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## SERVICE BULLETIN

#0033 Rev0

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**RELEASE DATE:** 6 July 2026

**EFFECTIVE DATE:** 6 July 2026

**SUBJECT:** Cabin Waterproofing Improvements

**MODELS AFFECTED:** All Sling 4 High Wing aircraft (Tricycle and Taildragger), including factory-built and kit-built variants, of all serial numbers delivered from Sling prior to the effective date above.

**COMPLIANCE TIME:** Refer to Compliance Requirements in Section 1.3.

**LABOUR TIME:** 18 hours

# 1 DESCRIPTION AND PURPOSE

## 1.1 PROBLEM IDENTIFIED

Following the release of Safety Alert #0014 Rev0, further testing, field reports, and post-flight inspections have indicated that water ingress issues may persist under certain operating and environmental conditions. As a result, additional modifications have been developed to improve cabin waterproofing.

The following deficiencies have been identified:

- The luggage compartment door does not seal adequately, allowing water ingress into the luggage compartment during rainfall.
- The cabin door seals are prone to detachment from the door frame, reducing their sealing effectiveness and allowing water and air leakage into the cabin.
- Due to the wing dihedral angle, water accumulating on the wing surface and within the wing fairings naturally flows inboard towards the fuselage. This water collects at the wing-to-fuselage junction and may enter the cabin through the wing root area.
- The air ventilation inlet water traps are susceptible to cracking during installation to the fuselage. In addition, nearby fuel lines can obstruct correct positioning of the water trap, resulting in an incorrect installation orientation. The water trap utilizes a snorkel-type mechanism that requires the collection chamber to be positioned at the lowest point to function effectively. When installed incorrectly, the water-separation function is compromised, allowing rainwater to be drawn through the ventilation system and into the cabin.
- Safety Alert #0014 Rev0 introduced fuselage belly drain holes to improve drainage of accumulated water. Subsequent testing and operational evaluation indicated that airflow during flight may drive water through these drain holes under certain conditions, creating an additional water ingress path.

## 1.2 SOLUTION

To address the identified water ingress paths, the following modifications are introduced:

- Luggage Compartment Door Seal: A V-seal is installed around the perimeter of the luggage compartment door to prevent water ingress into the luggage bay.
- Cabin Door Seal Retention System: A retaining ring is bonded to the door frame to mechanically retain the cabin door seal. The seal is installed between the retaining ring and the door frame, preventing seal displacement and ensuring a durable, weather-tight seal between the door and fuselage.
- Wing Root Water Barrier and Fairing Drainage: A water-blocking foam rib is installed on the fuselage side of the wing root junction to intercept water flowing inboard from the wing and prevent it from entering the cabin. As the rib prevents further inboard flow of water, drain holes are installed at the lowest points of the wing fairings to provide a controlled drainage path for the intercepted water and prevent accumulation within the fairing cavity.
- Air Vent Water Trap Modification: The fresh-air ventilation inlet is modified to incorporate a flexible pipe extension between the fuselage inlet and the water trap. This eliminates cracking associated with rigid installation and allows the water trap to be positioned independently of surrounding fuel lines. The modification ensures the water trap remains in its correct upright orientation, allowing the snorkel mechanism to function as intended and preventing water from entering the cabin ventilation ducting.

- Fuselage Belly Drain Hole Covers: Covers are installed over the fuselage belly drain holes introduced in Safety Alert #0014 Rev0. These covers reduce the potential for water ingress during flight while maintaining effective drainage of accumulated water.

## **1.3 COMPLIANCE**

### **1.3.1 MANDATORY**

Installation of the fuselage belly drain hole covers described in Section 3 is mandatory for all aircraft on which the fuselage belly drain holes introduced by Safety Alert #0014 Rev0 have been incorporated. This modification eliminates an identified in-flight water ingress path associated with the previously introduced drain holes and must be completed at the next scheduled Mandatory Periodic Inspection (MPI).

### **1.3.2 NON-MANDATORY**

Compliance with the remaining modifications contained in this Service Bulletin is recommended but not mandatory. The modifications are intended to improve resistance to water ingress during aircraft operation, particularly for aircraft exposed to rainfall, outdoor storage, or frequent operation in wet weather conditions.

Owners and operators should evaluate their operating environment, mission profile, and the nature of any water ingress experienced when determining whether to incorporate the modifications. Unless otherwise stated, the modifications described in this Service Bulletin may be incorporated either in their entirety or selectively, as appropriate to address the specific water ingress paths identified on the aircraft.

For aircraft experiencing water ingress, or those regularly exposed to rainfall and outdoor storage conditions, incorporation of all applicable modifications contained in this Service Bulletin is strongly recommended.

## **1.4 MASS DATA**

The incorporation of this Service Bulletin introduces additional mass through the installation of water-blocking foam ribs at the wing root junction and door seal retaining rings. The total additional installed mass is 0.708 kg, comprising 0.634 kg for the water-blocking foam ribs (0.317 kg per side) and 0.074 kg for the door seal retaining rings (0.037 kg per door). The additional mass is distributed close to the aircraft centre of gravity (CG); consequently, no significant change to the aircraft CG is expected. However, the aircraft weight and balance report must be updated to reflect the additional installed mass and its location in accordance with the applicable maintenance procedures.

## **1.5 ELECTRICAL LOAD DATA**

No changes

## **1.6 SOFTWARE MODIFICATION**

No changes

## **1.7 REFERENCES**

Sling 4 High Wing Maintenance Manual (DC-MAM-001-X-G current revision)  
 Sling 4 High Wing Finishing Construction Manual (DC-KAI-008-X-G current revision)  
 Safety Alert #0014 Rev0 - Water Ingress and Drainage

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## 2 MATERIAL INFORMATION

### 2.1 PARTS AND CONSUMABLES LIST

#### 2.1.1 PARTS

- 8m x CF-RUB-001-C-G-0 - Silicone Door Seal (30A Shore Hardness) for Cabin Door
- 2 x CF-RNG-S01-C-G - High Wing Door Seal Retaining Ring Set
- 2m x CF-RUB-001-C-G-0 - Silicone Door Seal (30A Shore Hardness) for Luggage Door
- 2 x CF-RIB-018-C-G - Fuselage Closing Rib (Front Lower)
- 2 x CF-RIB-118-C-G - Fuselage Closing Rib (Front Upper)
- 2 x CF-RIB-015-C-G - Fuselage Closing Rib (Rear)
- 2 x CF-RIB-016-C-G - Fuselage Closing Rib (Bottom)
- 2 x CF-RIB-017-C-G - Fuselage Closing Rib (Top)
- 1 x CF-ELB-001-L-G-1 – Water Trap (Left)
- 1 x CF-ELB-001-R-G-1 – Water Trap (Right)
- 4 x HW-CLM-119-X-X-0 - Hose clamps
- 0.2m x RW-DCT-805-X-X-0 - Flexible Ducting Vena MT 1" ID
- 6 x CF-CVR-014-X-G-0 - Drain hole covers
- 0.2m x RW-VNL-010-X-X-0 - Vinyl - Clear Stone
- 0.1m x UP-FOM-013-X-X-0 – SPX33 Black 10mm

#### 2.1.2 CONSUMABLES (NOT SUPPLIED)

- 3M Scotch-Weld Plastic & Rubber Instant Adhesive PR100
- Clear neutral silicone sealant
- Black silicone sealant
- Acetone or approved cleaning solvent
- Glue activator

#### 2.1.3 SUPPLEMENTARY PARTS (NOT SUPPLIED)

- Drain hole plugs
- Draft seal

### 2.2 TOOLS REQUIRED

#### a. General tools (used for multiple work packages):

- ♦ Clean, lint-free cloths
- ♦ Masking tape (minimum width 50 mm)
- ♦ Protective gloves
- ♦ Plastic scraper or suitable removal tool
- ♦ Wooden spatula or applicator
- ♦ Protective eyewear
- ♦ File or P220 sandpaper
- ♦ Sealant applicator gun
- ♦ Syringe (sealant applicator)

