ENTRANCE OF ANY FOREIGN MATERIAL

- 1) Do Part 4-I of this Service Bulletin to disconnect applicable fuel lines.
- 2) Disconnect the nuts on fuel lines attaching to the rear of the sump tank.
- 3) Remove all fuel lines, boost pumps and valves installed in the bay immediately outboard of the RH Keel and aft of the sump tank, to allow access for installing rivets to Rib#5 RH.
- 4) For aircraft with the Mk I fuel system, remove the fuel strainer bowls.
- 5) For aircraft with the Mk II fuel system, remove the fuel strainer bowl only if required, by removing the screws attaching to the studs at the rear of the Sump Tank. Cover the Sump Tank opening to avoid foreign material entering.
- 6) De-rivet the Fuel Pipe Hanger Bracket (GA8-532021-227) from Rib #5 RH.

H. Remove Sidewall and Floor Components at Rib #5 LHS and Rib #5 RHS

NOTE:

*Note the rivet types removed for the various components.
These rivet types must be used during re-installation.*

- 1) For Rib#5 LHS, do Part 4-J of this Service Bulletin to remove applicable side-wall and floor components.
- 2) For Rib#5 RHS, do Part 4-K of this Service Bulletin to remove applicable side-wall and floor components.

I. Remove Forward Aileron Cable and Conduit

- 1) Do Part 4-L of this Service Bulletin to remove Forward Aileron Cable and Conduit.

J. Removal of electrical wiring from Ribs #5 and #6

CAUTION

TAKE CARE WHEN CUTTING CABLE-TIES AND AVOID DAMAGE TO WIRES.

The electrical wiring loom passes through Rib #5 and #6 LH and RH. To facilitate the removal of these ribs and installation of replacement ribs, the electrical wiring shall be moved be clear of these ribs.

- 1) Remove LHS trim to left of pilot foot well.
- 2) Remove flight instrument panel.
- 3) Remove kick panel.
- 4) Lower and secure the electrical overhead panel. For Amendment 54 aircraft, electrical disconnects will be present.
- 5) Disconnect J102, P104, P101, P105 and J103. Mark each wire end with the connector housing number e.g. J102. De pin each connector housing.
- 6) Locate connector housing J12 and J09 (Sump Tank Sensors). Disconnect. Label. De pin.

- 7) Locate connector housing J07 (Liquid Level Sensor). Disconnect. Label. De pin.
- 8) Locate connector housing J08 (Liquid Level Sensor). Disconnect. Label. De pin.
- 9) Locate connector housing J47 (Passenger Mic and headphones). Disconnect. Label. De pin.
- 10) Locate connector housing J48 (Passenger mic and headphones). Disconnect. Label. De pin.
- 11) Locate wire PB4B8 attached to the 50A Bus 1 Main Circuit Breaker. Disconnect and drag aft through RH ribs # 5 and #6.
- 12) Locate wire PB2B6 attached to the 70A Bus 2 Main Circuit Breaker. Disconnect and drag aft through RH ribs # 5 and #6.
- 13) Follow the various routing of the wiring aft of Rib #6 LH (or Rib #6 RH if applicable), this may require removal of further Fuselage Inspection Panels, Wall Trim Panels, Tailcone Blanking panel or Aft Luggage Bin.
- 14) Cables that are routed from the electrical overhead panel to the firewall shall be "dragged" forward with exception of circuits PB4B8 and PB2B6.
- 15) If fitted, remove the coaxial connector fitted to the coaxial cables used for the forward GPS antenna, COM1 and COM 2. Carefully draw these cables forward. Take care to avoid damaging these cable by allowing a kink to develop.

K. Removal of Pitot-Static sense tubes from Ribs #5 and #6

The Pitot-Static tubes passes through Rib #5 and #6 LH. To facilitate the removal of these ribs and installation of replacement ribs, the sense tubes shall be moved be clear of these ribs. See Chapter 34-10-00 of the GA8 and GA8-TC 320 Service Manual for pitot static layout.

- 1) If there is a Pitot-Static Drain in the underfloor area behind Rib #7 LH, then disconnect the sense tubes on the cockpit side and pull sense tubes forward of Rib #5.
- 2) If there is no Pitot Static drain, then disconnect the Pitot-Static sense tubes from the connector in the LH wing root and pull sense tubes forward along their current path until ultimately forward of Rib #5.
- 3) All open pitot or static lines shall be covered with tape to prevent ingress of contaminants (eg dust, moisture).
- 4) Stow lines out of the way so that work may be completed on the Ribs.

L. Trim Floor Skin around Main Spar Side Pillar Assembly

- 1) Do Part 4-Q of this Service Bulletin to trim the floor skin.

