

Service Bulletin

Subject:

Fuel System Ventilation and Drainage Modification.

Applicability:

GA8 Type aircraft S/N:

GA8-02-012, GA8-TC 320-02-16, GA8-TC 320-03-25, GA8-TC 320-09-120 and GA8-08-128 up to GA8/GA8-TC 320-13-205.

Amendments:

1. Nil (initial issue).
2. Figure 5 dimensions amended due to typographical error.
3. Five drain holes added see Figure 5, 6, 7, 8 and 9. Aircraft with cargo pod instructions part 2 added. Applicability changed to include aircraft up to GA8/GA8-TC 320-13-205.
4. Figure 12 illustration improved. Part 2 instruction 24 (m) adhesive type added. Weight and Balance implication included.

Background:

The GA8/GA8-TC 320 aircraft Mk II fuel system features an integral sump tank located in the floor structure forward of the co-pilot seat. Between the aircraft floor skin and the top of the collector tank a compartment exists which is currently not ventilated and drained as required by FAR 23.967(b), See Figure 1. The drainage modification of the compartments adjacent to the integral sump described in earlier issues of this Service Bulletin was deemed unsatisfactory and resulted in five additional drainage holes being implemented as part of this issue, as required by FAR 23.967(b), Figure 10.

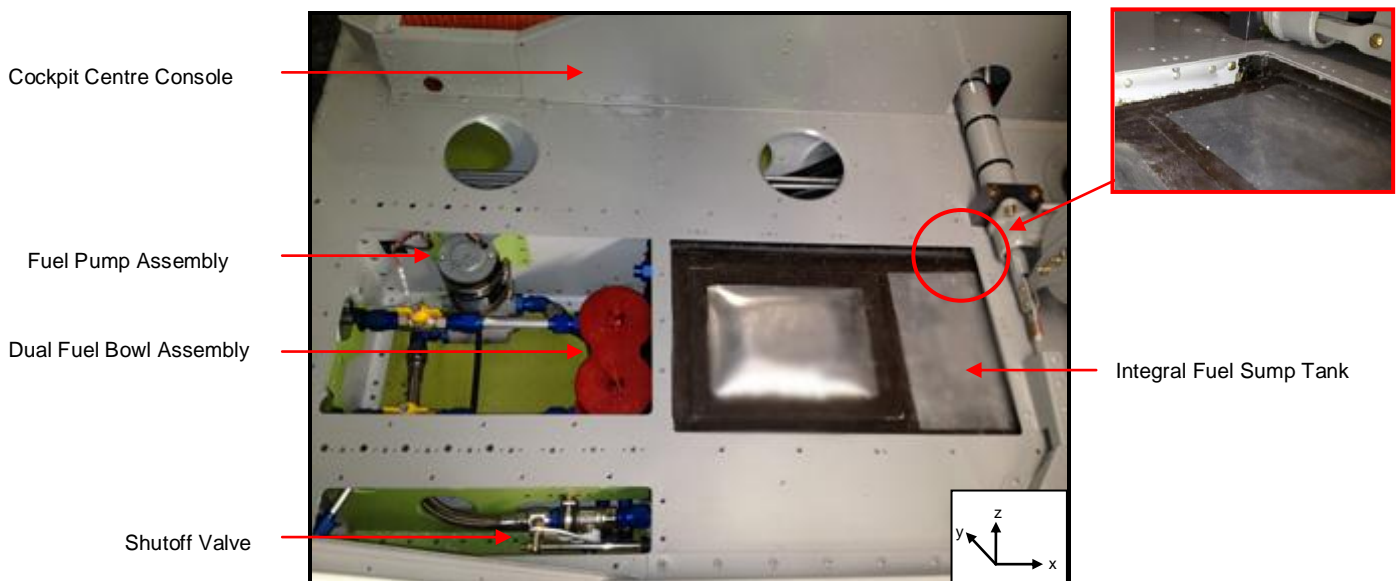


Figure 1

Compliance:

This service bulletin is to be carried out within 3 months or 100 flight hours from receipt of this Service Bulletin, whichever occurs first.

Instructions (Part 1): Fuel System Ventilation and Drainage Modification

The following instructions must be carried out:

1. Remove co-pilot seat from aircraft cabin and stow, Figure 2.
2. Remove fuel pump maintenance inspection panel and stow.
3. Remove co-pilot seat outboard seat rail and stow.
4. Remove sump tank access panel and stow.
5. Remove floor inspection panel forward of co-pilot control column and stow.
6. If applicable, remove cargo pod from aircraft and stow as per installation instruction in SB-GA8-2004-14 (instructions part 2 applicable).

