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(Sling Aircraft (Pty) Ltd. considers compliance with all Safety Alert mandatory)

RELEASE DATE:	2026/01/16
EFFECTIVE DATE:	2026/01/16
SUBJECT:	Water Ingress Mitigation and Water Drainage.
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:	Before next flight if evidence of water ingress and/or accumulation is found. At the next scheduled Mandatory Periodic Inspection (MPI) for all other affected aircraft.
LABOUR TIME:	5 to 7 hours (depending on the severity of water ingress).

1 DESCRIPTION AND PURPOSE

1.1 PROBLEM IDENTIFIED

Rainwater ingress and accumulation have been reported beneath the cabin floor in the centre fuselage of Sling 4 High Wing aircraft following:

- Uncovered parking in heavy rain or prolonged wet weather conditions
- Flight operations in rain

Safety hazard: Accumulated water beneath the cabin floor represents unaccounted mass that can unknowingly shift the aircraft's centre of gravity (CG). Pilots have no means of detecting this water accumulation during preflight inspection, and the weight and CG shift can adversely affect flight characteristics, stability, and control responses. This may compromise safe operation, particularly during critical phases of flight such as take-off and landing.
Additional concerns include:

- Increased risk of corrosion to internal systems and electrical components.
- Deterioration of cabin floor materials, insulation, and carpeting.

Operational consideration: Whilst it is preferred to minimize prolonged exposure to heavy rain when parked and during flight operations, complete avoidance is not possible. Furthermore, water accumulation can be due to condensation and spillage of other liquids. Therefore, the aircraft must have an adequate drainage system.

1.2 SOLUTION

This Safety Alert addresses water accumulation through a four-part solution:

1. Improved door seal installation - Eliminates water entry through door interfaces
2. Wing root fairing acrylic sealing - Eliminates water leakage at wing-to-fuselage junction
3. Centre fuselage drain provisions - Evacuates any water before it accumulates
4. Centre Fuselage Pillar Entry Point Sealing and Drainage – Seals water entry points and provides drain holes to remove any water present within the pillar hollow sections.

Compliance Requirements:

- Door seal installation (item 1) is only required if water ingress is detected during the inspection test described in Section 7.1

- Wing root fairing acrylic sealing (item 2), Centre fuselage drain provisions (item 3), and Centre fuselage pillars entry point sealing and drainage (item 4) are mandatory for all aircraft.

1.3 MASS DATA

Change of weight - Negligible

1.4 ELECTRICAL LOAD DATA

No changes

1.5 SOFTWARE MODIFICATION

No changes

1.6 REFERENCES

Sling 4 High Wing Maintenance Manual (current revision)
Sling 4 High Wing Finishing Construction Manual (DC-KAI-008-X-G current revision)

1.7 DOCUMENTATION AFFECTED:

DC-MAM-001-X-G-0.3 – Sling 4 HW Maintenance Manual should be updated to include inspection of door seals and drain holes, and then re-sealing of wing root failings post-maintenance inspections.

2 MATERIAL INFORMATION

2.1 PARTS AND CONSUMABLES LIST

- Improved door seal kit (PN:CF-RUB-001-C-G-0, if deemed required i.a.w. Section 7.1 below.
- 3M Scotch-Weld Plastic & Rubber Instant Adhesive PR100, if required
- Black silicone sealant
- Acrylic sealant (Alcolin Brilliant White Acrylic Sealant or equivalent)
- Isopropyl alcohol (99% preferred) or approved cleaning solvent

2.2 TOOLS REQUIRED

- **General tools (used for multiple work packages):**
  - Clean, lint-free cloths
  - Masking tape (50 mm width minimum)
  - Protective gloves
  - Plastic scraper or appropriate removal tool
  - Wooden spatula or applicator
- **Specific to door seal installation:**
  - No additional tools required
- **Specific to wing root fairing sealing:**
  - Sealant applicator gun (if using cartridge)
  - Safety glasses
- **Specific to drain hole installation:**
  - Electric or pneumatic drill (variable speed recommended)
  - 8mm or 5/16” drill bit (sharp and in good condition)
  - 9mm or 3/8” drill bit (sharp and in good condition)
  - Deburring tool or fine file
  - Marker pen (fine-tip permanent marker)
  - Vacuum cleaner or compressed air source
  - Inspection mirror and flashlight or borescope
  - Drill stop or depth gauge
  - Protective eyewear

2.3 RESPONSIBILITY AND WARRANTY COVERAGE

For aircraft under warranty:

- Labour costs covered by Sling Aircraft when work is performed by a Sling-approved maintenance organisation
- Consumables (sealant, cleaning solvent) covered by Sling Aircraft

Not covered by Sling Aircraft:

- Shipping costs
- Aircraft downtime
- Loss of income or consequential expenses

For aircraft outside warranty or owner-maintained:

- Owner is responsible for all materials and labour costs

2.4 PERSONNEL REQUIREMENTS

Work shall be performed by appropriately licensed personnel competent in composite aircraft structural work. Sling Aircraft cannot accept responsibility for workmanship quality if instructions are not followed.