M. Remove Pick-Up Straps from Ribs #5 and #6

- 5) Do Part 4-M of this Service Bulletin to remove the Pick-Up Straps from Ribs #5 and #6.

N. Remove Rivets from Ribs #5 and #6

- 1) Measure the thickness of the wing strut lugs to within 0.001"
- 2) Locally fabricate a Spacer from tube or round bar with an inside diameter of 0.630" +0.020"/-0.000", an outside diameter of no more than 1" and a length of the measured value from the previous step +/-0.001".
- 3) Remove the machined Inboard Fitting from the rear of Rib #6, if applicable.

CAUTION:

WHEN REMOVING ALUMINIUM RIVETS FROM THE RIB OR STRAPS, DO NOT DRILL THROUGH THE RIB OR STRAPS. DRILL THROUGH THE RIVET HEAD ONLY AND CAREULLY DRIVE THE RIVET SHANK OUT OF THE FLANGE WITH A PIN PUNCH OF A SMALLER DIAMETER THAN THE RIVET SHANK.

CAUTION:

WHEN DRILLING OUT RIVETS THROUGH KEEL ENSURE NO CABLES, OR BRAKE LINES ARE DAMAGED.

NOTE:

*Note the rivet types removed from Ribs #5 and #6.
These rivet types must be used during re-installation.*

CAUTION:

TO MAINTAIN AIRCRAFT ALIGNMENT REMOVE ONLY ONE RIB AT A TIME.

- 4) Remove all rivets attaching Ribs #5 OR #6, including through Long, Short and Intermediate Straps, Main Spar Side Pillar Assembly, Belly Skin, Floor Attach Angle, and also the Keel.
- 5) Remove Ribs #5 or #6, and the Floor Attach Angle.

O. Transfer Holes to Large and Small Doublers and Ribs #5 and #6

CAUTION:

**ENSURE THAT HOLES ARE NOT OVERSIZED OR DAMAGED
WHEN MATCH DRILLING HOLES THROUGH THE RIBS AND/OR
DOUBLERS.**

NOTE:

Use the 0.625" hole as the primary datum to locate and position a Pick-Up Strap. Keep the vertical edge of a Pick-Up Strap parallel to the Large and Small Doubler edges when locating and transferring fastener holes.

- 1) Put the removed Fwd Pick-Up Strap removed in Part 5-M together with Large and Small Doublers (GA8-532024-031/-033/-035/-037) so the 0.625" holes align.
- 2) Put the removed Aft Pick-Up Strap removed in Part 5-M together with Large and Small Doublers (GA8-532024-031/-033/-035/-037) so the 0.625" holes align.
- 3) Match drill fastener hole locations and diameters from the Fwd and Aft Strut Pick-Up Straps to the Large and Small Doublers (GA8-532024-031/-033/-035/-037).
- 4) Position replacement Ribs #5 and Rib #6 and temporarily install the wing strut attachment bolt to ensure the lug bore of the Ribs are concentric with the Carry-Through Straps and clamp the Ribs in position.
- 5) Match drill holes to the replacement Ribs #5 and #6 at existing locations in the Carry-Through Straps, Main Side Spar Pillar Assembly, Keel and Belly Skin (See Figure 40). De-burr all new holes.
- 6) Mark location of the Conduit Hole in the Main Spar Pillar Assembly onto Ribs #5 and #6.
- 7) Pin the Seat Rail Rib Aft – LH and RH, in position on belly skin and Rib #4.
- 8) Match drill holes from the rear flange of the Seat Rail Ribs to the replacement Rib #5. De-burr all new holes.
- 9) Position the Large Doubler on replacement Rib #5 or #6 (See Figure 40) and temporarily install the wing strut attachment bolt to ensure the lug bore of the doublers are concentric with the Rib and Carry-Through Straps and clamp the doubler in position.

NOTE:

5/32" fastener hole diameter: 0.161" (#20 drill)

1/8" fastener hole diameter: 0.129" (#30 drill)

- 10) Match drill holes to the Large Doubler at existing strap locations in the Rib.
- 11) Mark location of the Conduit Hole in the rib onto the Large Doubler.
- 12) Drill new holes using a #20 drill, to a diameter of 0.161", into the replacement Ribs #5 and #6 using the pilot hole locations of the Large Doublers which exist above the floor skin water-line (See Figure 40).
- 13) Drill 15 new holes, using a #30 drill, to a diameter of 0.129", through the lower web of the replacement Rib #5 and #6 using the pilot hole locations in the Large Doublers below the floor skin water-line (See Figure 40).
- 14) Remove the Large Doublers. Create the Conduit hole in each Large Doubler and deburr all new holes.
- 15) Transfer hole locations from the Large Doubler to the Small Doubler, ensuring that the lug bores of each doubler are concentric and the outboard vertical edges are aligned.
- 16) De-burr all new holes.