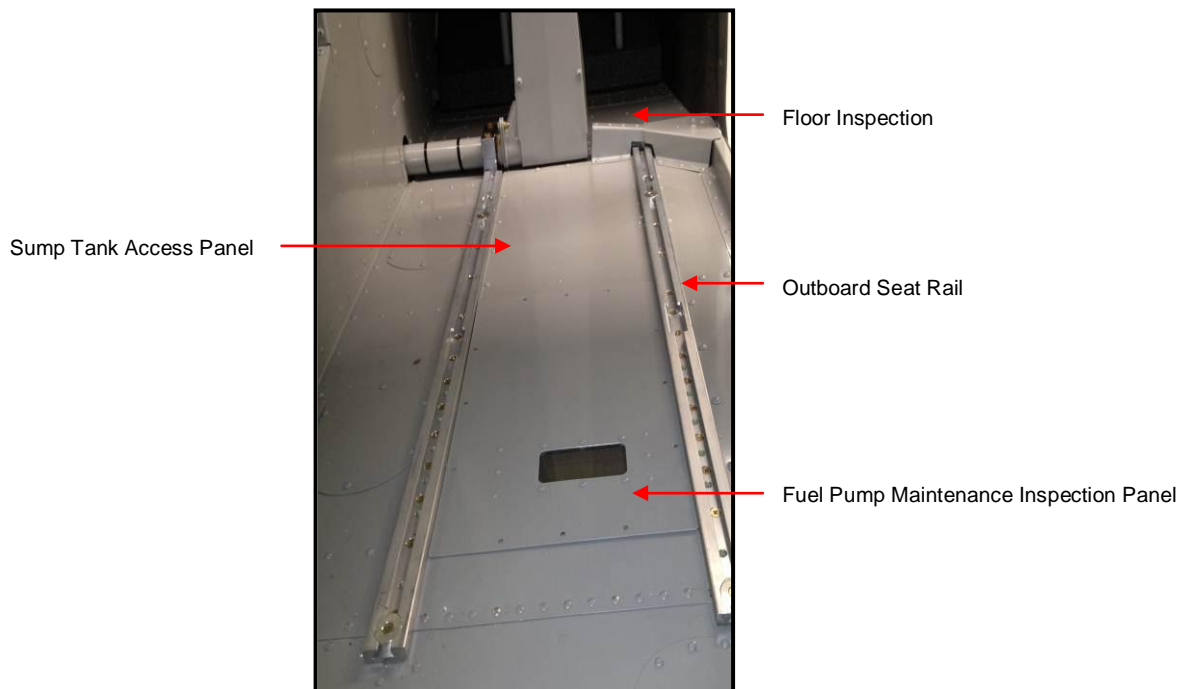


Figure 2

7. Gain access through sump tank access panel and drill $\frac{1}{4}$ in. hole through rib no. 3 RH (GA8-532023-253), Figure 3.
8. Refer to Figure 10.
9. Gain access through floor inspection panel forward of control column and drill $\frac{1}{4}$ in. hole through bottom skin located between no. 2 RH rib (GA8-532023-016) and no. 3 RH rib (GA8-532023-253), Figure 4.
10. Gain access through floor inspection panel forward left of the control panel and drill $\frac{1}{4}$ in. hole through bottom skin located between centre rib no. 2 (GA8-532023-115) and centre rib no. 3 assembly (GA8-532013-055), Figure 5.

11. Drill ¼ in. hole through bottom skin located in board of sump tank, between centre rib no. 4 (GA8-532023-125) and centre rib no. 3 assembly (GA8-532013-055), Figure 6.
12. Drill ¼ in. hole through bottom skin located outboard of sump tank, between no. 3 RH rib (GA8-532023-253) and no. 4 RH rib assembly (GA8-532013-071), Figure 7.
13. Drill ¼ in. hole through bottom skin located inboard of sump tank, between centre rib no. 4 (GA8-532023-125) and centre rib no. 5 (GA8-532013-127), Figure 8.
14. Drill ¼ in. hole through bottom skin located outboard of the seat rail rib RH aft (GA8-532021-259) adjacent to grommet, Figure 9.
15. To prevent moisture from entering the new drain holes (Figure 10), press 'half-moon flute' into surface of skin, Figure 11 (approximate dimensions shown).
16. Deburr holes, visually check using 10X magnification to ensure no hole cracks were induced and prime with suitable aircraft primer.
17. Apply PR1422 between sump tank access panel and floor skin, fit access panel to floor skin ensuring good seal. Refer to applicable Service Manual Chapter 28 for Fuel Tank Sealing Procedures.
18. Fit floor inspection panel forward of co-pilot control column.
19. Fit co-pilot outboard seat rail.
20. Fit fuel pump maintenance inspection panel.
21. Fit co-pilot seat.
22. If applicable, revise cargo pod installation instruction as specified in SB-GA8-2004-14 at latest issue.
23. Record completion of this Service Bulletin in Aircraft Log Book.

NOTE:

All measurements shown in the following figures are in inches.

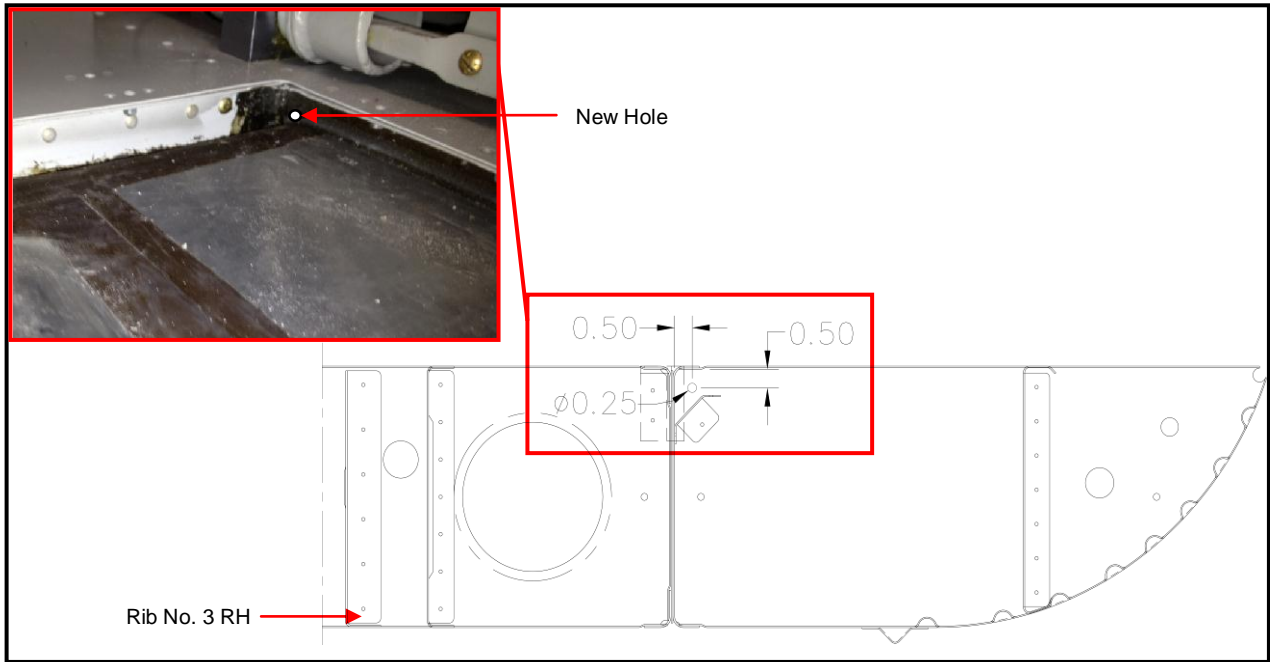


Figure 3: Hole 1 (View looking forward on Rib No. 3)