2.5 COMPANY SUPPORT INFORMATION:

For technical or airworthiness support, contact:
Airworthiness@slingaircraft.com or Technical@slingaircraft.com.

3 WATER DRAINAGE PATHWAYS

3.1 PATHWAY DESCRIPTION

Water has been observed entering the centre fuselage through multiple pathways during rain exposure. Primary ingress points include door seal interfaces, wing root-to-fuselage fairing junctions, horizontal stabilizer fairing interfaces, and fuselage vertical pillar structures (door posts and structural supports). Once water penetrates these entry points, it migrates downward through the aircraft structure following gravity and internal pathways, eventually accumulating in the centre fuselage floor bays where no natural drainage exists. The water flow paths and accumulation areas are illustrated in Figure 1 , Figure 2 and Figure 3 , which show how water enters at upper interfaces and travels through the structure to collect beneath the cabin floor. This accumulated water cannot be visually detected during normal preflight inspection and has no means of escape without the drainage provisions described in this Safety Alert.

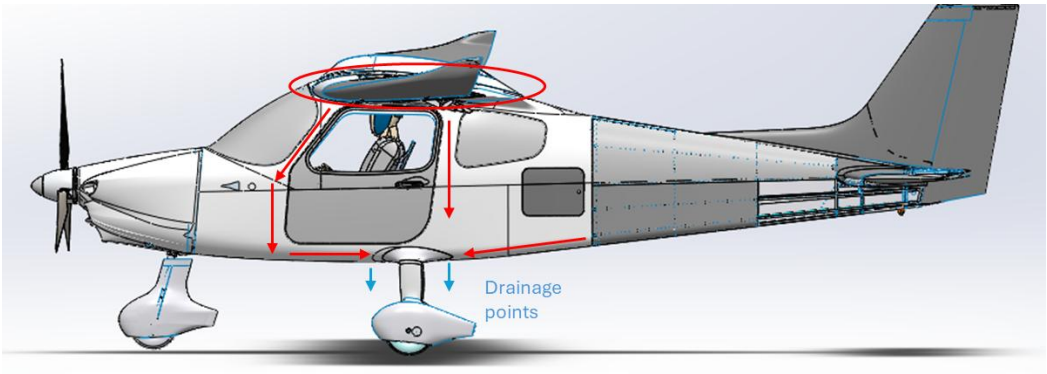

Figure 1: Tricycle Gear Ground and Level Flight Attitudes

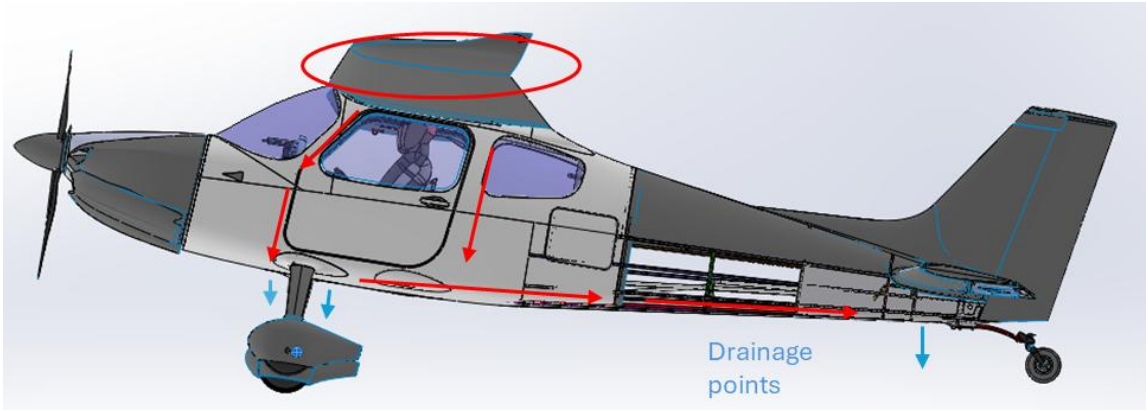

Figure 2: Taildragger Aircraft Ground Attitude

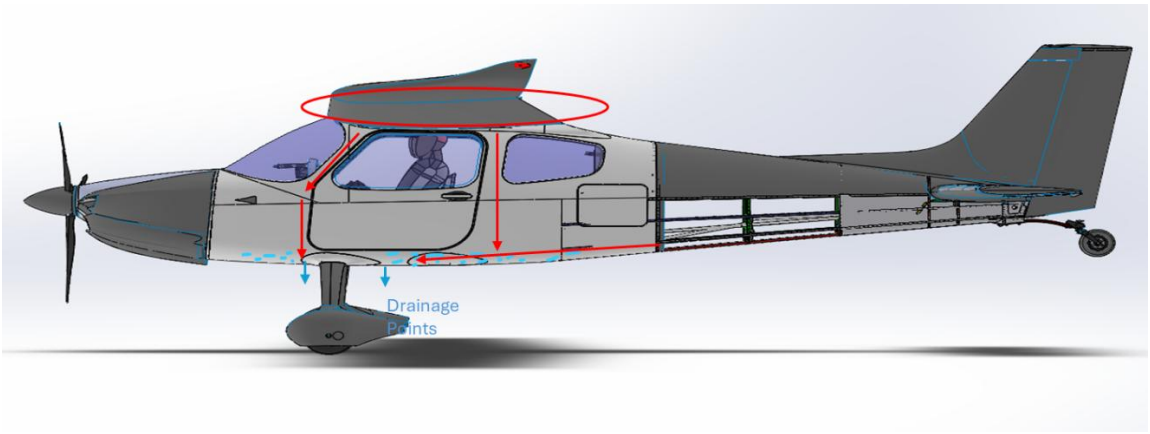

Figure 3: Taildragger Aircraft Level Flight Attitude

4 DRAIN HOLES

4.1 GENERAL REQUIREMENTS

Drilling requirements:

- Use 8mm or 5/16” drill bit for floor bays and inter-rib holes
- Use 9mm or 3/8” drill bit for mid bulkhead hole (as specified)
- Finished holes must be smooth, free from burrs or irregularities

SAFETY WARNING: Extreme care required to avoid damage to structure, control systems, wiring, fuel lines, and other equipment. Always verify clearances before drilling.

4.2 DRAIN HOLE LOCATION

4.2.1 TRICYCLE CONFIGURATION

The holes for the tricycle configuration shall be in accordance with the below bullet points (also refer to Figure 4 and Figure 5).

- Six (6) 8mm or 5/16” drain holes in centre fuselage floor bays