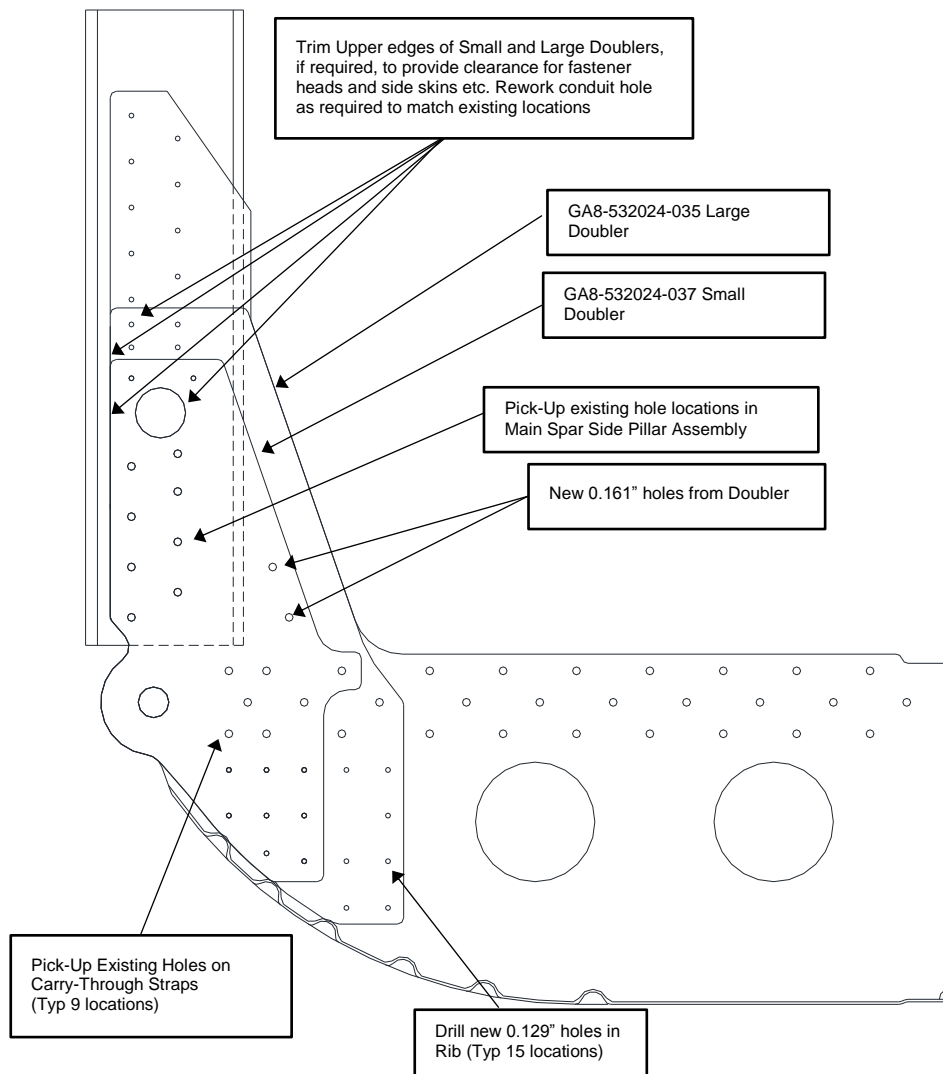


Figure 40: Typical installation of Large and Small Doublers

If extended seat rails are installed, continue, otherwise skip to next Section.

- 17) Pin the Floor Attach angle to Rib #6.
- 18) Place the Inboard Fitting removed in 5-N, below the Floor Attach Angle and against Rib#6. Temporarily install an existing seat rail mounting screw through the rear seat rail attachment hole and into the inboard fitting to fasten the inboard fitting up against the skin/trim angle. (See Figure 41).
- 19) Back-drill holes from the inboard fitting into Rib #6 using a #11 drill to a diameter of 0.191".
- 20) Remove the inboard fitting.
- 21) Remove Rib #6 and Floor Attach Angle and de-burr holes.
- 22) Place an MS21047L3 Anchor nut over each of the 0.191" holes, and using it as a template, back-drill the two rivet holes into Rib #6 using a #40 drill to a diameter of 0.098" (See Figure 41).
- 23) Countersink these 0.098" holes on the Inboard Fitting side of the Rib, to a depth to suit the head of an MS20426AD3 rivet.
- 24) Install the MS21047L3 anchor nuts to Rib#5 using MS20426AD3 rivets (assess rivet length on installation) (See Figure 41).