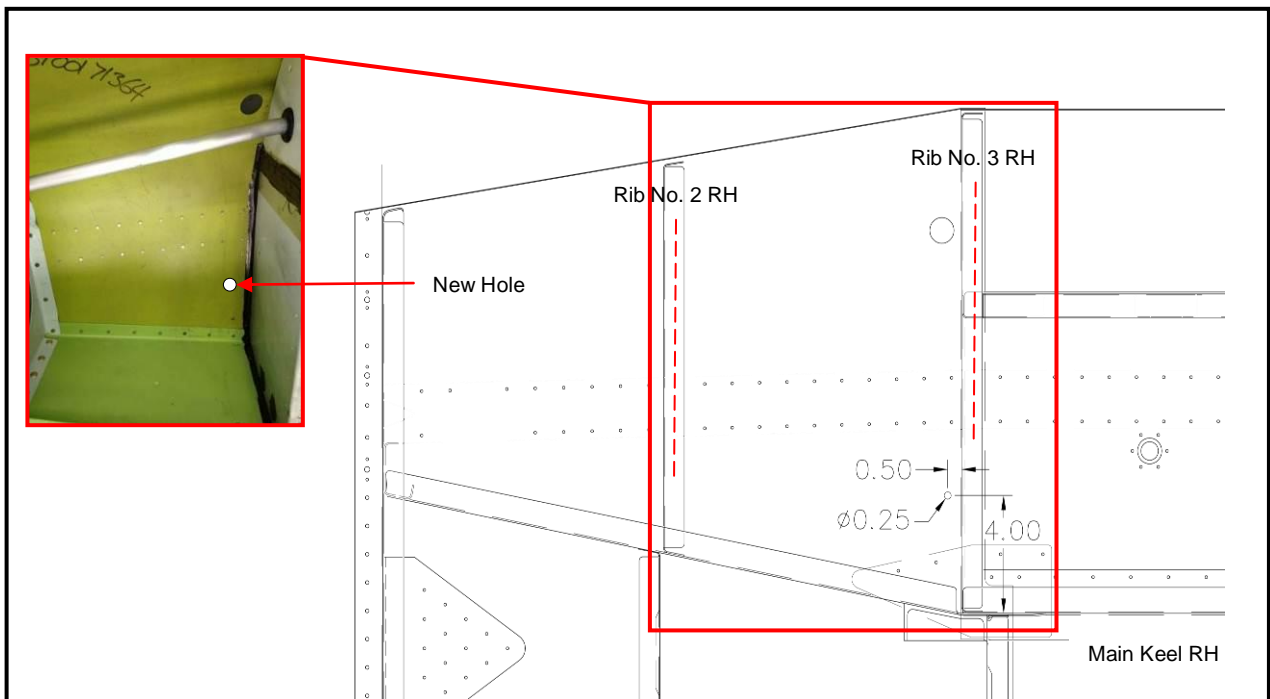


Figure 4: Hole 2 (Belly skin shown from above for clarity, DO NOT REMOVE FLOOR SKIN)

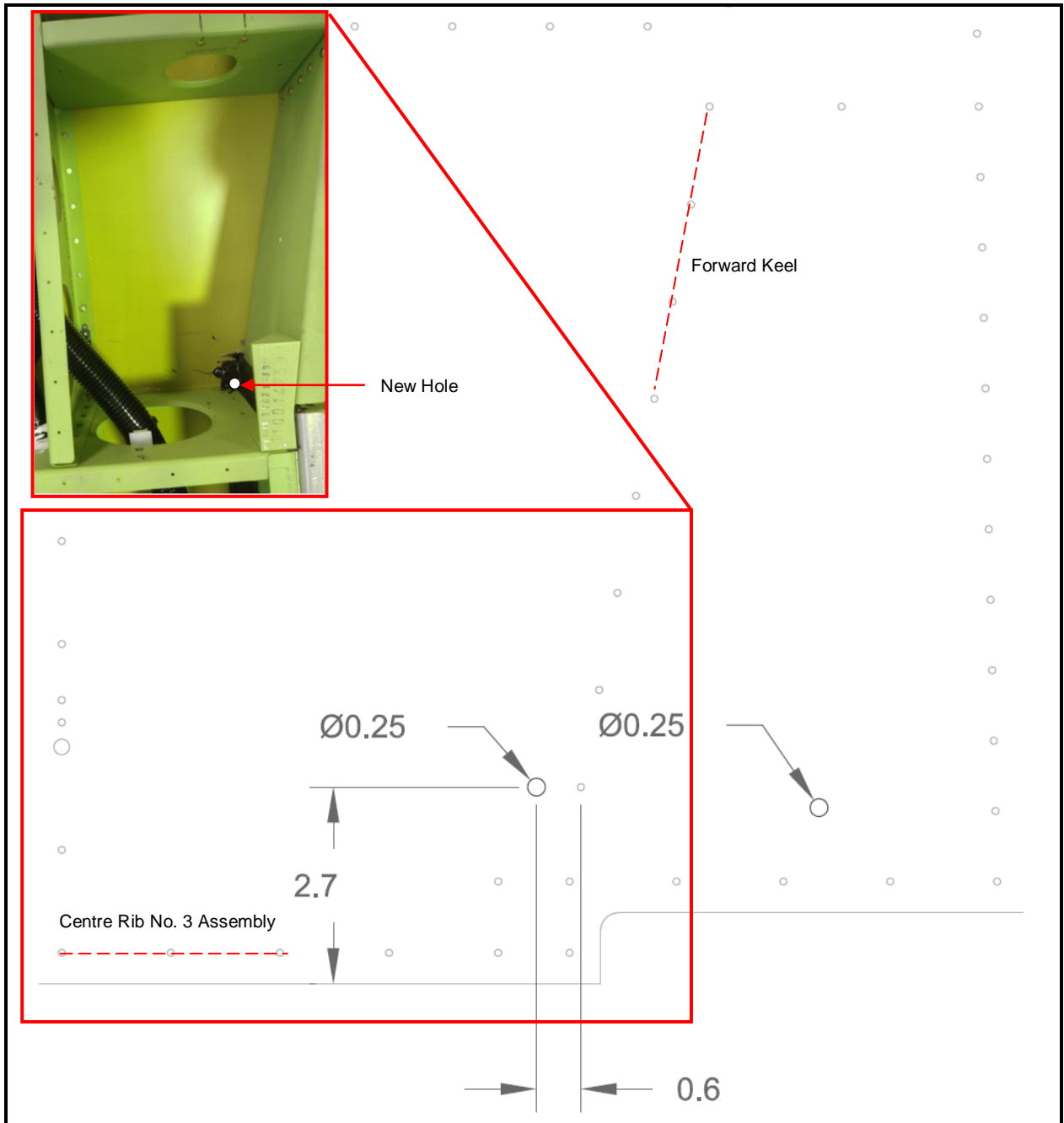


Figure 5: Hole 3 (Belly skin shown from above for clarity, DO NOT REMOVE FLOOR SKIN)