#### b. Specific to luggage door and cabin door seal installation:

- ♦ Cutting blade

#### c. Specific to wing root foam rib installation:

- ♦ Sealant applicator gun

- ♦ Hacksaw
- ♦ Line Tape
- d. Specific to fairing drain hole installation:**
  - ♦ Electric or pneumatic drill
  - ♦ 6 mm or 15/64" drill bit (sharp and in good condition)
  - ♦ Marker pen (fine-tip permanent marker)
- e. Specific to air vent water trap modification:**
  - ♦ Locking wire (0.025in)
  - ♦ Safety wire pliers

## 2.3 MATERIAL COST RESPONSIBILITY

Sling Aircraft (Pty) Ltd will provide the required parts listed in Section 2.1 for all aircraft subject to the Service Bulletin. Sling Aircraft will cover all parts and labour costs if work is performed by a Sling approved maintenance organisation. Sling Aircraft is not responsible for costs related to shipping, downtime, loss of income, etc.

## 2.4 LABOUR RESPONSIBILITY

Sling Aircraft AMO 1264 (Johannesburg, South Africa) is available to perform the work required under this Service Bulletin on aircraft presented at its facilities. All personnel undertaking the actions prescribed herein shall adhere strictly to the instructions set out below and shall consult all supplementary documentation identified in Section 1.7, as applicable. Sling Aircraft accepts no liability for the quality, completeness, or airworthiness of any work carried out to implement this Service Bulletin if such work is performed by any entity other than Sling Aircraft AMO 1264 (Johannesburg, South Africa).

Work required under this Service Bulletin (Service Bulletin 33) may be performed by a kit builder, subject to compliance with the legal and regulatory requirements of the governing aviation authority in the jurisdiction in which the work is undertaken.

Sling Aircraft will reimburse labour costs only for aircraft that (i) are already in flying condition at the time of compliance and (ii) remain within their applicable warranty period. Labour reimbursement by Sling Aircraft shall be limited to a maximum rate of US\$50.00 per hour, and only for the time reasonably required to accomplish the corrective actions described herein.

Sling Aircraft shall bear no responsibility for labour costs associated with kit-built aircraft. Kit builders are entitled to the parts specified under this Service Bulletin; however, all labour associated with the installation, modification, or corrective work remains solely at the builder's expense.

Sling Aircraft shall not be liable for any indirect, consequential, or incidental costs arising from compliance with this Service Bulletin, including but not limited to shipping charges, aircraft downtime, loss of income, or other associated expenses.

## 2.5 COMPANY SUPPORT INFORMATION

Customers are required to direct all requests for Service Bulletin kits, materials, or related support to their authorised local distributor. Customers who have purchased their aircraft, kit, or components directly from Sling Aircraft Headquarters shall direct such requests to [sales@slingaircraft.com](mailto:sales@slingaircraft.com).

All technical inquiries or requests for clarification regarding this Service Bulletin shall be submitted to [technical@slingaircraft.com](mailto:technical@slingaircraft.com).

### 3 FUSELAGE BELLY DRAIN HOLE COVERS (**MANDATORY**)

**Note:** Following the introduction of fuselage belly drain holes in Safety Alert #0014 Rev0, testing and operational evaluation indicated that airflow during flight may drive water through open drain holes under certain conditions. Drain hole covers are therefore installed to minimise the potential for in-flight water ingress while maintaining effective drainage of accumulated water.

#### 3.1 PRE-INSTALLATION PROCEDURE

1. Verify that the fuselage belly drain holes introduced in Safety Alert #0014 Rev0 have been installed.
2. Inspect the drain holes and surrounding fuselage skin for damage, contamination, or obstructions.
3. Clean the area surrounding each drain hole using an approved cleaning solvent and allow the surface to dry completely.
4. Confirm that the drain holes are free from debris and allow water to drain freely.

#### 3.2 INSTALLATION PROCEDURE

1. Refer to Figure 1 for drain hole cover placement and orientation.
2. Position the drain hole cover over the drain hole with the opening facing aft.
3. Verify that the cover shields the drain hole from direct airflow while maintaining a clear drainage path.
4. Mark the cover location on the fuselage skin.
5. Apply a continuous bead of clear silicone sealant to the bonding surface of the drain hole cover.
6. Install the drain hole cover and apply firm pressure to ensure full contact with the fuselage skin.
7. Remove any excess sealant and ensure that the drain hole remains unobstructed.
8. Allow the sealant to cure fully in accordance with the manufacturer's instructions.



Figure 1: Drain Hole Cover Installation.

#### 3.3 POST-INSTALLATION INSPECTION

1. Verify that the drain hole cover is securely bonded with no lifted edges or gaps.
2. Confirm that the drain hole remains unobstructed and capable of draining water freely.
3. Pour a small quantity of water into the drainage path and verify that water drains through the drain hole without restriction.
4. Verify that the drain hole cover is correctly orientated and provides shielding from direct airflow.
5. Inspect the surrounding area and remove any excess sealant or contamination.

## 4 LUGGAGE DOOR SEALING

### 4.1 PRE-INSTALLATION PROCEDURE

1. Remove the existing flat weather seal from the luggage door frame.
2. Cut the carpet along the edge where the luggage door frame meets the fuselage interior.
3. Peel back the carpet by a minimum of 20 mm from the edge of the luggage door frame to provide sufficient clearance for installation of the inner leg of the V-seal.
4. Remove any residual adhesive from the exposed surface using an approved adhesive remover.
5. Abrade the exposed bonding surface using fine-grit sandpaper to promote adhesion.
6. Ensure the bonding surface is clean, dry, and free from dust, debris, loose material, and contamination before proceeding.



Figure 2: 20 mm Carpet Opening for V-Seal Installation at the Luggage Door Frame

### 4.2 INSTALLATION PROCEDURE

1. Refer to Figure 3, Figure 5 and Figure 6 for seal placement and orientation.
2. Modify the luggage door latch block as shown in Figure 4.
3. Apply a continuous bead of black silicone sealant around the perimeter of the luggage door frame at the seal installation location.
4. Install the V-seal onto the luggage door frame with the shorter leg inserted into the 20 mm carpet opening and bonded against the interior fuselage surface.
5. Ensure the V-profile is oriented inboard such that it compresses against the luggage door when closed.
6. Ensure the seal runs continuously around the full perimeter of the door frame with no gaps or lifted edges.
7. Secure the V-seal using masking tape until the sealant has cured sufficiently to prevent movement or lifting of the seal.

8. Cut reliefs in the V-seal at the latch block and hinge attachment locations as shown in Figure 5. Ensure the cut-outs provide sufficient clearance for installation of the existing hardware while maintaining continuity of the seal.
9. Reinstall the luggage door latch block over the V-seal and secure using the existing hardware.
10. Reinstall the carpet over the inner leg of the V-seal and secure it using a suitable adhesive. Ensure the carpet lies flat against the fuselage surface with no wrinkles, gaps, or loose sections.
11. Allow the silicone sealant and carpet adhesive to cure fully before removing the masking tape and closing the luggage door. Refer to the manufacturer's instructions for curing times.