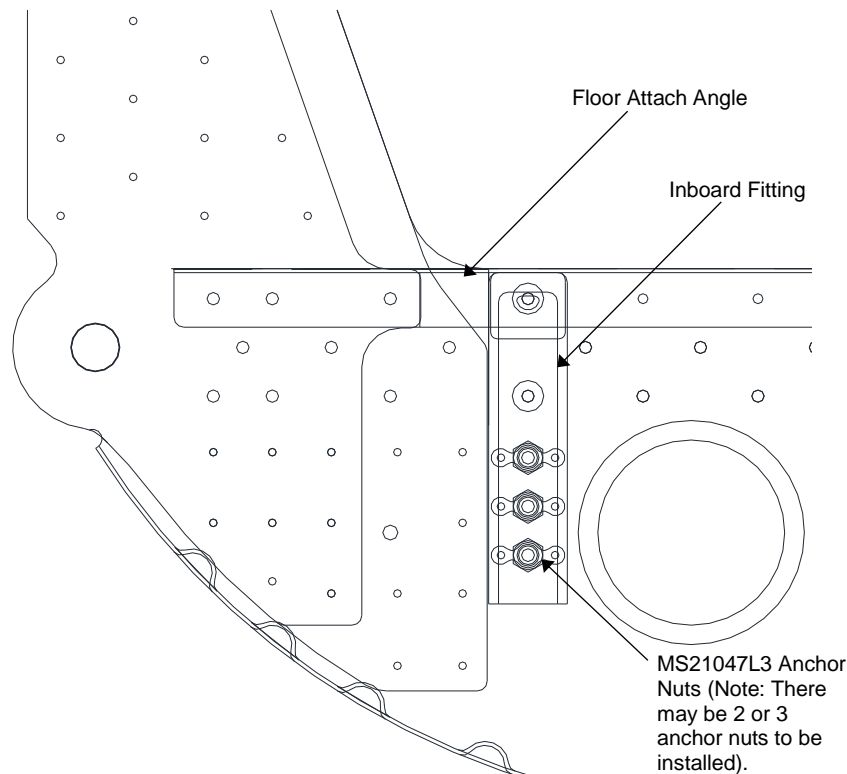


Figure 41: Inboard Fitting anchor-nut installation

P. Install Replacement Ribs #5 and 6, and the new Permanent Doublers

- 1) Position the replacement Rib and the Small and Large Doublers in place (See Figure 40). Place the Spacer, from Part 5-N, between the Carry-Through Straps so that the Wing Strut attachment bolt may pass through the Spacer.
- 2) Temporarily attach the Wing Strut attachment bolt to ensure the lug bores of the Doublers are concentric with the Rib and Carry-Through Straps. Pin the Floor Attach Angle back in place.
- 3) Verify adequate clearance is provided from adjacent structure including: the Floor Attach Angle, Cabin Side-Wall Skins (See Figure 40). Ensure that the Large Doubler inboard vertical edge does not project beyond the Rib #5 and #6 inboard edge profile. If adequate clearance exists with Large and Small Doublers in position then proceed to Step (10) otherwise continue with Steps (4) through (9) as necessary.
- 4) Trim, if required, the outboard end of Floor Attach Angle to ensure clearance from the Large and Small Doublers (See Figure 40).
- 5) Trim, if required, the upper edges of the Large and Small Doublers to ensure adequate structural clearance from the Cabin Side-Wall Skins and to avoid fouling on any rivet heads (See Figure 40).
- 6) Trim, if required, the penetration holes in the Large and Small Doublers to provide clearance for the aileron cable conduit penetration (See Figure 40).
- 7) Trim, if required, the inboard upper edge of the Large Doubler to ensure it is flush with the Rib #5 and #6 inboard edge profile.
- 8) Re-prime all re-worked edges using MIL-PRF-23377 or equivalent primer.
- 9) Re-attach the Large and Small Doublers using the wing strut attachment bolt to locate bores concentrically. Clamp the doublers in position to prevent movement during fastener installation.

NOTE:

*Note the location where the rear flange Cockpit Door Aft Gusset – LH or RH was installed into Rib # 5, and also the location of Rib #5 and #6 where the Gusset Cap is installed. **DO NOT** install rivets into these holes at this stage.*

- 10) Install the replacement Rib #5 and Rib #6 to the belly skin and keel using the same type and size rivets as removed earlier.