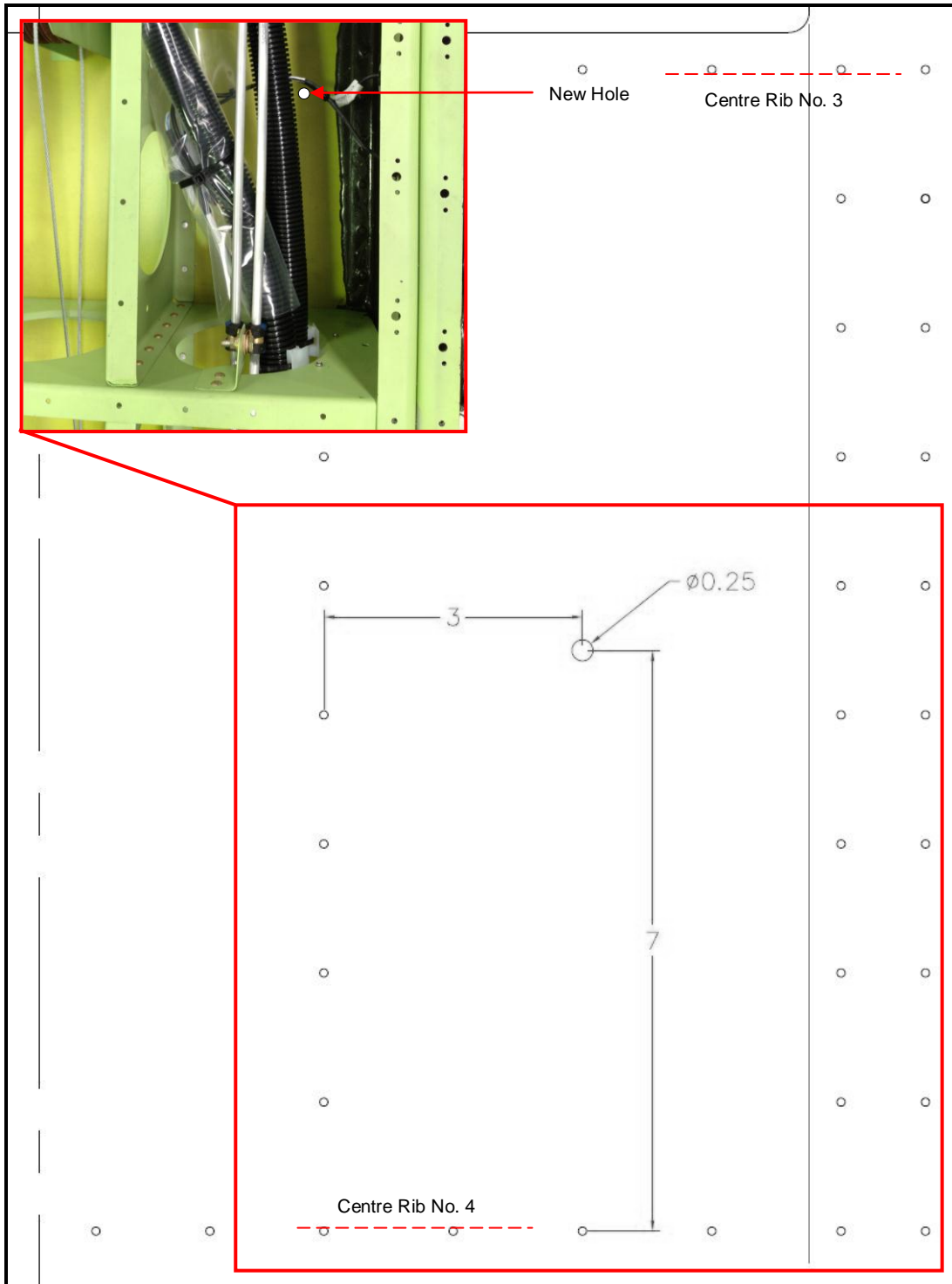


Figure 6: Hole 4 (Belly skin shown from above for clarity, DO NOT REMOVE FLOOR SKIN)