- Three (3) of which are located forward of undercarriage box
- Three (3) of which are located aft of undercarriage box
- Each at lowest point of respective bay
- Minimum 20 mm clearance from structural members and fastener lines

4.2.2 BOTH CONFIGURATIONS

Refer to Figure 4 and Figure 6

1. **Rear seat attachment point corner transfer holes:**
    - One (1) 8mm or 5/16” diameter transfer hole at each seat attachment point corner bottom hole
    - These are pockets where water can accumulate

- Transfers water into the belly where it will be drained to the exterior of the aircraft

2. **Inter-rib water transfer holes**:
   - Two (2) 8mm or 5/16” diameter transfer holes through the two outermost centre fuselage rib webs closest to the bulkhead at lowest point
   - Transfers water from the outermost rib bays into the next rib bay where bulkhead transfer holes are located
3. **Bulkhead water transfer holes:**
   - Three (3) 9mm or 3/8” diameter holes at lowest point of bulkhead
   - For tricycle allows water from rear fuselage to transfer into centre fuselage where drain holes allow water to exit the aircraft.
   - For taildragger allows water to transfer from centre fuselage to rear fuselage during ground operations (tail-down attitude), and from rear fuselage to centre fuselage during level flight where drain holes allow water to exit the aircraft.

4.2.3 TAILDRAGGER CONFIGURATION

Refer to Figure 7

1. Forward of undercarriage box: Two (2) 8mm or 5/16” drain holes at lowest points (level flight attitude)
2. Aft of undercarriage box: Three (3) 8mm or 5/16” drain holes at lowest points (level flight attitude)

4.3 INSPECTION PRIOR TO INSTALLATION

1. **Access:** Remove cabin floor panels, seats, and interior trim for complete access
2. **Water inspection:**
   - Check all bays for standing water or moisture
   - If present: remove all water, dry completely, document quantity/location
3. **Structural assessment:**
   - Inspect for delamination, fibre exposure, matrix cracking
   - Rectify any damage per Maintenance Manual before continuing