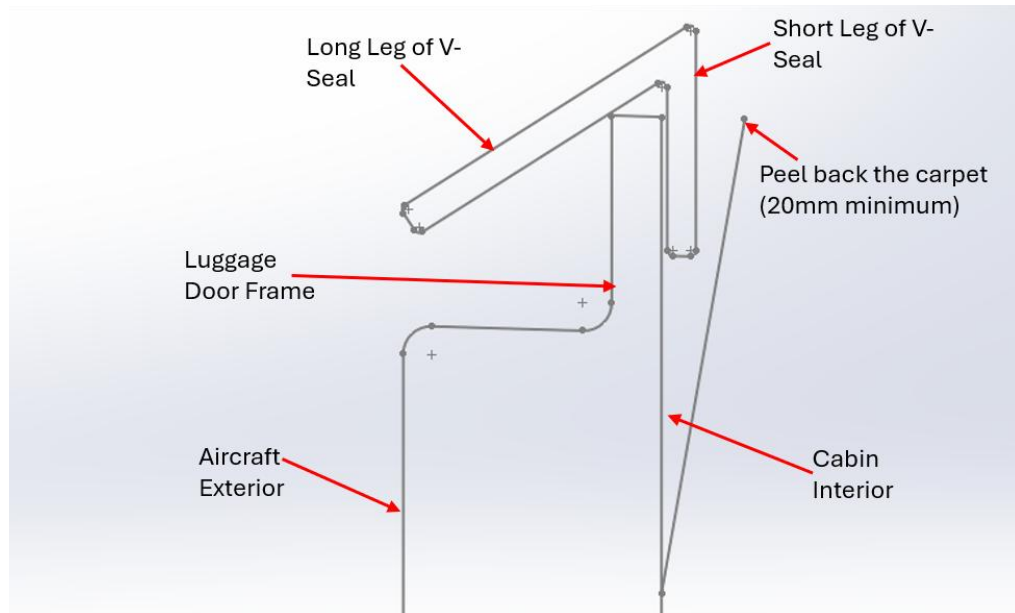


Figure 3: Luggage Door V-Seal Installation Cross-Section

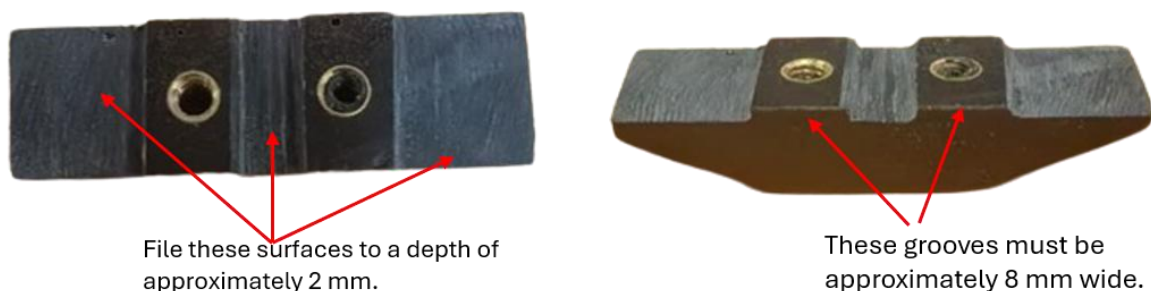


Figure 4: Latch Block Modification

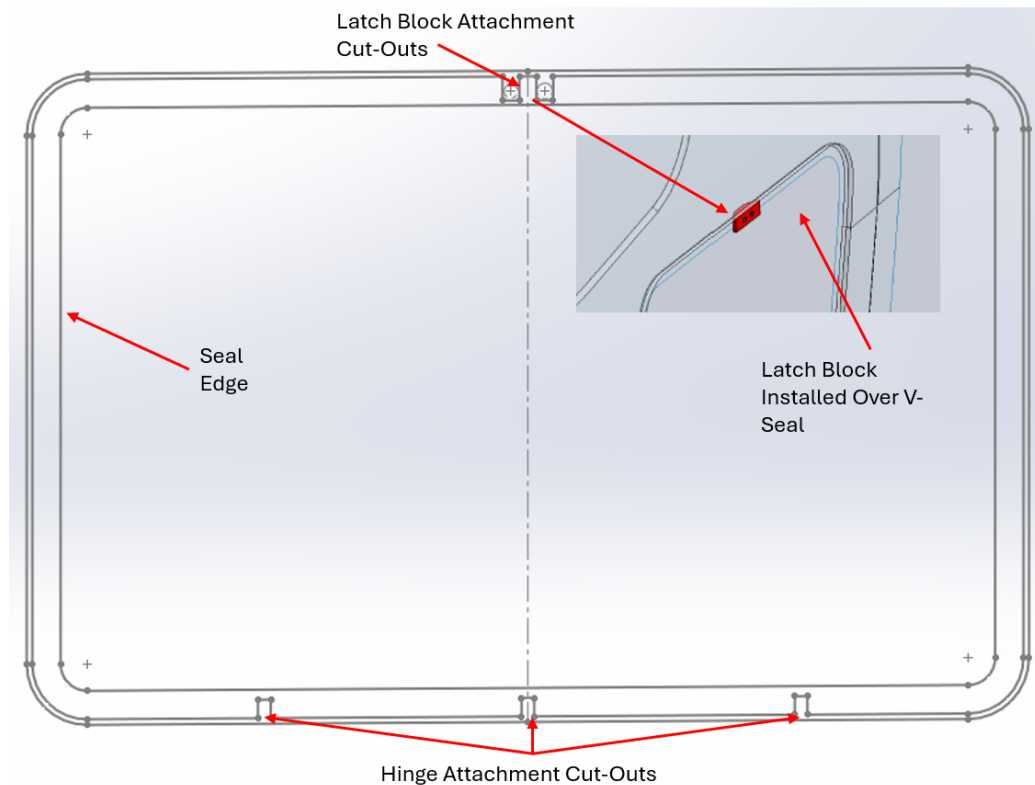


Figure 5: Luggage Door V-Seal Installation Showing Hardware Attachment Cut-Outs.

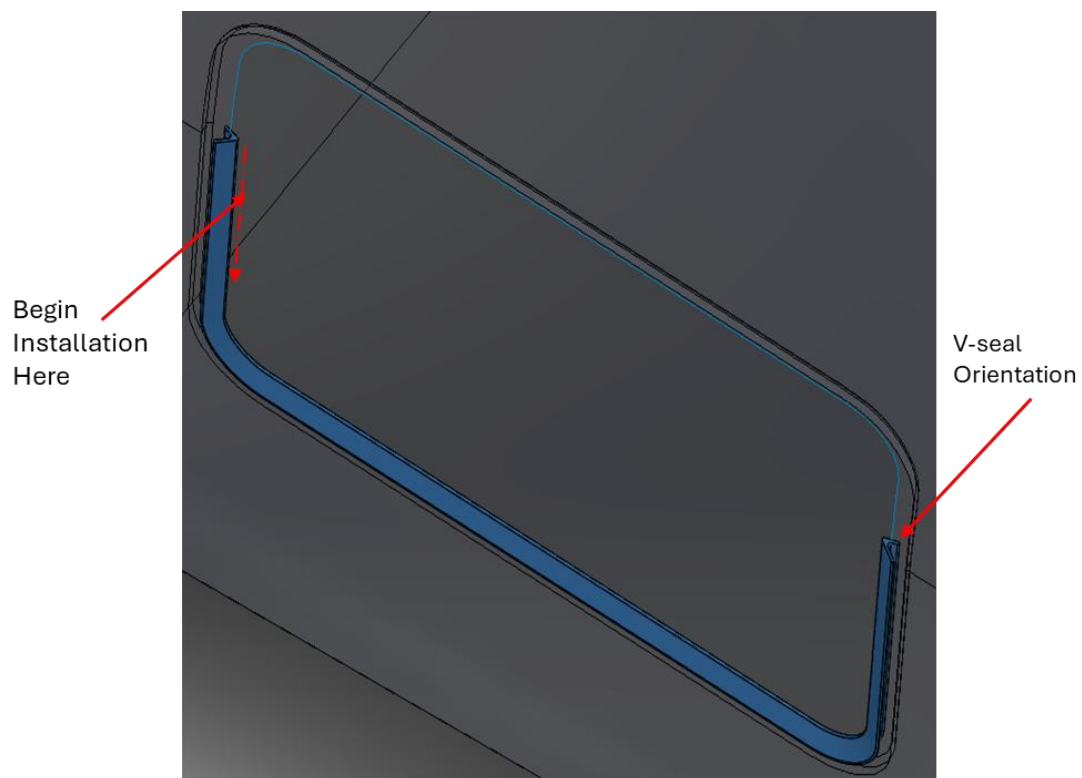


Figure 6: V-Seal Installation on Luggage Door Frame, showing V-profile orientation