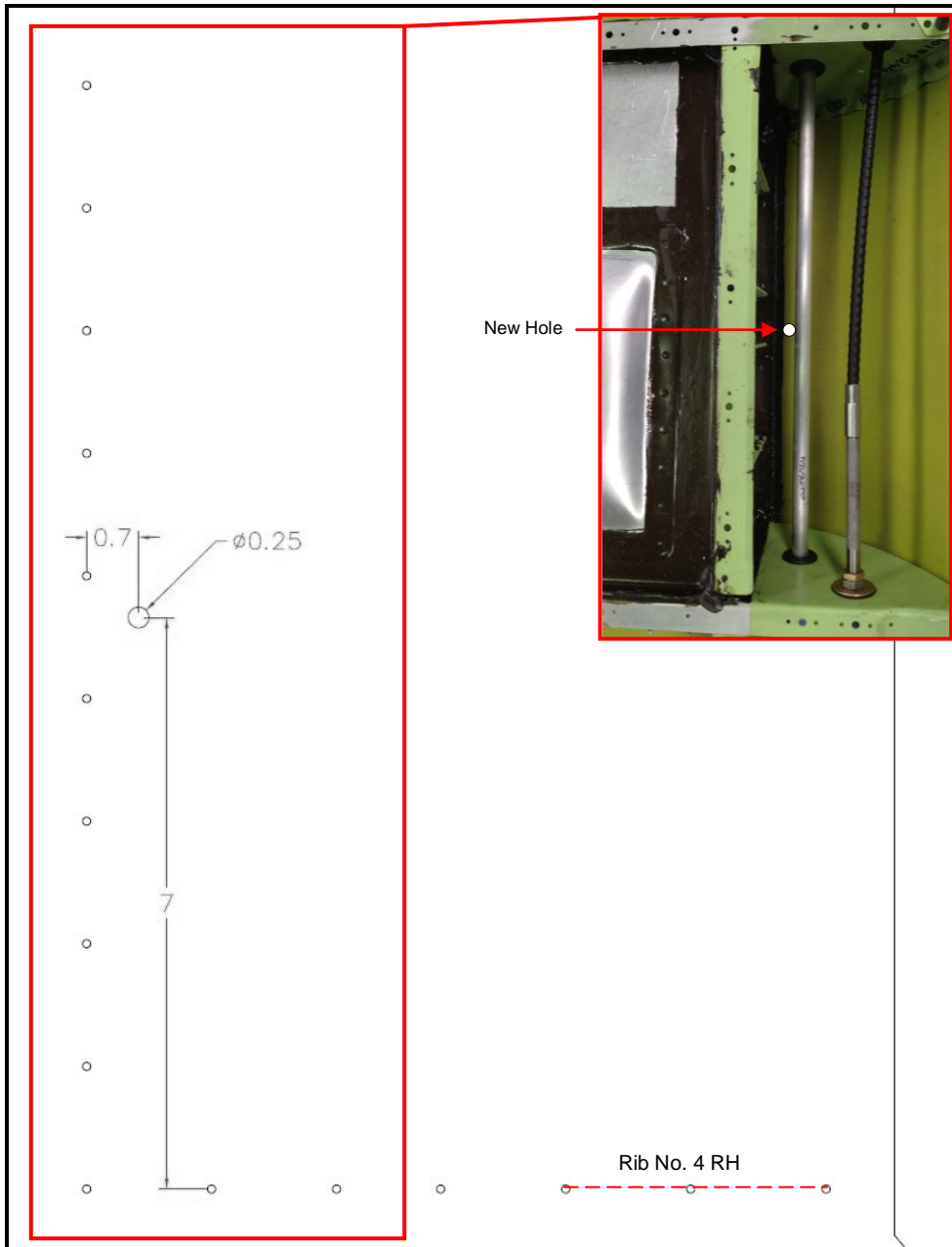


Figure 7: Hole 5 (Belly skin shown from above for clarity, DO NOT REMOVE FLOOR SKIN)

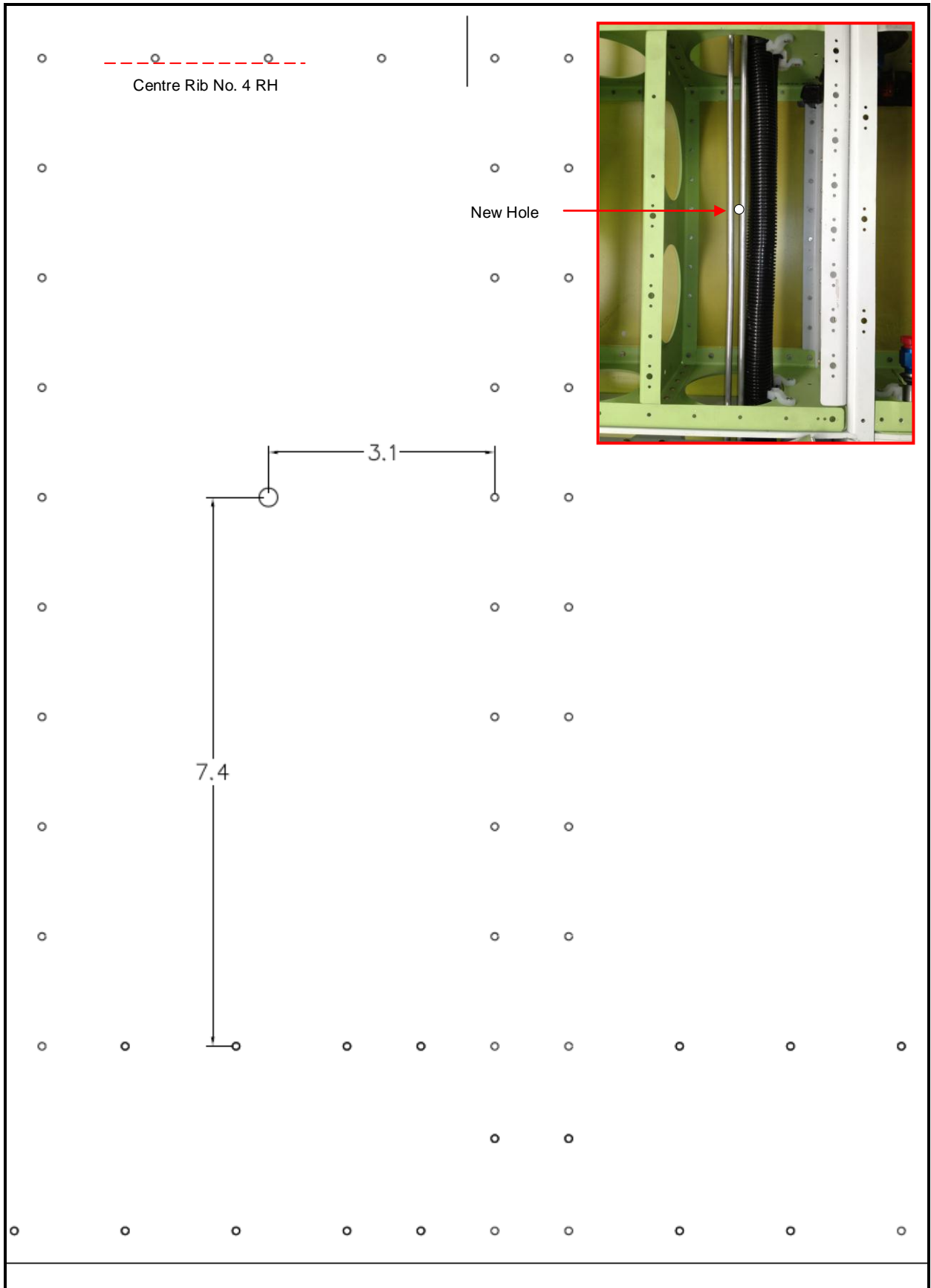


Figure 8: Hole 6 (Belly skin shown from above for clarity, DO NOT REMOVE FLOOR SKIN)