4.4 DRAIN HOLE POSITION MARKING GUIDELINES

1. **Systems clearance verification:**
   - Using visual inspection and borescope, verify no control cables, wiring, fuel lines, or brake lines within 25 mm of intended drill path
   - Mark system boundaries with masking tape
   - Consider alternative hole positions if systems are close
2. **Location marking:**
   - For trike: verify lowest points with aircraft in normal ground attitude
   - For taildragger: verify transfer hole positions allow water flow in both tail-down and normal flight attitudes
   - Apply masking tape around each drill location
   - Mark all drain and transfer hole locations per Figure 4, Figure 5, Figure 6 and Figure 7 using fine-tip permanent marker
3. **Important considerations:**
   - Aircraft configuration and production revision may affect internal structure: Always verify the aircraft structure corresponds with Figure 4, Figure 5, Figure 6 and Figure 7 before drilling
   - Imagery illustrations in the Appendix may be used as additional reference
   - Do not rely solely on illustrations: physical inspection is mandatory
   - For taildragger aircraft:
     - Drain holes forward and aft of undercarriage box use same principles as trike configuration, accessed through inspection hatches
     - Maintain minimum 20 mm clearance from undercarriage box and all structural members

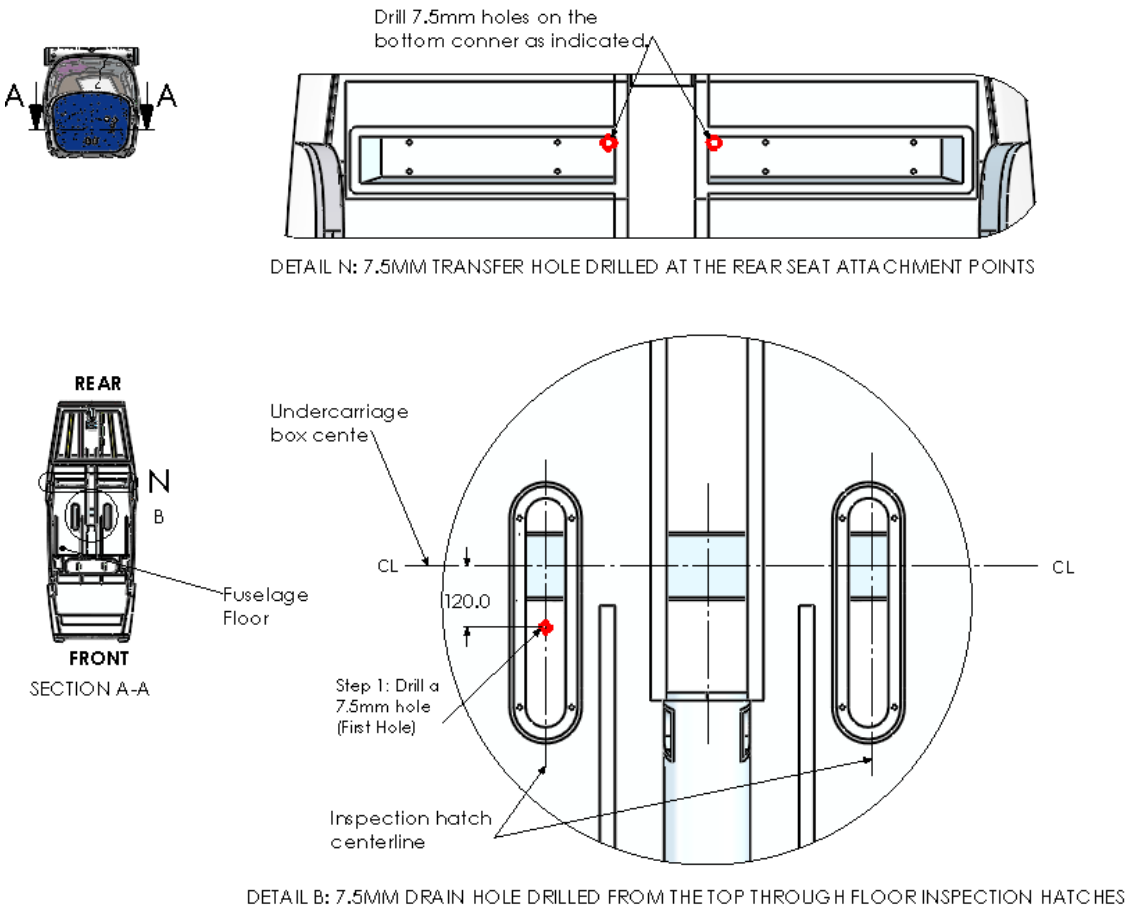

Figure 4: Tricycle drain hole drilling instructions (First Step)