### 4.3 POST-INSTALLATION INSPECTION

1. Verify that the V-seal runs continuously around the full perimeter of the luggage door frame with no gaps, lifted sections, or misalignment.
2. Confirm that the silicone sealant has cured fully and that the seal is firmly bonded with no loose edges.
3. Close the luggage door and inspect that the seal compresses evenly against the door with no areas of excessive or insufficient compression.
4. Conduct a water ingress test by applying water around the perimeter of the closed luggage door and inspecting the luggage compartment for evidence of leakage.
5. Verify that the carpet has been correctly reinstated and bonded, with no loose, lifted, or wrinkled sections.

## 5 DOOR SEALING

### 5.1 PRE-INSTALLATION PROCEDURE

1. Remove the existing weather seal from the cabin door frame.
2. Remove any residual adhesive and sealant from the door frame surface using an approved cleaning solvent.
3. Abrade the bonding surface using fine-grit sandpaper to promote adhesion.
4. Ensure the bonding surface is clean, dry, and free from dust, debris, loose material, and contamination before proceeding.

### 5.2 INSTALLATION PROCEDURE

#### 5.2.1 RETAINING RING INSTALLATION

1. Refer to Figure 7 for retaining ring placement and orientation.
2. Apply a continuous bead of PR100 adhesive to the bonding surface of the retaining ring. **Note:** The retaining ring may be cut into shorter sections to ease handling and installation, particularly at the corners of the door frame. Ensure that cut sections are butted tightly together with no gaps when fitted.
3. Position the retaining ring on the door frame and apply firm pressure along its length until the adhesive has achieved initial bond strength. **Note:** If bonding is taking longer than expected, spray the glue activator onto the bonding surface to accelerate the curing process.
4. Ensure the ring runs continuously around the full perimeter of the door frame with no lifted or loose sections.
5. Ensure the retaining ring is positioned such that a uniform gap is maintained between the ring and the door frame to accommodate the V-seal.

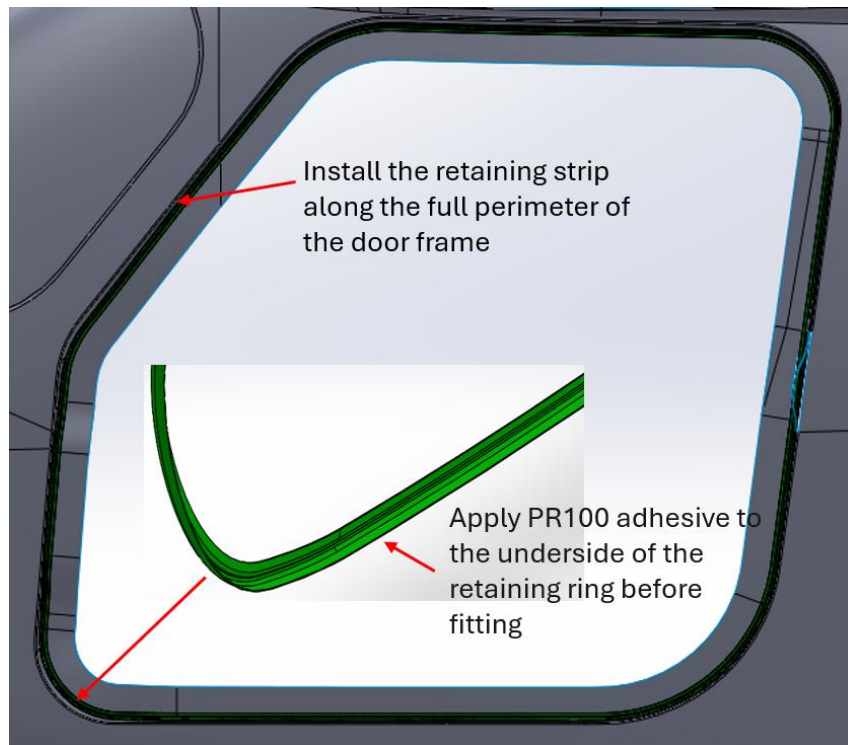


Figure 7: Cabin Door Retaining Ring Installation

### 5.2.2 V-SEAL INSTALLATION

1. Refer to Figure 8 for V-seal placement and orientation.
2. Apply masking tape around the retaining ring and door frame to protect surrounding surfaces before applying silicone.
3. Apply a continuous bead of black silicone sealant into the gap between the retaining ring and the door frame around the full perimeter.
4. Insert the shorter leg of the V-seal into the gap between the retaining ring and the door frame and press firmly into the silicone sealant to ensure full contact and retention.
5. Ensure the seal runs continuously around the full perimeter of the door frame with no gaps or lifted edges.
6. Remove the masking tape immediately after seal installation and remove any excess sealant before curing.
7. Allow the silicone to cure fully before closing the door.
8. Inspect the gap between the retaining ring and the door frame and verify that all gaps have been adequately sealed.
9. Apply a continuous bead of silicone sealant along the top of the door frame at the junction between the frame and the seal to prevent water from tracking behind the seal. **Note:** This sealant bead prevents water from tracking behind the seal through capillary action and entering the cabin.