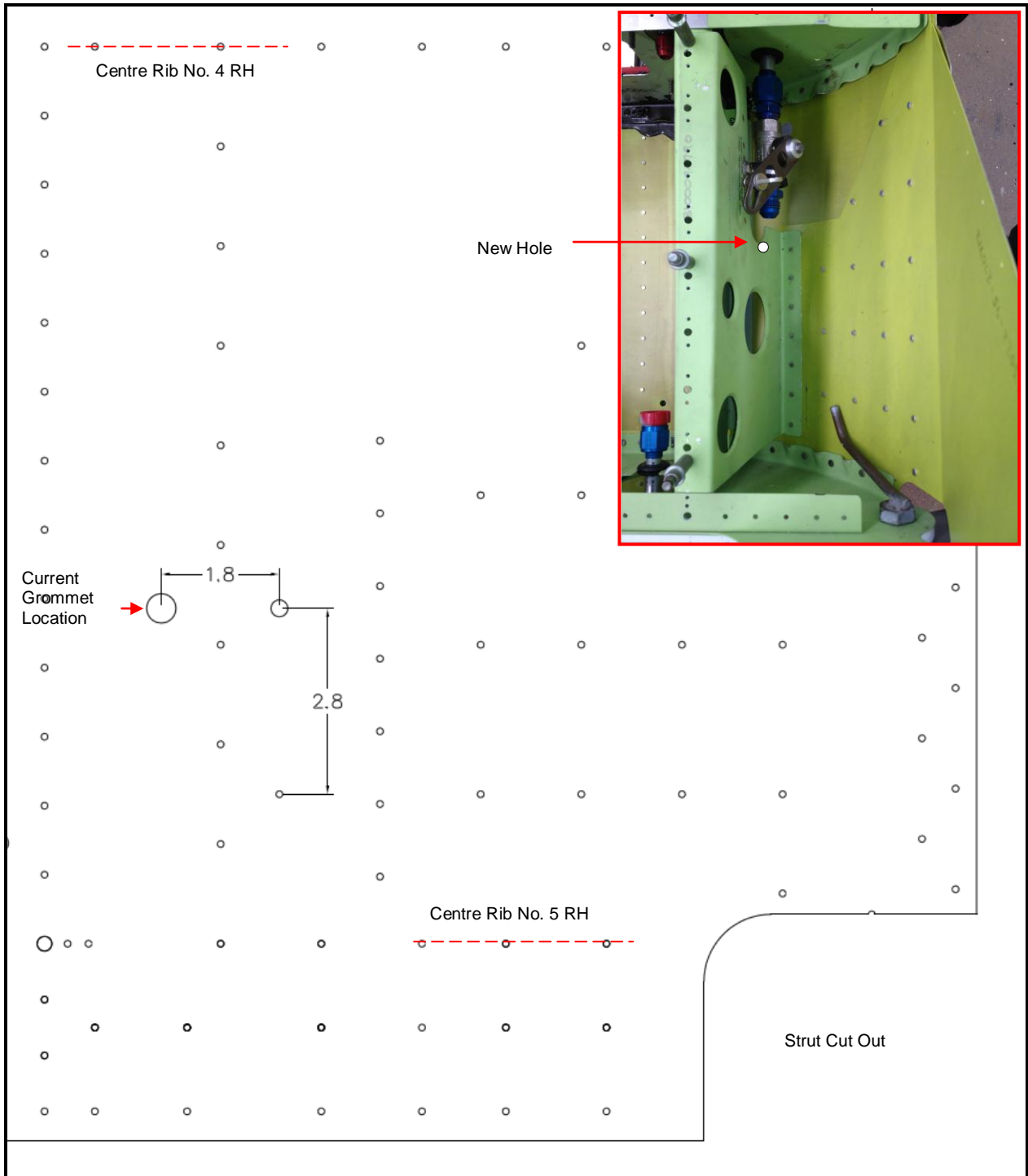


Figure 9: Hole 7 (Belly skin shown from above for clarity, DO NOT REMOVE FLOOR SKIN)

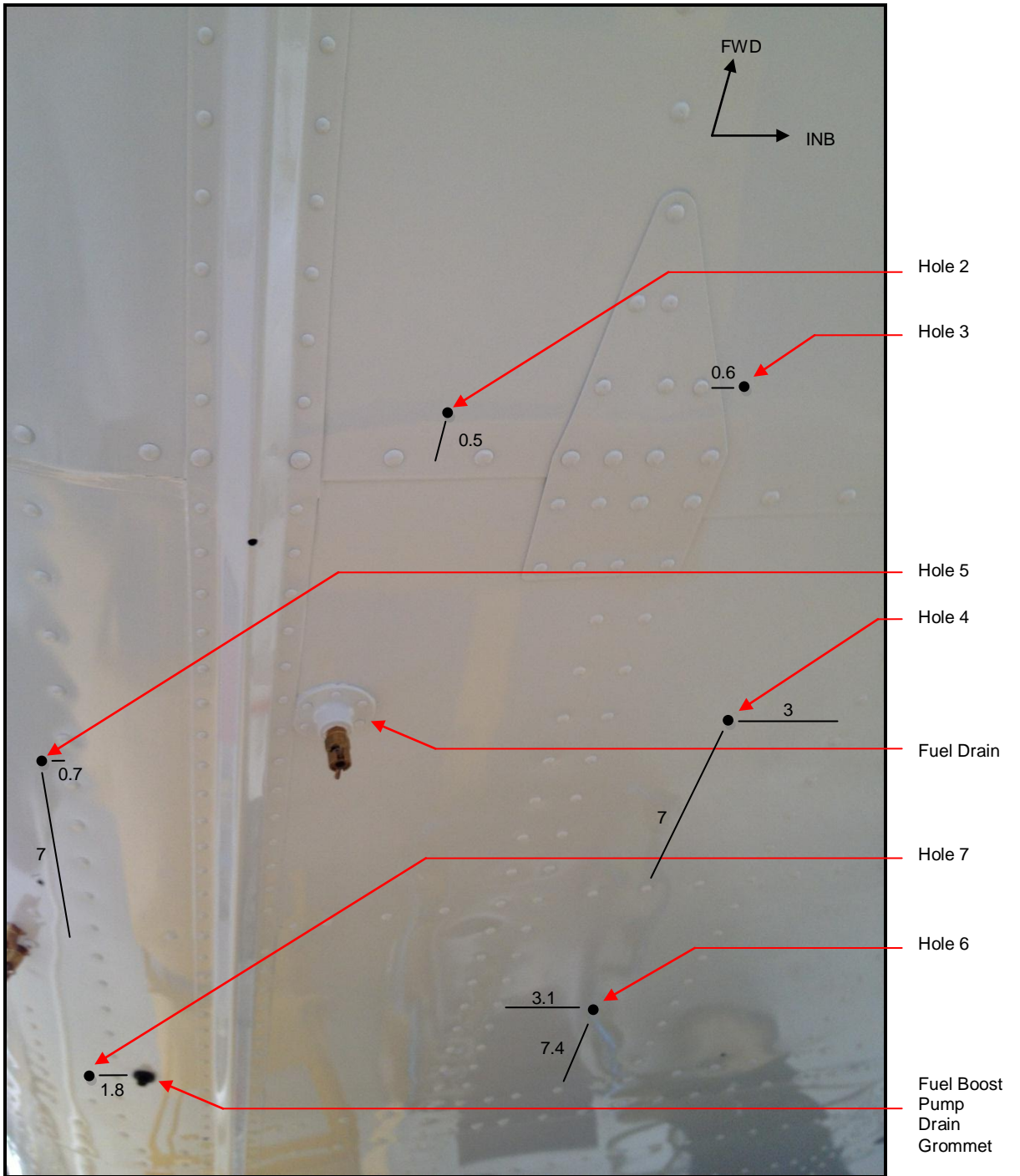


Figure 10: Hole Locations Viewed from Bottom of Belly Skin (Dimensions in inches)