- 11) Pin the Seat Rail Rib Aft – LH and RH to Rib #5, Rib #4 and the belly skin. Install the same type of rivets to install the Seat Rail Rib Aft to Rib #5. (Rivet length to be assessed on installation).
- 12) Install CR3213-5 rivets (confirm grip length prior to installation) at the existing hole locations in the Rib and Main Spar Side Pillar Assembly above the Floor Skin waterline.
- 13) Install three MS20470AD5 rivets through the Floor Attach Angle, Rib #5 and #6, Carry-Through Straps and the Large and Small Doublers (rivet grip length to be verified on installation) (See Figure 40).
- 14) Install quantity of four MS20470AD5 rivets through the Large and Small Doublers, Rib #5 and #6 and the Carry-Through Straps (rivet grip length to be verified on installation) (See Figure 40).
- 15) Install quantity of four MS20470AD5 rivets through the Large and Small Doublers, Rib #5 and #6 and the Carry-Through Straps (rivet grip length to be verified on installation) (See Figure 40).
- 16) Install quantity of seven MS20470AD5 rivets through the Floor Attach Angle, Rib #5 and #6 and the Carry-Through Straps (rivet grip length to be verified on installation).
- 17) Install quantity of fourteen MS20470AD5 rivets through the Rib #5 and #6 and the Carry-Through Straps (rivet grip length to be verified on installation).
- 18) Install quantity of two MS20470AD5 rivets through the Large Doubler, Rib #5 and #6 and the Carry-Through Straps (rivet grip length to be verified on installation) (See Figure 40).
- 19) Install quantity of fifteen MS20470AD4 rivets through the lower web of Rib 5 and 6 and the Large and Small Doublers (rivet grip length to be verified on installation) (See Figure 40).
- 20) Install the Inboard Fitting to the rear of Rib #6, if applicable, using existing fasteners.

Q. Modify Cockpit Door Aft Gusset

- 1) Follow all steps in Part 4-U of this Service Bulletin, to modify the Cockpit Door Aft Gusset.

R. Install Replacement Cap

- 1) Place the replacement Gusset Cap (GA8-533028-049) in position of removed Gusset Cap.
- 2) Trim Gusset Cap, as required, to avoid fouling on the Small Doubler(s) or Cockpit Door Aft Gusset Angle. De-burr newly exposed edges and prime using MIL-PRF-23377 or equivalent primer.
- 3) Mark mounting holes on Ribs #5 and #6. Ensure edge distance of marked holes is 0.325" or greater. When satisfied this condition is met, clamp replacement Gusset Cap in place. Match drill holes through the Ribs #5 and #6 and Large Doublers using a #20 drill to a diameter of 0.161".
- 4) Install the Gusset Cap using CR3213-5 Cherry-Max rivets (assess rivet length on installation).

S. Modify Centre Floor Skin, if required.

- 1) Do Part 4-W of this Service Bulletin to modify the Centre Floor Skin.

T. Systems and Equipment Re-installation and Checks

- 1) Install the aileron cable and conduit removed in Part 5-I and apply a neutral cure sealant at the conduit penetration through Ribs #5 and #6.
- 2) Install the Fuel Pump, Fuel Strainer Bowl(s), Fuel Valves and Fuel Lines as were removed in Part 5-G. Trial fit the Fuel Pipe Hanger Bracket in position.
- 3) Back-drill the two mounting holes from the Fuel Pipe Hanger Bracket to Rib #5 using a #20 drill to a diameter of 0.161”.

NOTE:

Strainer Bowl(s) or Fuel Lines may need to be temporarily removed to allow access to rivet the Fuel Pipe Hanger in place.