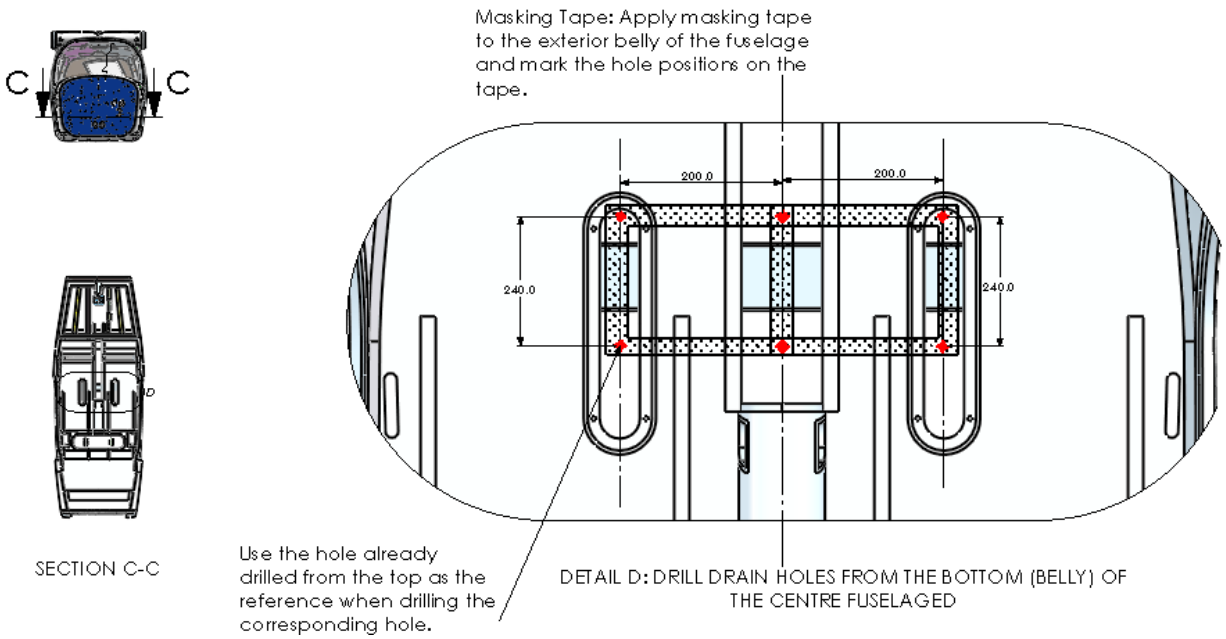

Figure 5: Tricycle drain hole marking and drilling instructions

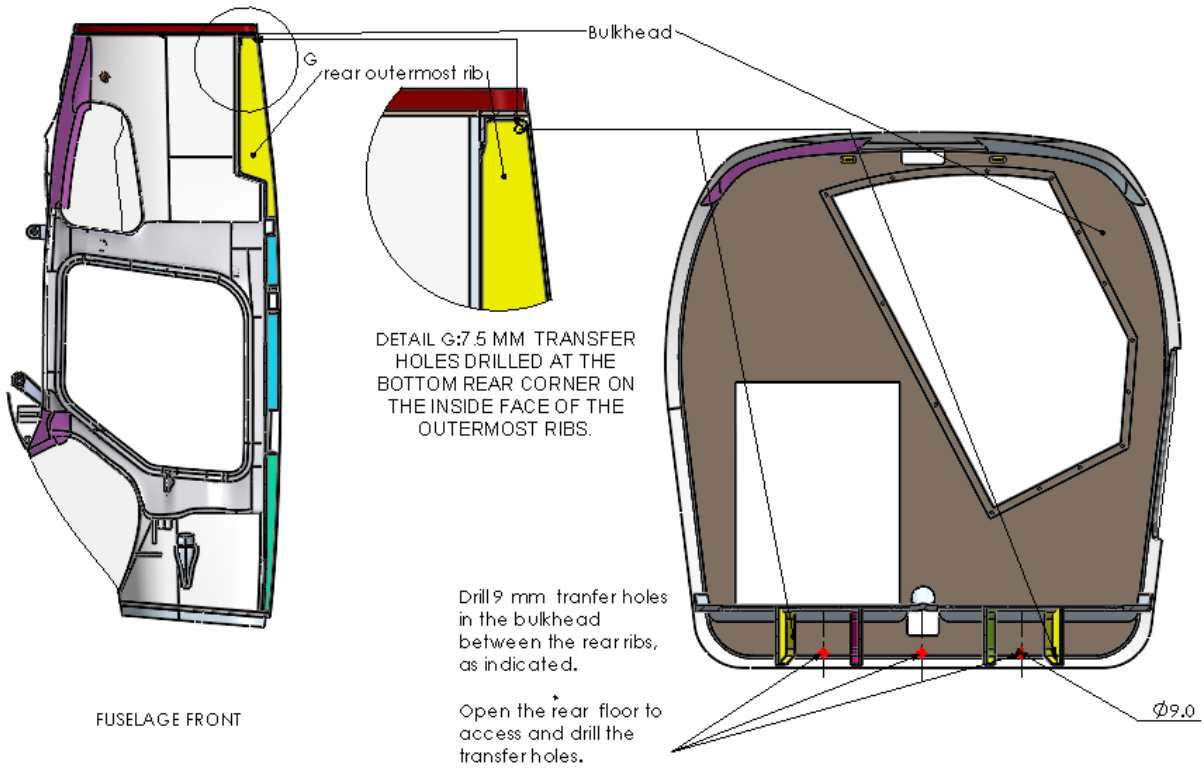

Figure 6: Bulkhead and inter-rib transfer holes marking and drilling instructions (Both Configurations)