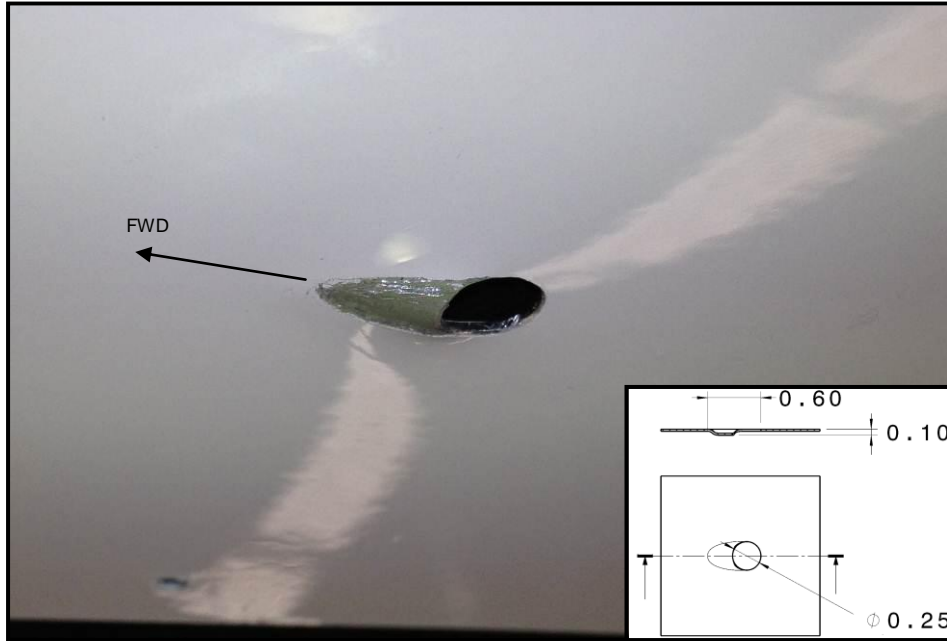


Figure 11: Fluted Hole (Dimensions in inches)

NOTE:

Measurements referred in Figure 11 are approximate and shall be used as a reference only.

Instructions (Part 2): Cargo Pod (if installed) Guard Installation

Item	Part Number	Description	Qty
Kit SB-GA8-2012-96-1			
1	GA8-255014-037	Cargo Pod Guard	1
2	AN525-832R8	Screw	7
3	MS35489-13	Grommet	1
4	GA8-255024-073	Drain Hose	1

24. The following instructions are applicable to aircraft fitted with a cargo pod (GA8-255004-017 or GA8-255004-019):
- a. A fuel drain compartment must be installed in the front right section of the cargo pod. The compartment will comprise of a sheet metal cargo pod guard (GA8-255014-037) with a silicon edge seal (GA8-255024-075, GA8-255024-077).
 - b. The cargo pod fuel guard (GA8-255014-037) and edge seals (GA8-255024-075, GA8-255024-077) should be obtained from GippsAero.
 - c. Align the cargo pod fuel guard within the cargo pod. The left guard wall should be aligned with the right forward attachment hole. The right guard wall must be aligned with the 3rd right forward attachment hole. Confirm that hole 6 will drain within the

cargo pod guard. Trim cargo pod guard to suit internal geometry of cargo pod (only if required). See Figure 12.

- d. Drill $\text{\O} 3/16$ " holes in cargo pod at anchor nuts on cargo pod fuel guard flanges.

NOTE:

The optimum temperature for the application of PR-1422 sealant is $21^{\circ}\text{C} \pm 3^{\circ}\text{C}$ ($70^{\circ}\text{F} \pm 5^{\circ}\text{F}$). For every 10°F (5.6°C) rise in temperature, application life reduces by a half, and for every 10°F (5.6°C) drop it is doubled. High humidity at the time of mixing shortens application life.

WARNING:

PR-1422 ACCELERATORS CONTAIN HEAVY METAL PEROXIDES. KEEP AWAY FROM HEAT AND FLAME. USE ONLY IN A WELL-VENTILATED AREA. AVOID SKIN AND EYE CONTACT. WEAR EYE PROTECTION. IN CASE OF EYE CONTACT, FLUSH GENEROUSLY WITH WATER AND GET PROMPT MEDICAL ATTENTION.

- e. Clean all surfaces to be sealed with PR-1422 (class B).
- f. Apply a bead of sealant (PR-1422, Class B or equivalent) along lower flanges of cargo pod fuel guard. Enough sealant must be applied so that it will squeeze out around the joint when the parts are finally fastened together.
- g. Align cargo pod fuel guard with holes and fasten with screws (AN525-832R8).