- 4) Install the Fuel Pipe Hanger Bracket to Rib #5 RH using CR3213-5 rivets (assess length on installation).
- 5) Install brake lines removed in Part 5-F.
- 6) Replenish brake fluid in accordance with Section 12-10-30 of the GA8 or GA8-TC 320 Service Manual.
- 7) Place removed/moved Rib #7 Assy(s) back in position and install to the keel beam and belly skin using MS20470AD4 rivets. Ensure correct orientation of Rib #7 Assy(s).
- 8) Place removed Intercostal Rib(s) in position and install to the belly skin using MS20470AD4 rivets.
- 9) Install Seat Rail Rib Aft – LH and RH to the Belly Skin and to Rib #4 using the same rivets as were removed. Seal either side of the flange attaching the Seat Rail Rib Aft – RH and over the rivet heads/tails per Section 28-10-10 of the GA8 and GA8-TC 320 Service Manual.
- 10) Route electrical wires through Ribs #5 and #6 to their original location.
- 11) For each circuit, using the aircraft's Service Manual and an electrical multimeter with an audible continuity tester, re confirm the crimp contact plug housing number and allocated plug contact number.
- 12) For each electrical housing, ensure each crimp contact is fully seated, secure and not able to dislodge itself out from the housing. Re-terminate the crimp contact if the latter occurs.
- 13) Secure electrical harnesses to cable tie bases or cable stand offs, returning wiring protection to original configuration. This will require replacement of cable ties removed in Section J. "Removal of electrical wiring from Ribs #5 and #6"
- 14) Join each electrical housing to its mating connector.
- 15) Route Pitot-Static sense tubes to the Pitot-Static drain or LH Wing Root, as applicable, to restore to previous configuration.
- 16) Remove tape covering each tube opening.
- 17) Re-join the pitot static system. Do not over tighten nylon threads.
- 18) Test the pitot-static system in accordance with Chapter 34 of the GA8 or GA8-TC 320 Service Manual to confirm that no leaks are present.
- 19) Install Cockpit Floor Skin and Centre Floor Skin using the same type of rivets as were removed, and ensuring to reinstall the same type of anchor nuts as applicable.
- 20) Install the fittings and fuel vent lines removed in Part 5-H.
- 21) Install the fittings and fuel lines in the floor which were removed in Part 5-G. Ensure the re-installed Wall Lower Fuel Line(s) are outboard of the aileron cable conduit.
- 22) Perform a fuel system flow rate check in accordance with Section 28-20-50 of the GA8 or GA8-TC 320 Service Manual, ensuring there are no leaks.
- 23) Install the Wing Root Fairing and Pilot's Grab Handle on the RHS of aircraft, if RHS was affected.
- 24) Install the Sidewall Components removed in Part 5-H, including the modified Cockpit Door Aft Gusset(s), ensuring correct pulley installation and routing of aileron cables

through pulleys behind the Cockpit Door Aft Gusset(s) and the Aileron Pulley Bracket Covers(s).

- 25) Conduct a Ground Power Test in accordance with Appendix 1 of this Service Bulletin.
- 26) Rig the aileron control system and carry out a functional check including free play and travel limits as specified in Section 27-10-70 of the GA8 or GA8-TC 320 Service Manual.
- 27) Attach the Flap Lever cables disconnected in Part 5-D. Re-install the Flap Lever Assembly.
- 28) Rig the Flap Control System and carry out a functional check including travel limits as specified in Section 27-50-15 of the GA8 or GA8-TC 320 Service Manual.
- 29) Install the Console Recess and ensure Fire Extinguisher is in correct position.
- 30) Attach the Wing Strut to the fuselage in accordance with Section 57-10-10 of the GA8 or GA8-TC 320 Service Manual, and check wing rigging.
- 31) Pull all over head circuit breakers.
- 32) Install the Battery Box, and then install the Battery removed in Part 5-C.
- 33) Conduct an electrical systems check in accordance with Section 24-00-10 of the GA8 or GA8-TC 320 Service Manual, including for all disturbed system. Consult GA8 or GA8 Service Manual for wiring diagrams, and also consult applicable Service Manual Supplements contained in the aircraft's Service Manual for wiring diagrams and troubleshooting. The operational test shall cover every function fitted to the electrical overhead panel assembly. Push in one circuit breaker at a time and test that system. At the completion of the test pull the applicable circuit breaker. Complete Appendix 2.
- 34) Push in all circuit breakers in the electrical overhead panel.
- 35) Install the floor access panels and covers removed in Part 5-C using same fasteners.
- 36) If Part 5-S was implemented, then install the GA8-533028-033 Cover Plate over the round access hole created in Part 5-S, and the GA8-533028-047 Cover Plates over the oval-shaped access hole using CR3213-4 Cherry-max rivets into the satellite holes (assess rivet length on installation).
- 37) Install the seat rail removed in Part 5-C of this Service Bulletin. Ensure seat rails are placed back in correct position and orientation.
- 38) Install the seats and restraint equipment removed in Part 5-B in accordance with Sections 25-10-01, 25-10-03, 25-20-01 and 25-20-02 of the GA8 or GA8-TC 320 Service Manual.
- 39) Apply a paint conforming to MIL-PRF-85285E (or later revision) Type I Class H, or an aviation urethane, in a colour to match the surrounding area to surfaces and rivet heads as required.
- 40) Install the Cabin Wall Trim and Floor Coverings removed in Part 5-B of this Service Bulletin.
- 41) Complete the logbook entries as required in the documentation section.

Appendix 1: Ground Power Test

This test is to be conducted after the ground power receptacle and associated wire and ground bar have been returned. It requires a ground power cart.