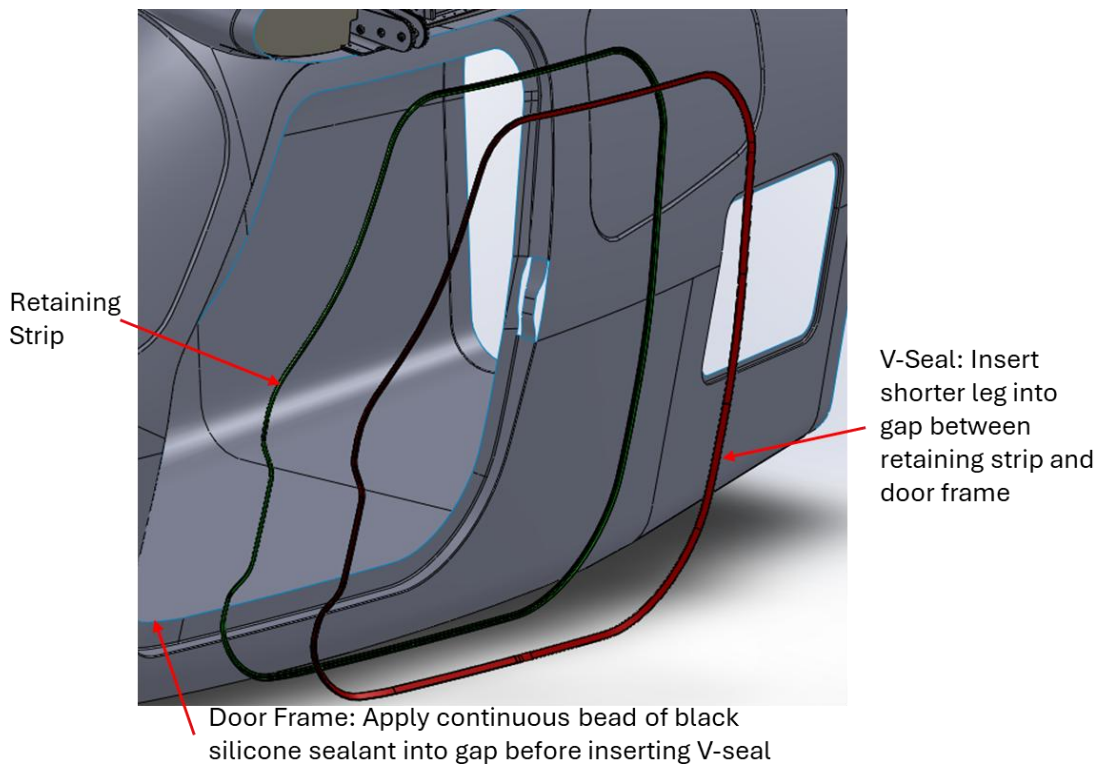


Figure 8: Cabin Door Seal and Retaining ring Assembly

### 5.3 POST-INSTALLATION INSPECTION

1. Verify that the retaining ring is firmly bonded along the full perimeter of the door frame with no lifted or loose sections.
2. Verify that the sealing bead at the upper door frame is continuous and free from voids or discontinuities.
3. Close the cabin door and inspect that the seal compresses evenly against the door frame with no areas of excessive or insufficient compression.
4. Conduct a water ingress test by applying water around the perimeter of the closed cabin door and inspect the cabin interior for evidence of leakage.
5. With the door closed and the pin latched from the inside, apply a load of no more than 5 kg on the door to simulate the pressure acting on the door during flight. Inspect the seal for any gaps around the full perimeter.

**Note:** If gaps are observed under load, first check the door latch pin clearance and adjust to improve the fit. If adjustment is not possible or insufficient, apply a draft seal to the door at the affected area to close the remaining gap.

Push Door from  
Inside Cabin  
(Door Latched) to  
Check for Gaps



Figure 9: Installed Cabin Door Seal and Pressure Test Procedure



Figure 10: Pressure Test Result: No Gap Observed (left) vs Gap Observed at Seal-Frame Interface (right). Adjust latch pin clearance or apply draft seal where gap is present.

## 6 AIR VENT WATER TRAP

The primary purpose of this modification is to ensure correct positioning of the water trap and to eliminate cracking associated with the existing installation. This modification replaces the existing water trap assembly with a pre-assembled modified water trap supplied as part of the Service Bulletin kit. Where the water-blocking rib modification described in Section 6 is incorporated, the water trap drainage outlet is rerouted through the water-blocking rib and into the wing fairing cavity.

Note: If the water-blocking rib modification is not being incorporated, there is no requirement to reroute the water trap drainage outlet. The drainage pipe may remain in its original configuration routed through the front door frame pillar. In such cases, only the supplied modified water trap assembly need be installed to address cracked water traps or to ensure that the water trap is positioned with the collection chamber at the lowest point for correct snorkel operation.

### 6.1 PRE-INSTALLATION PROCEDURE

1. Locate the existing air vent water trap on both the left and right sides of the fuselage.
2. Carefully remove the existing water trap from its installed position.
3. Remove any residual Sikaflex from the fuselage inlet connection point and clean the surrounding area using acetone or an approved cleaning solvent.
4. Inspect the fuselage inlet connection point and surrounding structure for damage or contamination. Rectify any discrepancies before proceeding.
5. Verify that the supplied modified water trap assembly is free from damage and suitable for installation.

### 6.2 INSTALLATION PROCEDURE

1. Refer to Figure 11 for the supplied modified water trap assembly.

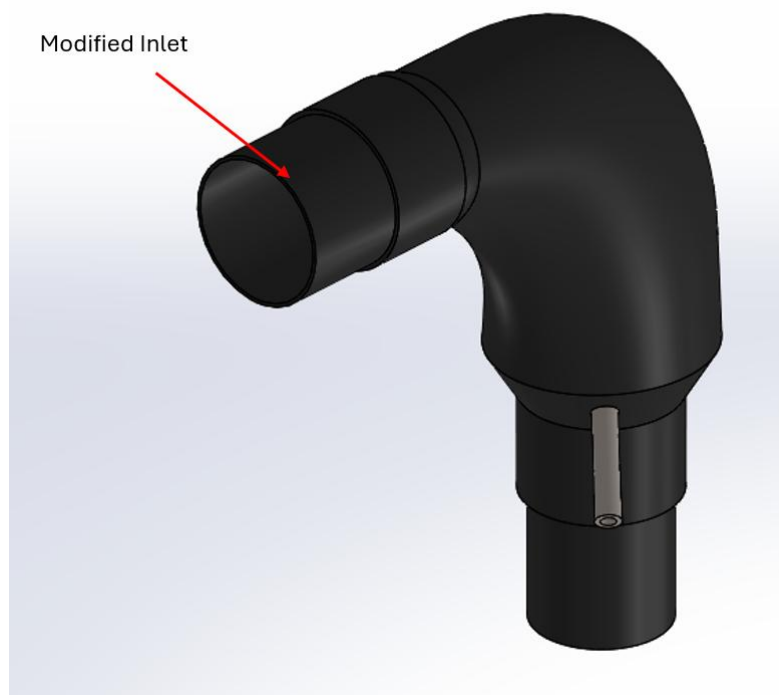


Figure 11: Modified Water Trap Assembly

2. Apply a continuous bead of clear silicone sealant around the mating surface of the fuselage composite inlet, then connect the 100 mm flexible pipe and secure it using a hose clamp.

3. Apply a continuous bead of clear silicone sealant around the mating surface of the modified inlet on the supplied water trap assembly, then connect the opposite end of the 100 mm flexible pipe and secure it using a hose clamp.
4. Position the supplied modified water trap assembly in its upright orientation with the collection chamber located at the lowest point to ensure correct operation of the snorkel mechanism, in accordance with Figure 12.
5. Fabricate and install the stand-off on the front pillar at the main spar connection point between the top box and the fuselage.
6. Secure the supplied modified water trap assembly to the fabricated stand-off bracket.
7. Verify that the flexible pipe is free from kinks, sharp bends, chafing, or interference with adjacent structure.

**Note:** The water trap assembly must remain in the specified upright orientation for correct operation. Any installation that allows the assembly to rotate or positions the collection chamber above the snorkel inlet may result in water ingress into the cabin ventilation system.

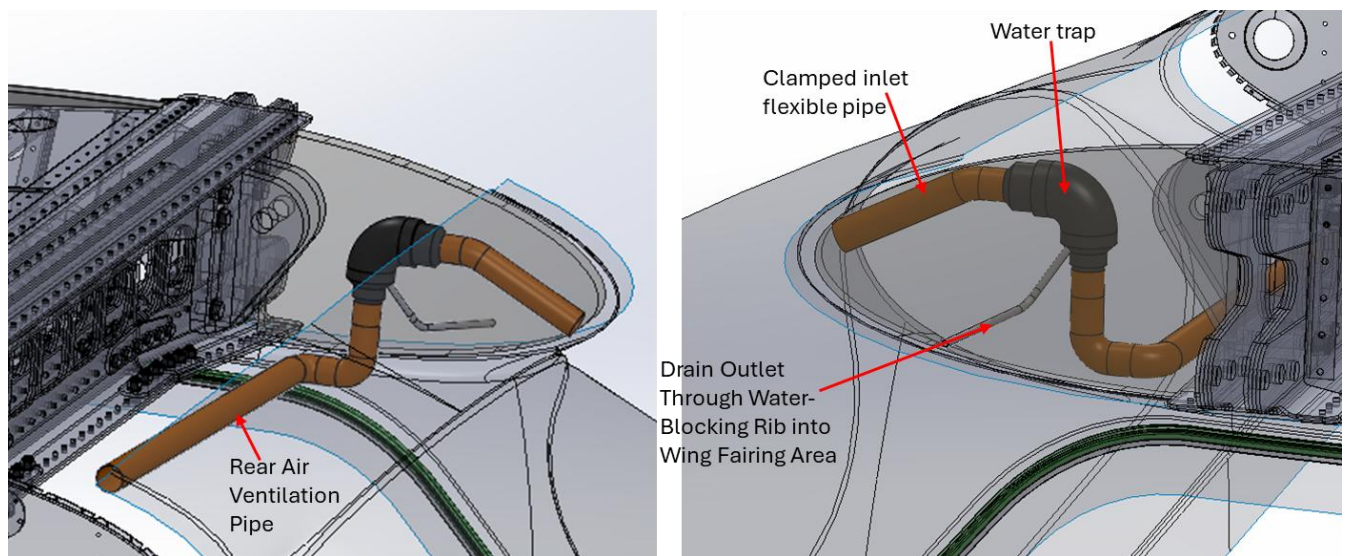


Figure 12: Completed Water Trap Assembly, Showing Correct Orientation with Trap at Lowest Point.