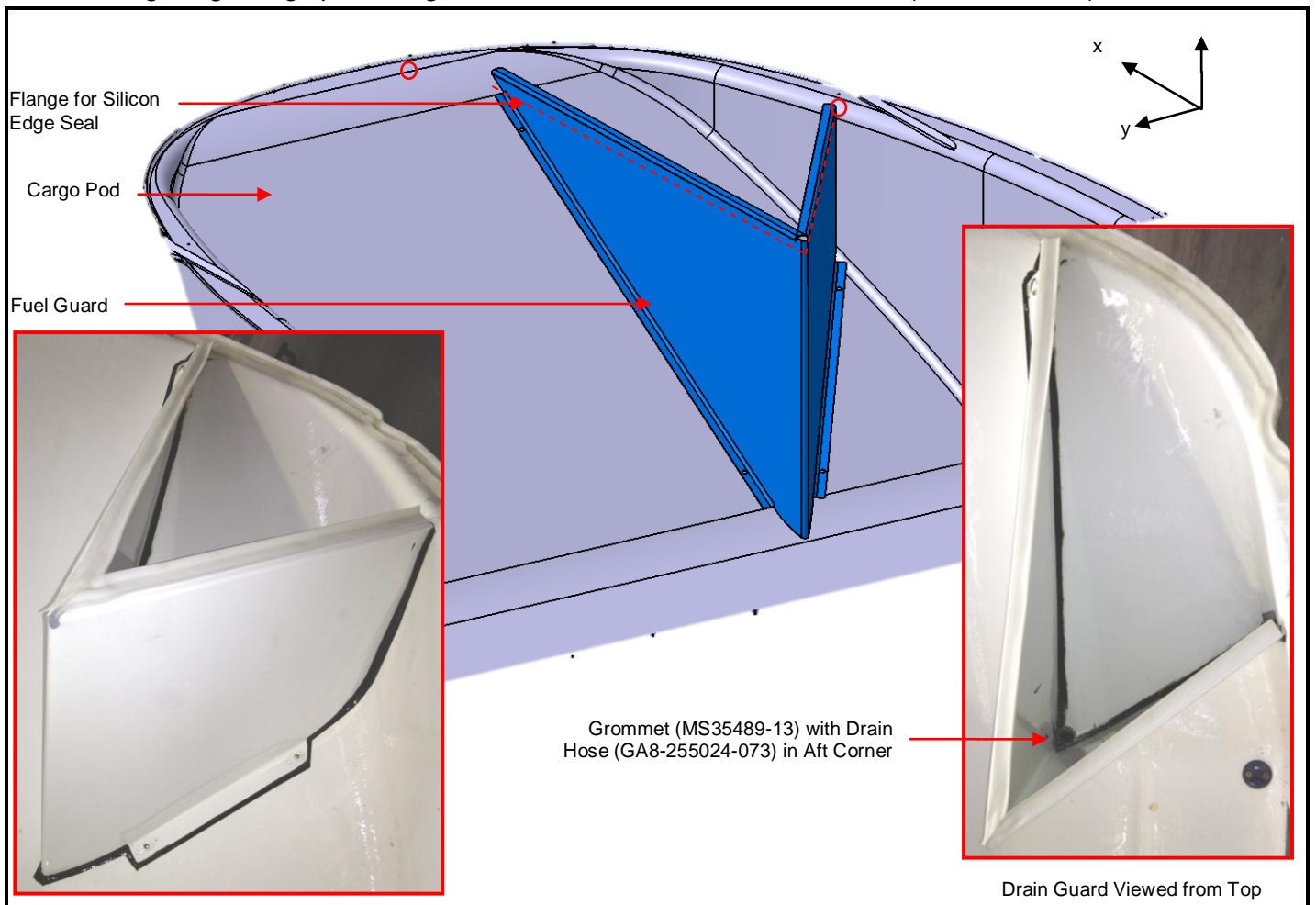


Figure 12: Cargo Pod Fuel Guard Installation

- h. Apply additional sealant to all boundaries, as well as any other area between the cargo pod fuel guard and cargo pod that could cause a fuel leak.
- i. Allow sealant/adhesive to cure.
- j. Use 100% silicon neutral cure sealant/adhesive to glue the fuel guard edge seals (GA8-255024-075, GA8-255024-077) to the top cargo pod fuel guard flange, trim to suit.
- k. Drill Ø0.750" hole for drainage in cargo pod at aft corner of fuel drain compartment, deburr the hole ensuring no sharp edges remain, Figure 12.
- l. Line the hole using the grommet (MS35489-13), Figure 12.
- m. Fit drain hose (GA8-255024-073) to grommet with Loctite 406 (or equivalent) adhesive. Trim hose flush with top of grommet and protruding slightly from the bottom of the cargo pod, facing aft sheared at a 45° angle, Figure 13.

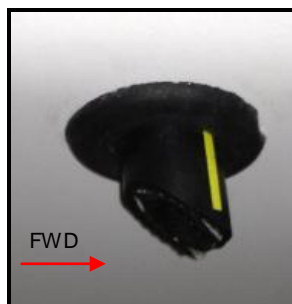


Figure 13: Drain Hole of Cargo Pod Fuel Drain Compartment

- n. Install cargo pod to aircraft as per instructions in SB-GA8-2004-14.
- o. After the cargo pod is installed on the aircraft confirm that there are no gaps between the cargo pod and the fuselage belly skin. Fill gaps using neutral cure silicone sealant.

NOTE:

If part 1 and part 2 instructions are applicable they must be incorporated simultaneously.

Weight and Balance:

Incorporation of this Service Bulletin adds 0.94 lbs (0.425 kg) at 38 in (965 mm) as indicated below:

		Weight (lb)	Arm (in)	Index (in-lb)
Kit SB-GA8-2012-96-1	Fuel Drain Guard Installation	0.94	38	35.72

This modification has no appreciable change to weight and balance of the aircraft.

Parts Availability:

New parts can be obtained directly from GippsAero.

Tel.: +61 03 5172 1200

Fax.: +61 03 5172 1201

Email: spares@gippsaero.com

Labour:

3 man hours should be allocated to the incorporation of Part 1 instructions in this Service Bulletin.

4 man hours should be allocated to the incorporation of Part 2 instructions in this Service Bulletin.

Warranty:

Aircraft within the warranty period may claim from warranty@gippsaero.com

Continuing Airworthiness:

Please refer to Service Manual Supplement C05-96-24. All fuel drainage holes in the aircraft belly skin and cargo pod must remain free of debris. Aircraft fitted with cargo pod must refer to Flight Manual Supplement C01-04-34.

Compliance Notice:

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

References:

Should you require more information please contact GippsAero Customer Support Department:

Tel: +61 (0) 3 5172 1200

Fax: +61 (0) 3 5172 1201

Email: support@gippsaero.com

DOCUMENT COMPLIANCE NOTICE



A Mahindra Aerospace Company

Document:

SB-GA8-2012-96

Issue 4

Aircraft Serial Number: _____

Cargo Pod Serial Number: _____

Aircraft Registration: _____

Incorporation Date: _____

Incorporated by: _____

*I certify that SB-GA8-2012-96 Issue 4 Instructions **Part 1** has been incorporated in the aircraft specified in this Document Compliance Notice*

Signed

*I certify that SB-GA8-2012-96 Issue 4 Instructions **Part 2** has been incorporated in the aircraft specified in this Document Compliance Notice*

Signed

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