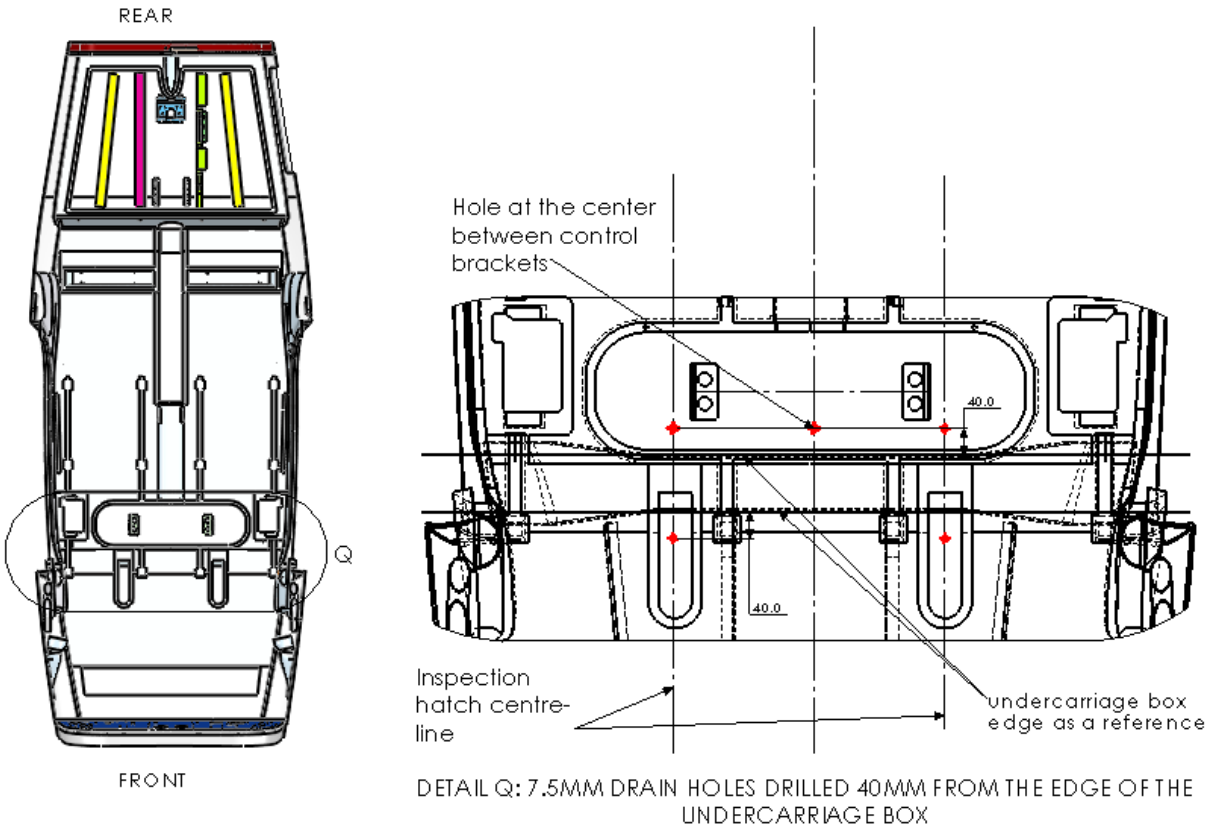

Figure 7: Taildragger marking and drilling instructions

4.5 INSTALLATION PROCEDURE

1. **Drilling:**
   - Confirm all inspections complete
   - Use moderate drill speed with steady, controlled pressure
   - Apply masking tape on exterior surface to reduce tear-out
   - Reduce speed as breakthrough approaches
   - Continuously vacuum debris during operation
   - Have assistant observe breakthrough where possible
2. **Deburring and finishing:**
   - Deburr both interior and exterior edges
   - Ensure smooth internal surface for unrestricted flow
   - Clean with isopropyl alcohol
   - Remove all marker marks and tape residue

4.6 POST-INSTALLATION CHECKS

1. **Drainage verification:**

- **Flight attitude check:**
  - Position the aircraft in an approximate level flight attitude. Perfect levelling of the aircraft is not required.
  - Introduce water into each bay within the centre fuselage and rear fuselage and verify that the water drains fully and without delay.
- **Tail down attitude check:**
  - Position in tail-down attitude
  - Introduce water into each fuselage bay
  - Verify water migrates through inter-rib holes, across mid bulkhead, and migrates towards the rear drains.
  - Verify that the water drains fully and without delay.