### 6.3 POST-INSTALLATION INSPECTION

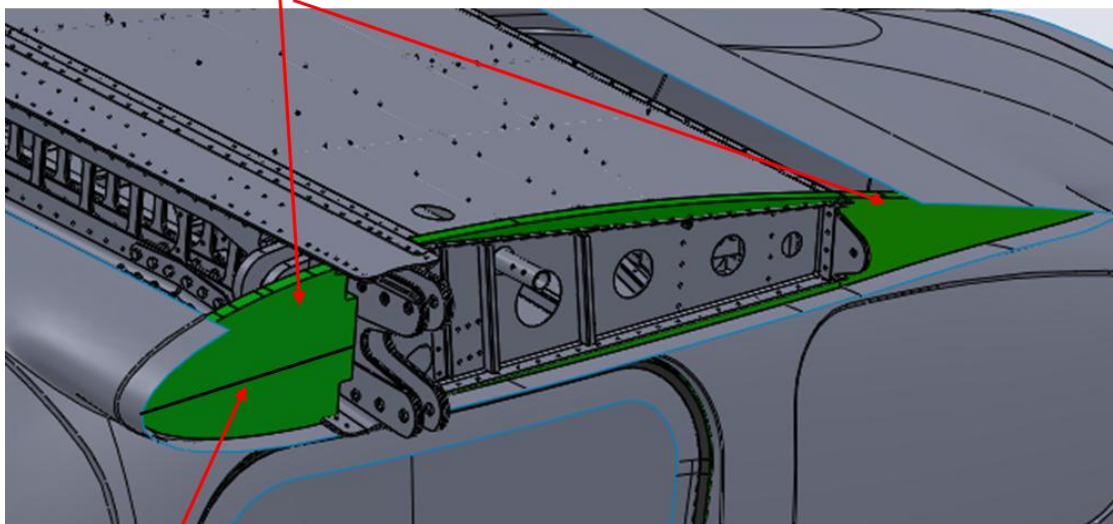
1. Verify that the stand-off is securely installed.
2. Verify that the supplied modified water trap assembly is securely attached to the stand-off bracket and correctly orientated with the collection chamber at the lowest point.
3. Verify that the flexible pipe is securely connected at both ends and that the hose clamps are correctly tightened.
4. Verify that the flexible pipe is free from kinks, sharp bends, chafing, or interference with adjacent structure.
5. Inspect both silicone-sealed joints to ensure complete sealing with no gaps or voids.
6. Verify that the installation is secure, clean, and free from excess sealant or foreign material.

## 7 WATER-BLOCKING RIB

### 7.1 PRE-INSTALLATION PROCEDURE

1. Remove the wing fairing and roof panel to gain access to the wing root junction on the fuselage side.
2. Clean the fuselage surface at the wing root junction using benzene or approved cleaning solvent and allow to dry completely.
3. Inspect the fuselage surface for uniformity and remove any remaining debris, loose material, or contamination before proceeding.
4. Dry fit the front and rear foam rib sections and trim or sand as required to achieve a close-fitting interface with the fuselage contour.
5. Mark the locations of all fuel lines, pitot system tubing, and roof panel grooves that pass through or adjacent to the foam rib installation area.
6. Cut the required slots and grooves as necessary to accommodate the aircraft systems and interfaces identified during the dry-fit process. **Note:** Aircraft configurations may vary. Verify all system routing against the aircraft before cutting any slots or grooves into the foam rib.
7. Dry fit both foam rib halves to confirm correct fit, alignment and routing clearances before proceeding with installation.

Water-blocking foam rib original state: Mark and cut slots for fuel lines, pitot system routing and roof panel groove as required to suit individual aircraft configuration before installation.



Front foam rib supplied in two halves for ease of fitment

Figure 13: Pre-installation Marking

### 7.2 INSTALLATION PROCEDURE

1. Refer to Figure 14 for rib placement and orientation.
2. Apply masking tape to the fuselage surface around the perimeter of the rib installation area to protect adjacent surfaces.
3. Apply masking tape to the outer edges of both foam rib halves.
4. Apply a continuous bead of clear silicone sealant to the bonding face of each foam rib half.
5. Position the foam rib against the fuselage surface and apply firm, even pressure to ensure full contact along the entire bonding interface.
6. Verify that all fuel lines, pitot tubing, and roof panel interfaces remain free from compression, chafing, distortion, or interference before the sealant cures.

7. Where accessible, install a 10 mm SPX foam strip between the foam rib and the main spar web to close the gap, then seal with clear silicone sealant. If access is restricted by the wing structure, this step may be omitted.

Note: Access to the gap between the foam rib and the main spar web may vary depending on wing position and individual aircraft configuration. Install the SPX foam strip wherever access permits and seal all installed sections with clear silicone sealant. Omit this step where access is not possible.

8. Apply clear silicone sealant to all cut-outs around fuel lines, pitot tubing, wiring, and any other penetrations through the foam rib to prevent water ingress.
9. Install 10 mm SPX foam rings around the flap and aileron pushrods and seal the perimeter of each foam ring with clear silicone sealant.
10. Apply clear stone-chip protection film over all existing topbox lightening holes to prevent water ingress through the topbox structure.
11. Remove all masking tape before the silicone sealant begins to cure and remove any excess sealant as required.
12. Allow the silicone sealant to cure fully before reinstalling the roof panels. Refer to the sealant manufacturer's instructions for the required curing time.
13. Inspect all sealed areas to verify complete coverage and confirm that no gaps, voids, or unsealed penetrations remain that could permit water ingress.