- 1) Ensure battery is still removed from aircraft. See Section 24-00-10 of Service Manual.
- 2) Pull all under floor circuit breakers
- 3) Pull all overhead circuit breakers
- 4) On the LH Instrument Panel, place the Bus 1/ Bus 2 volt meter switch to position BUS 1 / BATTERY
- 5) On the overhead panel, ensure Bus 1 and Bus 2 Master Off
- 6) Confirm Ground cart is set for 12/14VDC.
- 7) Apply power to ground cart outlet.
- 8) Insert connector to the Ground Power Receptacle.
- 9) Listen for the ground power solenoid to “click in”. This indicates power is being applied to the coil of the ground power field solenoid. Do not proceed if the sound of the solenoid contactor was not heard. Undertake electrical fault finding.
- 10) If ground power cart is fitted with an ampere meter, observe for current flow.
- 11) Push in Bus 1 CONTROL and BUS1 MAIN under-floor circuit breakers
- 12) Push in SYS 1 overhead electrical circuit breaker
- 13) Move Bus 1 Master Switch on overhead panel to ON whilst observing volt meter
- 14) The test is passed if the displayed voltage matches that from the ground power $\pm 0/-0.5V$. If test is not passed, check wiring (See Chapter 24 or the GA8 or GA8-TC 320 Service Manual) and re-test.
- 15) When satisfied with correct operation, move Bus 1 Master Switch to OFF.
- 16) Remove ground power connector from the aircraft.
- 17) The battery box, if removed, and/or battery may be re-installed to the aircraft following this test.

Appendix 2: Electrical System Function Check

This test is to be conducted after the ground power receptacle and associated wire and ground bar has been returned. It requires a ground power cart.

CAUTION:



CONFIRM AIRCRAFT IGNITION KEY IS REMOVED FROM AIRCRAFT IGNITION

Equipment required to performed test:

Variable power supply with current limiting function.

Main Lights.

Action	Technician	Completed Or Record. ✓		
Pull all circuit breakers.				
Make sure All Switches is Off.				
Engage Circuit Breakers on solenoid box.				
Master Switches ON.				
Avionics Switches ON.				
Test operation of NAV Lights. LH wing RH wing Tail		LH	RH	Tail
Record display voltage and current on Volt/Amp meter on Power supply.	VA		
Test operation of Strobe Lights. LH wing RH wing Tail		LH	RH	Tail
Test operation of Landing Lights. (Inner) LH wing RH wing		LH	RH	
Test operation of Taxi Lights. (Outer) LH wing RH wing		LH	RH	
Test operation of Wing Courtesy Light.				
Test operation of Passenger Courtesy Light and Overhead Panel Lamp.				
Test operation of Map Light (<i>Includes dimmer operation</i>).				

Instrument Lighting

Action	Technician.	Completed Or Record. ✓		
Pull all circuit breakers observe that no instrument lighting will come on when switch is operated.				
Engage Instrument Light breaker.				
Test operation of Instrument Dimmer lighting CHT (<i>Very difficult to see</i>); Volt/Amp meter; Oil meter; LH Fuel Gauge; RH Fuel Gauge.		CHT	V/A	Oil
		LH/F	RH/F	
Test operation of Coaming lights and dimmer circuit of Coaming lights.				
Test operation of Overhead Electrical Panel lighting and dimmer circuit.				
Test operation of Standby Compass lighting. (<i>Look for red light on needle</i>)				

Fuel Systems

Action	Technician.	Completed Or Record. ✓	
Test operation of Fuel Pump from Overhead Electrical panel Operate for less than 1 second the Fuel Boost Pump Observe illumination of Fuel Boost lamp			
Push in "START" circuit breaker Depress the "PUSH TO PRIME" switch. Operate for less than 1 second. Observe illumination of Fuel Boost lamp Pull the "START" circuit breaker			
Fuel Flow Transducer indicator type fitted (JPI FS 450 Bus 1) Or (EDM-800 Bus 1 Avionics.)		JPI	EDM
		BUS 1	BUS1/A
Test operation of Fuel Gauges (<i>Pull circuit breaker</i>)			

Indicator Lamps

Action	Technician.	Completed or N/A ✓		
		W/I Oil	VAC Alt.	Pitot Alt/A
Warning Lights Vac, Pitot & Oil = On/illuminated ; ALT = Off Alternate Air (if fitted). (Make sure Caution warning C/B are engaged Bus 1 & 2)				
Warning Light Test if pressed. All lights on?				
Operation of Warning Lamp Dim Switch. Ensure that switch position matches the lamp intensity. All lights on and dimmed except Oil lamp full brightness.		Position		
		Dimmed		
Operation of Alternate Air lamp. (Normally Aspirated engine only). Open and close the control cable. (Requires 1A Stall breaker pushed in)				

Other

Action	Technician.	Completed ✓
Test Voltage at Aux power receptacle. Matches volt amp meter indication.		
Turn Co-Ordinator power flag not present with application of power to the Turn Co-Ordinator.		
Confirm each avionics unit installed powers on. For remote mounted equipment this may be verified by status lights on the unit or by error messages displayed on the avionics display units installed.		

