

Technical Note TN.JS-024

17 February 2015

TITLE

21m Wing Tip Drain Plug Installation

DESCRIPTION

This Technical Note sets out the installation procedure to install drain plugs on the 21m wing tips to provide a way to drain the wing tips completely.

INSTRUCTIONS

1. Protect the top skin, leading edge and bottom skin of the wing using masking tape.

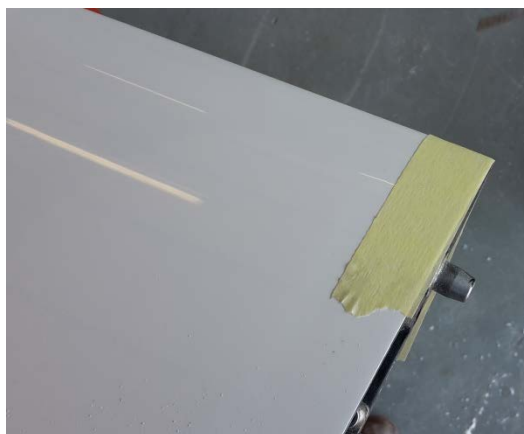


Fig. 1 - Masking Tape Cover

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2. Cut out the following template.

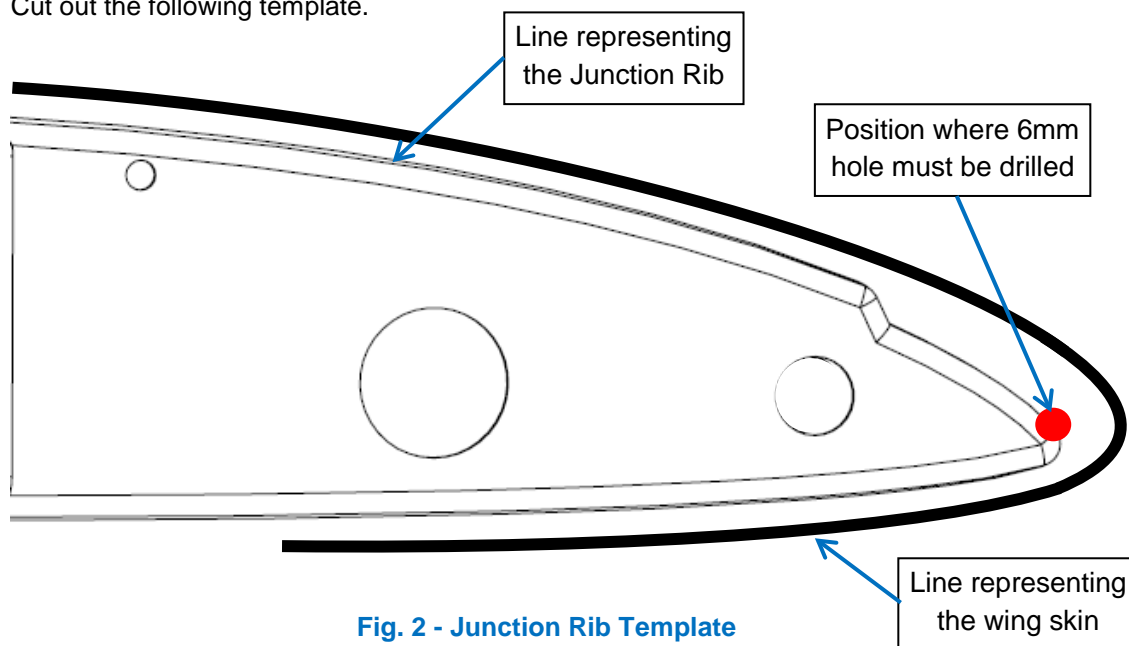


Fig. 2 - Junction Rib Template
1:1 Scale

3. Fit the template onto the junction rib. The red marker indicates the position where the hole should be drilled.

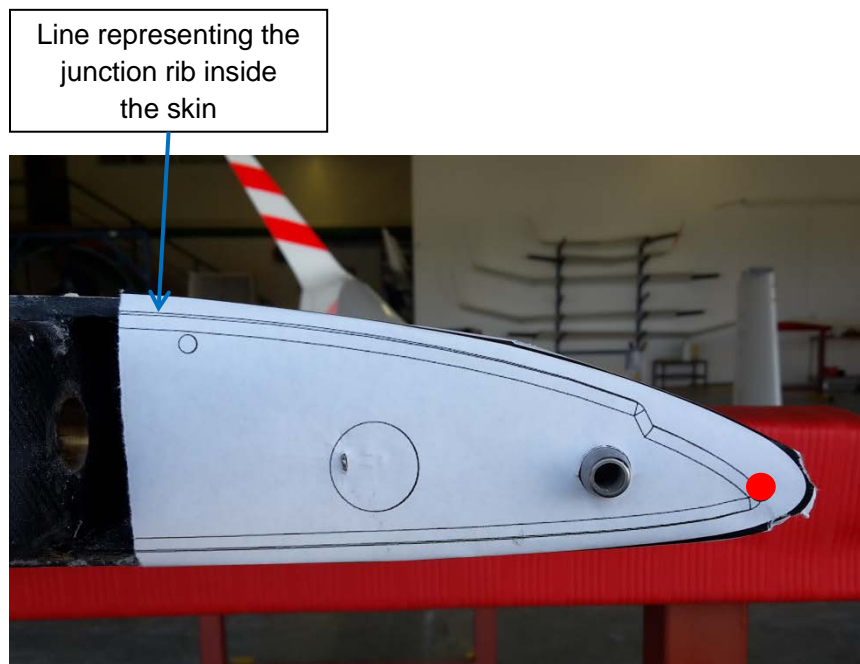


Fig. 3 - Fitment of Template

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4. The OD of the 6mm hole must be tangent to the lines formed by the thickness of the skin. The centre of the hole must be at a radius of 10mm from the skin.



Fig. 4 - Approximate hole position

5. Drill a 3mm pilot hole into the correct position through the thickness of the junction rib into the water tank. Ensure the hole is drilled parallel with the leading edge to prevent damage to the wing skins.



Fig. 5 - Parallel with Leading Edge

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6. Drill a 6mm hole through the junction rib into the water tank making use if the pilot hole.



Fig. 6 - 6mm hole drilled

7. Ensure the drilled hole penetrates into the water tank – blown air should be able to flow freely through the hole.