2. **Visual inspection:**
   - Confirm all holes are clear, correctly positioned, and free from burrs
   - Verify no damage to structure, controls, wiring, or systems
   - Reinstall all components per Maintenance Manual
   - Torque all fasteners properly

5 PILLARS SEALING AND DRAINAGE

5.1 PILLAR DRAINAGE CONSIDERATIONS

Water entering the vertical pillar hollow sections will migrate downward. Due to the enclosed nature of the pillar construction, the hollow sections between the door reinforcement structure and the outer skin can trap water, as there is no natural drainage path. Water ingress typically occurs through unsealed penetrations in the pillars where electrical wiring and fuel lines pass from the wing into the fuselage.
If trapped, this water can:

- Cause corrosion of the internal pillar structure
- Damage electrical wiring routed through the pillars
- Eventually leak into the cabin, resulting in damage to carpeting and insulation

Because the pillar hollow sections cannot be practically inspected for existing water accumulation, this Safety Alert mandates both sealing of all potential water entry points, including wiring and fuel line penetrations, and the installation of drainage holes at the lowest point of each pillar to remove any water that may enter or already exist within these hollow sections.

5.2 SEALING WATER ENTRY POINTS

Refer to Figure 8 and Figure 9 for typical sealing points.

1. **Inspection for water entry points**
   - Inspect all upper pillar areas for potential water entry paths.

- Examine interfaces where the pillar structure meets the upper fuselage, roof line, and door frame.

2. **Surface preparation**
   - Clean all areas to be sealed using isopropyl alcohol.
   - Remove all contamination, oil, grease, and debris.
   - Allow surfaces to dry completely.
3. **Sealant application**
   - Apply Black Silicone sealant to all gaps, joints, and openings where water could enter the pillar hollow sections.
   - Ensure a continuous bead with no gaps, voids, or breaks.
   - Tool the sealant smooth for proper adhesion and a professional finish
4. **Curing**
   - Allow sealant to cure per the manufacturer's instructions.
   - Do not expose sealed areas to rain or moisture during the curing period.