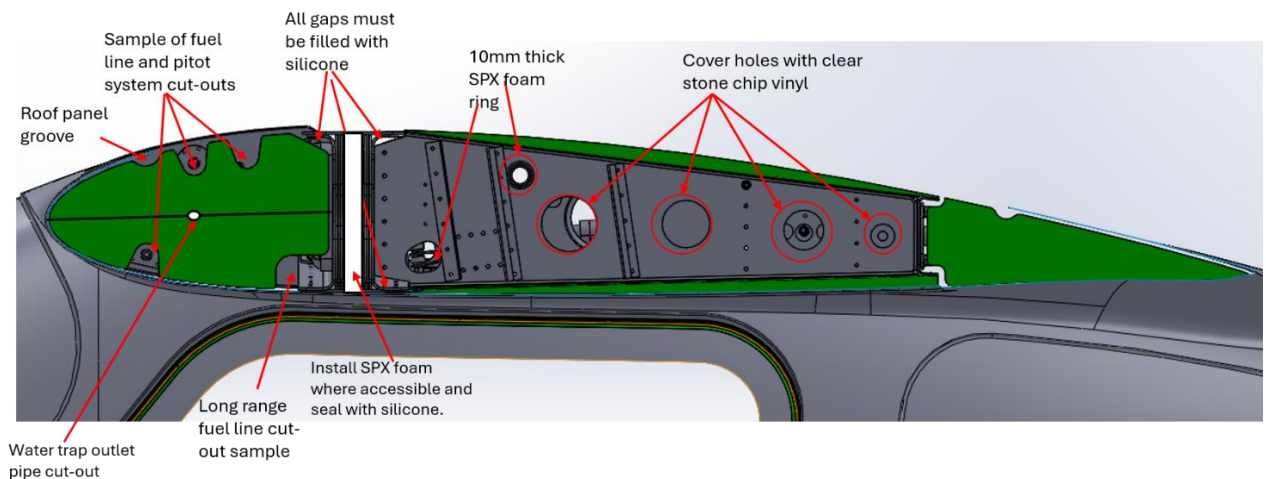
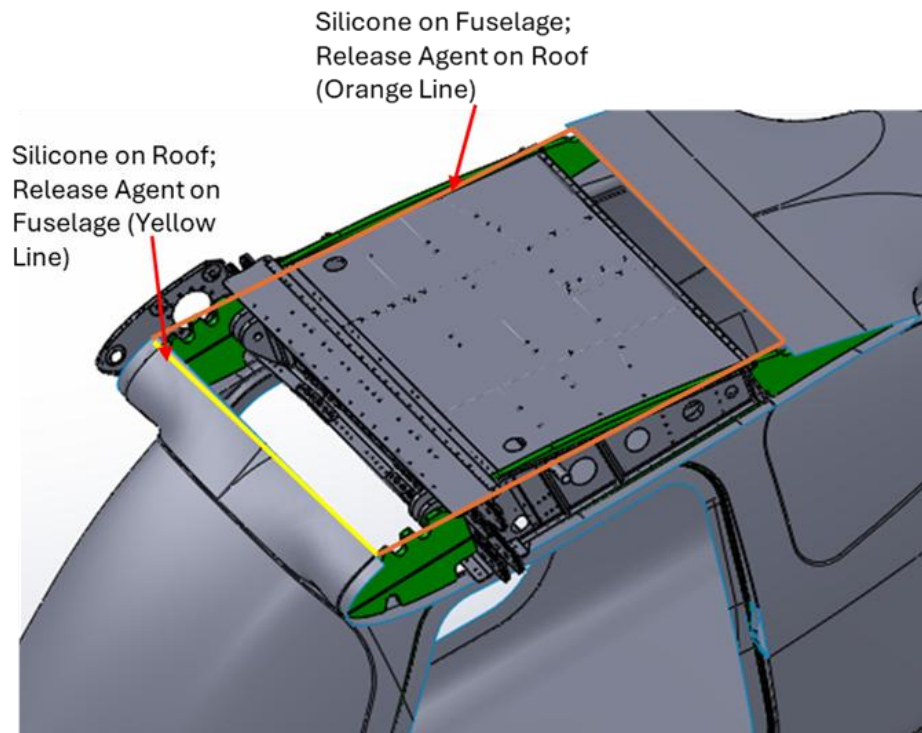


Figure 14: Water-Blocking Foam Rib. Installed state showing cut-outs and sealing requirements.

## ROOF PANEL REINSTALLATION:

14. Refer to Figure 15 for silicone and release agent placement.
15. Apply clear silicone sealant around all anchor nuts on the roof panel and fuselage roof structure to prevent water ingress through any gaps caused by anchor nut movement or shifting.
16. Allow the silicone on the anchor nuts to cure fully before proceeding.
17. Apply wax release agent to the fuselage surface along the front edge of the roof panel opening, following the yellow line indicated in Figure 15.
18. Apply clear silicone sealant to the upper side of the roof panel along the front edge only.
19. Apply clear silicone sealant to the upper side of the fuselage along the remaining three sides of the roof panel opening.
20. Apply wax release agent to the corresponding edges of the roof panel on the remaining three sides.
21. Carefully refit the roof panel ensuring correct alignment and apply firm and even pressure around the full perimeter to achieve a continuous weathertight seal.

22. Inspect the interface between the roof panel and the foam rib and apply a continuous bead of clear silicone sealant to seal all visible gaps along the full length of the roof-rib interface.
23. Allow all silicone to cure fully before reinstating the wing fairing. Refer to the silicone manufacturer's instructions for curing time.



**Note:** Perform the first inspection prior to roof closure. The wing fairings shall remain open at this stage.

Figure 15: Roof Panel Reinstallation Showing Silicone Application



Figure 16:Anchor Nut Sealing

### 7.3 POST-INSTALLATION INSPECTION

1. Verify that both foam rib halves are firmly bonded to the fuselage with no lifted or loose sections and that the joint between the two halves is tight with no gaps.
2. Inspect the full perimeter of the rib for any visible gaps between the rib and the fuselage surface and fill with clear silicone sealant as required.
3. Confirm that all fuel line and pitot system cut-outs are correctly sealed with silicone with no distortion or compression of any lines or system components.
4. Where the 10 mm SPX foam strip was installed at the main spar gap, confirm that it is firmly in place and fully sealed with clear silicone sealant with no visible gaps.
5. Confirm that all topbox lightening holes are covered with clear stone chip vinyl with no lifted edges.
6. Confirm that the rib is correctly positioned to intercept water flowing inboard along the wing root.

## 8 WING FAIRING DRAIN HOLE

### 8.1 PRE-INSTALLATION PROCEDURE

1. With the wing fairing fitted to the aircraft, identify and mark the lowest point of the fairing with the aircraft in its normal parked (ground) attitude. This location allows water to drain when the aircraft is parked in rain.
2. Identify and mark a second location towards the trailing edge of the fairing to allow drainage during flight.
3. Confirm that both marked locations are clear of any internal structure, wiring, or fuel lines before drilling.

### 8.2 INSTALLATION PROCEDURE

1. Using the marker pen, confirm the centre point of each marked location.
2. Drill a 6 mm diameter hole at each marked location using a sharp 6 mm (15/64 in.) drill bit. Hold the drill at approximately 45° aft relative to the fairing surface.
3. Deburr both sides of each drilled hole and remove all swarf and debris from the wing fairing using a vacuum cleaner or compressed air.
4. Inspect the drilled holes to ensure they are free from burrs, cracks, or other damage.

**Note:** Care must be taken when drilling the ground drain hole due to its proximity to the main spar. Verify the drilling location before commencing work and ensure that no structural members, systems, or adjacent components are damaged during the drilling operation. The drain holes shall be installed as close as practicable to the water-blocking rib to provide effective drainage of water intercepted by the rib. Incorrect placement may result in residual water remaining within the cavity, leading to water accumulation and stagnant conditions.

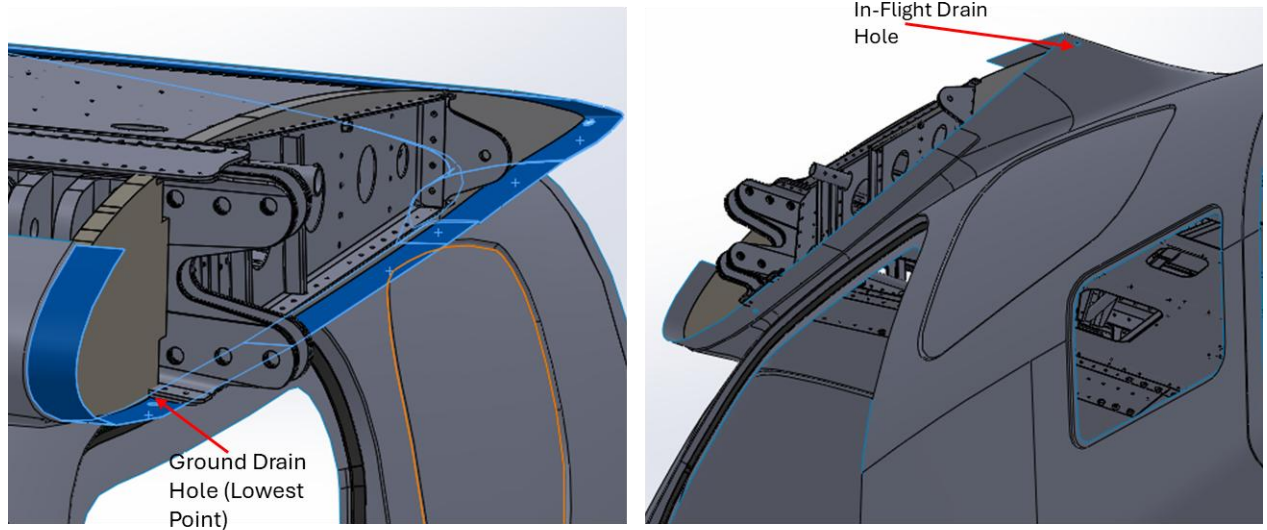


Figure 17: Wing Fairing Drain Hole Drilling.