Pitot tube heating

Action	Technician.	Completed ✓
Remove cover from Pitot tube. Apply power to Pitot tube.		
Observe current draw increase, typically 20A on start-up reducing by 10A.		
Observe Heat Pitot lamp off.		
Observe tube heating by touching the tube immediately after power has been applied.		
Turn off Pitot Switch circuit breaker. Observe illuminated Heated Pitot lamp.		
Allow the tube to cool and return the pitot tube cover.		

Fan

Action	Technician.	Completed ✓
Fresh Air Fan Low Setting		
Fresh Air Fan High Setting		

Documentation:

Update aircraft log book to show incorporation of this Service Bulletin.

Continuing Airworthiness:

CAUTION:

INCORPORATION OF PARTS 2, 3, 4 AND/OR 5 ALTER THE AIRWORTHINESS LIMITATIONS FOR RIB #5 AND #6

The inspections detailed in **Part 1** of this shall be conducted at intervals of 100 hours until the affected Rib is replaced in accordance with **Part 5** of this Service Bulletin.

Subject to acceptance by the National Airworthiness Authority in the country of registration, this inspection interval may be extended by up to 10%.

Aircraft modified in accordance with this Service Bulletin at Issue 1

Operators shall contact GippsAero using the Revision to Airworthiness Limitations notice attached to this Service Bulletin. See Service Letter SL-GA8-2016-31 at latest issue for procedures.

Aircraft modified in accordance with Part 2, 3 and/or 4 of this Service Bulletin at Issue 2

Operators shall contact GippsAero using the Revision to Airworthiness Limitations notice attached to this Service Bulletin. See Service Letter SL-GA8-2016-31 at latest issue for procedures.

Aircraft modified in accordance with Part 5 of this Service Bulletin at Issue 2

Chapter 4 of the applicable aircraft Service Manual contains new Airworthiness Limitations for Ribs installed by this Service Bulletin.

Compliance Notice:

Complete the Document Compliance Notice and return to GippsAero by mail, fax or email.

DOCUMENT COMPLIANCE NOTICE



A Mahindra Aerospace Company

Document:

SB-GA8-2013-99

Issue 3

Aircraft Serial Number: GA8-_____

Service Bulletin SB-GA8-2013-99 Issue 3 has been incorporated in the above aircraft.

Part 2 accomplishment:

- LH FWD RIB
- RH FWD RIB
- LH AFT RIB
- RH AFT RIB

Part 5 accomplishment: – Serial numbers for Replacement Rib and Permanent Doublers installed:

LH FWD RIB _____ RH FWD RIB _____

LH AFT RIB _____ RH AFT RIB _____

Aircraft flight hours: _____ Date: _____


Signed _____

Print Name: _____

Please post, fax or email this compliance notice to:

GippsAero Technical Services
P.O. Box 881
Morwell Victoria 3840
Australia
Fax.: +61 03 5172 1201
Email: aircraft.techpubs@mahindraaerospace.com

REVISION TO AIRWORTHINESS LIMITATIONS

 <small>A Mahindra Aerospace Company</small>	Document: SB-GA8-2013-99 Issue 3
----------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------

COMPLETE THIS SECTION AND RETURN TO GIPPSAERO

Fax: +61 (0)3 5172 1201
Email: aircraft.support@mahindraaerospace.com

AIRCRAFT

SERIAL NUMBER	GA8-
REGISTRATION	

AIRCRAFT GROSS WEIGHT

	lb
--	----

AIRCRAFT HOURS

SB-GA8-2013-99 ISSUE 1	PART 1		<i>Blend Repair</i>
SB-GA8-2013-99 ISSUE 3	PART 1		<i>Blend Repair</i>
	PART 3		<i>Temporary Doubler</i>
	PART 4		<i>Permanent Doubler</i>

REVISED AIRWORTHINESS LIMITATIONS

Component	Part Number	Life (hrs)	Requirement
Rib No.6 LH	GA8-532023-37		
Rib No.6 RH	GA8-532023-38		
Rib No.5 LH	GA8-532023-77		
Rib No.5 RH	GA8-532023-78		
Rib No.6 LH	GA8-532023-301		
Rib No.6 RH	GA8-532023-302		
Rib No.5 LH	GA8-532023-303		
Rib No.5 RH	GA8-532023-304		

- THESE AIRWORTHINESS LIMITATIONS SUPERSEDE THOSE PUBLISHED IN CHAPTER 4 OF THE AIRCRAFT SERVICE MANUAL FOR THE PART NUMBERS LISTED
- THE AIRCRAFT LOGBOOK SHALL BE UPDATED TO SELECT THESE NEW AIRWORTHINESS LIMITATIONS