Fig. 7 - Air through wing vent

8. Sand the outside surface of the 6mm stainless steel tube and degrease with a solvent.



Fig. 8 - Sanding the Stainless Steel tube

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9. Use a tongue depressor to apply bonding epoxy to the inside of the hole drilled into the wing.



Fig. 9 - Priming the hole

10. Apply an even amount bonding epoxy around the 6mm stainless steel tube and insert it into the hole.



Fig. 10 - Application of bonding mix

11. Recess the tube 2mm into the hole. This allows the drain plug shoulder to fit between the junction inner and outer ribs.



Fig. 11 - Stainless Steel tube recessed position

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12. Clean the inside of the tube and the junction rib from the excess epoxy.



Fig. 12 - Cleaning of Stainless Steel Tube

13. Allow epoxy to set.

14. Insert the drain plug into the hole, as illustrated in Fig. 13 below.



Fig. 13 - Fitting of Drain Plug

15. Fill the tank with water and ensure no water is leaking from the plug.

16. Rig the tip and ensure the drain plug does not interfere with the fitting.

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MATERIAL SUPPLIED

1. 2 x 30mm 316 Stainless Steel Tube, 1mm wall thickness, OD 6mm
2. 2 x Red Drain Plugs

MATERIAL REQUIRED

1. Epoxy and Cab-o-Sil Bonding Mix

MASS AND BALANCE

No change to mass or balance.

ADDITIONAL NOTES

This technical note must be implemented by an approved maintenance technician.

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