### 8.3 POST-INSTALLATION INSPECTION

1. Inspect each drain hole to confirm it is clean, free of debris, and unobstructed.
2. Confirm that each hole passes fully through the fairing skin with no internal obstructions.
3. Pour a small amount of water into the fairing at the lowest point and confirm that it drains freely through the drain hole.

## **9 SUPPLEMENTARY**

This section is supplementary and contains additional procedures applicable to specific operating conditions. Perform the procedures described in the relevant subsection where the stated conditions apply

### **9.1 PARACHUTE CABLE HOLE SEALING**

Water may drip into the cabin through the parachute cable hole at the bulkhead interface with the parachute compartment if the blow-out skin is not adequately sealed. Perform this procedure where water ingress at the rear bulkhead has been observed or where additional waterproofing is required.

#### **9.1.1 PRE-INSTALLATION PROCEDURE**

1. Remove the rear headphone jack compartment to gain access to the rear bulkhead area.
2. Locate the parachute cable penetration at the bulkhead interface with the parachute compartment.
3. Inspect the parachute cable penetration and the surrounding bulkhead surface for contamination, damage, or any condition that may prevent proper adhesion of the SPX foam seal. Rectify any discrepancies before proceeding.
4. Clean the bulkhead sealing surface using acetone or an approved cleaning solvent and allow the surface to dry completely before installation.

#### **9.1.2 INSTALLATION PROCEDURE**

1. Refer to Figure 18 for the seal dimensions, placement, and orientation.
2. Cut an SPX foam seal measuring 80 mm × 25 mm × 10 mm thick with 8 mm corner radii on the two lower corners, as shown in Figure 18.
3. Where parachute cables are present, cut reliefs in the SPX foam seal as required to provide clearance for the cables. Keep the cut-outs to the minimum size necessary.
4. Position the SPX foam seal over the parachute cable penetration.
5. Apply a continuous bead of clear silicone sealant around the perimeter of the SPX foam seal to bond it in position.
6. Ensure the SPX foam seal is fully bonded to the bulkhead and that the parachute cables remain free to move without interference from the foam or sealant.
7. Allow the silicone sealant to cure fully before reinstalling the rear headphone jack compartment.

80 mm x 25 mm SPX foam, 10 mm thick. Cut out for parachute cable routing where the parachute is installed. Apply clear silicone around the perimeter.

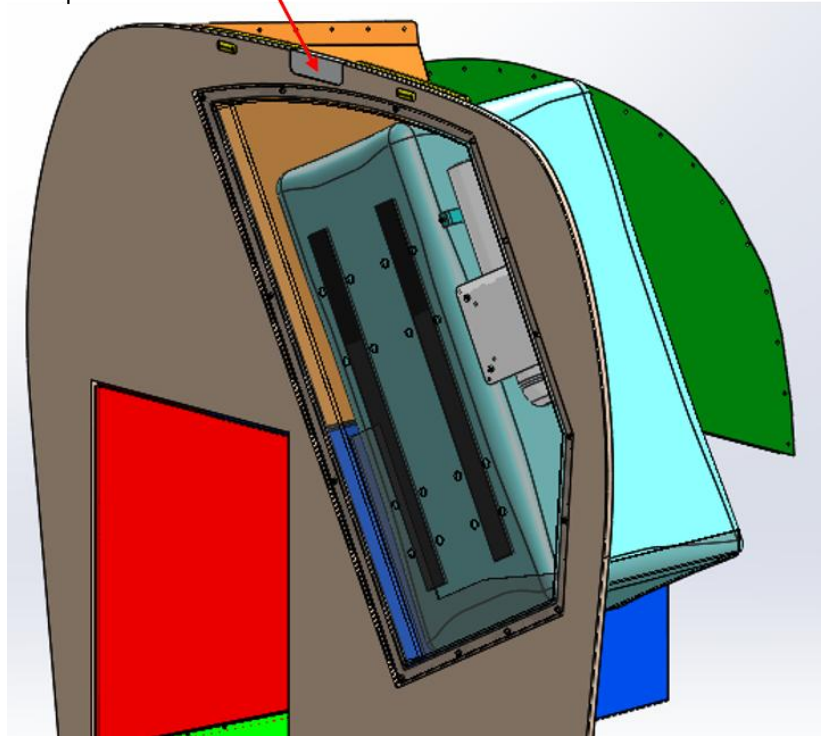


Figure 18: Parachute Cable Hole Sealing at Bulkhead Interface with Parachute Compartment.

### 9.1.3 POST-INSTALLATION INSPECTION

1. Verify that the SPX foam seal is correctly positioned over the parachute cable penetration.
2. Verify that the silicone sealant forms a continuous bead around the perimeter of the SPX foam seal with no gaps or voids.
3. Verify that the relief cut-outs provide adequate clearance for the parachute cables.
4. Reinstall the rear headphone jack compartment and verify that it is correctly secured.

## 9.2 DRAIN HOLE PLUGS

In regions where insects are known to nest in drain holes, temporary plugs may be inserted into the wing fairing and centre fuselage belly drain holes while the aircraft is parked on the ground to prevent insect ingress and blockage. The plugs must be removed before flight to allow the drain holes to function as intended during flight.

### 9.2.1 INSTALLATION PROCEDURE

1. With the aircraft parked and the engine shut down, insert the drain hole plugs into the wing fairing drain holes (left and right) and the centre fuselage belly drain holes.
2. Confirm that each plug is securely and flush fitted with no protruding edges.

**WARNING:** All drain hole plugs must be removed before flight. Failure to remove the plugs before flight will prevent water from draining from the wing fairing cavity and centre fuselage belly and may result in water accumulation in these areas.

### 9.2.2 REMOVAL PROCEDURE

1. As part of the pre-flight inspection, confirm that all drain hole plugs have been removed from the wing fairing and centre fuselage belly drain holes before flight.
2. Inspect each drain hole to confirm it is unobstructed and free from insect nesting or debris before flight.
3. Store the plugs securely in the aircraft for reinsertion after landing.

### 9.3 WING FAIRING SEALING

The installation of the water-blocking ribs and the associated topbox sealing improvements addresses the primary water ingress paths into the cabin. Where these modifications have been completed and all potential water ingress paths, including those around the rib and topbox interfaces, have been effectively sealed, the acrylic sealant application specified in Safety Alert #0014 Rev0 may be replaced by the installation of the weather seal in accordance with the sealing practice used prior to the release of Safety Alert #0014 Rev0.

Where complete sealing of all potential water ingress paths cannot be verified, particularly at the main spar interface or other inaccessible areas, the application of acrylic sealant in accordance with Safety Alert #0014 Rev0 is recommended to provide additional protection against water ingress.

Signed on this the <sup>06</sup> day of ..... July 20~~20~~<sup>26</sup>



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**ACCOUNTABLE MANAGER**

**MR JAMES PITMAN**

p.p MR TERRY MUSIKER