Figure 8: Typical sealing locations on the front pillar

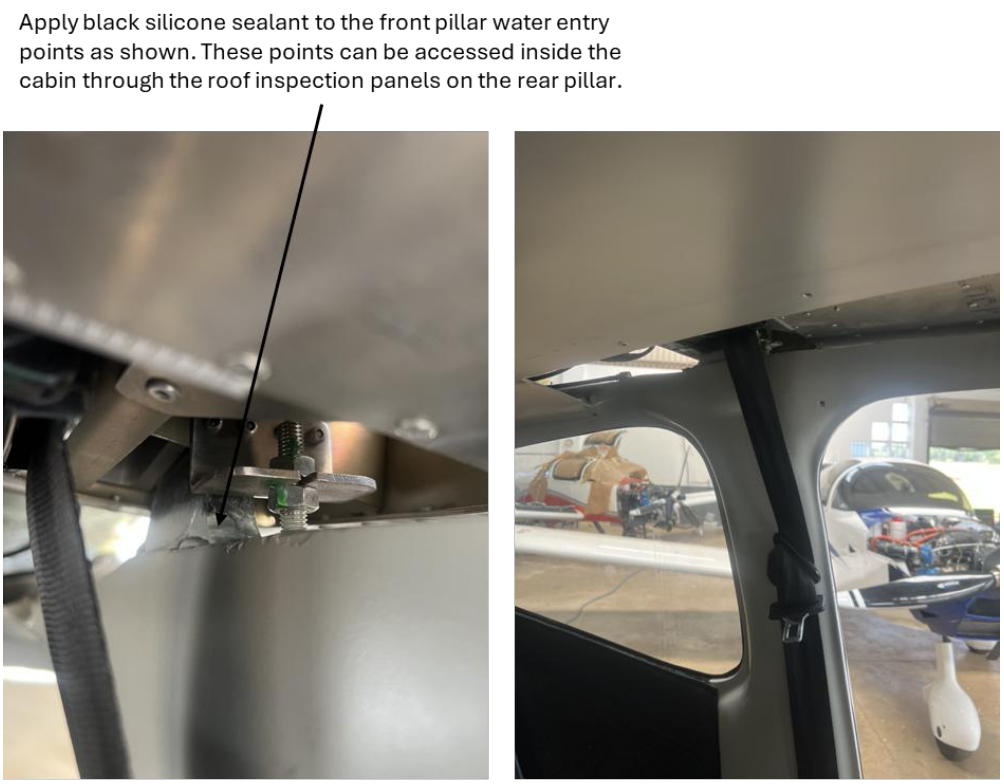

Figure 9: Typical sealing locations on the rear pillar

5.3 INSTALLATION PILLAR HOLLOW DRAIN HOLES

1. Access
   - Remove interior panels as required to access the base of each pillar.
   - Ensure adequate lighting and clear access to the work area.
2. Location marking
   - Mark the drill location at the lowest point of the pillars as indicated in Figure 10 and Figure 11. Water must be allowed to drain from the base of the pillar onto the aircraft floor.
3. Drilling
   - Follow the drilling procedure provided in Section 4.
   - 8 mm (5/16”)
4. Verification
   - Verify each drain hole is clear and positioned at the lowest point.
   - Confirm water can freely exit the pillar hollow section.
   - Reinstall all interior panels in accordance with the Sling High Wing Maintenance Manual.

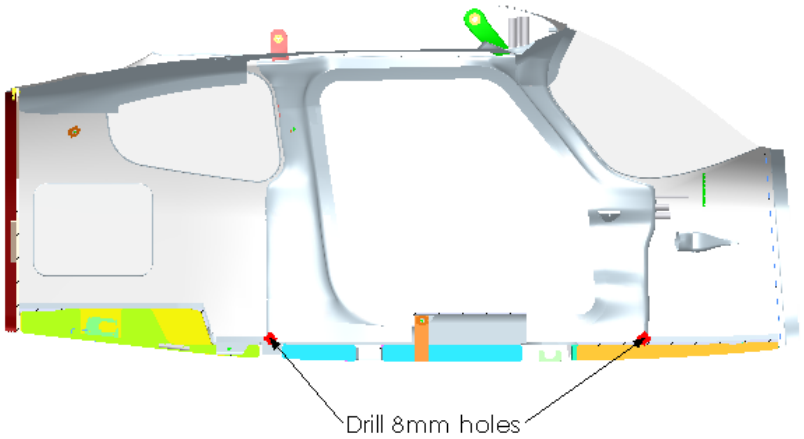

Figure 10: Pillar drain locations

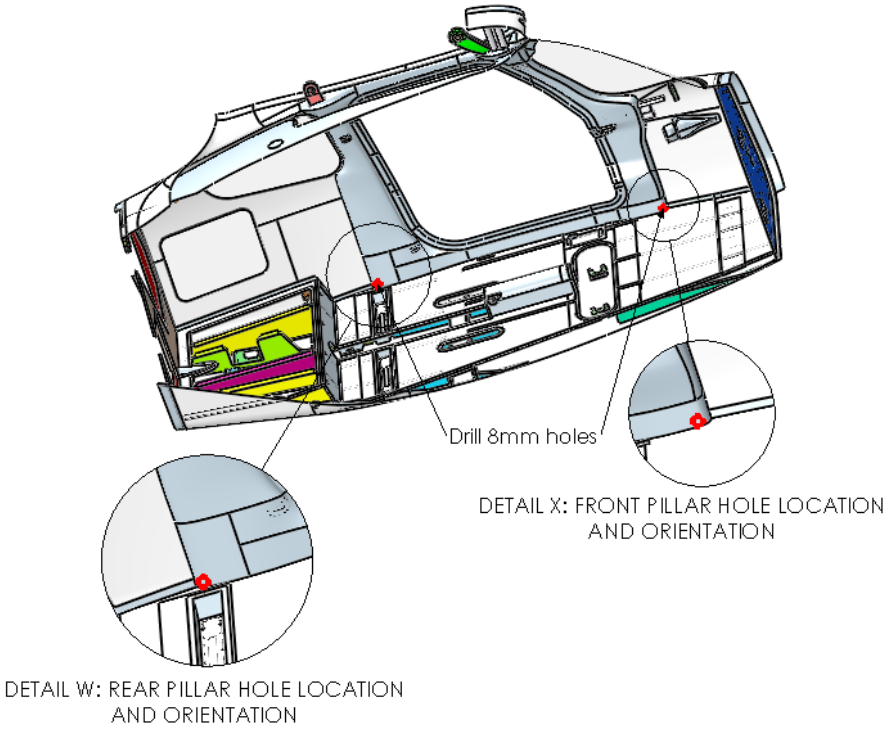

Figure 11: Detailed pillar hole location and orientation

6 WING ROOT FAIRING

6.1 INSTALLATION PROCEDURE

1. **Fairing removal and cleaning**
   - Remove wing root fairings per Sling High Wing Maintenance Manual. The applicable wing root fairings are: WG-SKN-025-L-G-0, WG-SKN-025-R-G-0, WG-SKN-027-C-G-0, WG-SKN-029-C-G-0, CF-CMP-009-R-G-1, and CF-CMP-009-L-G-1

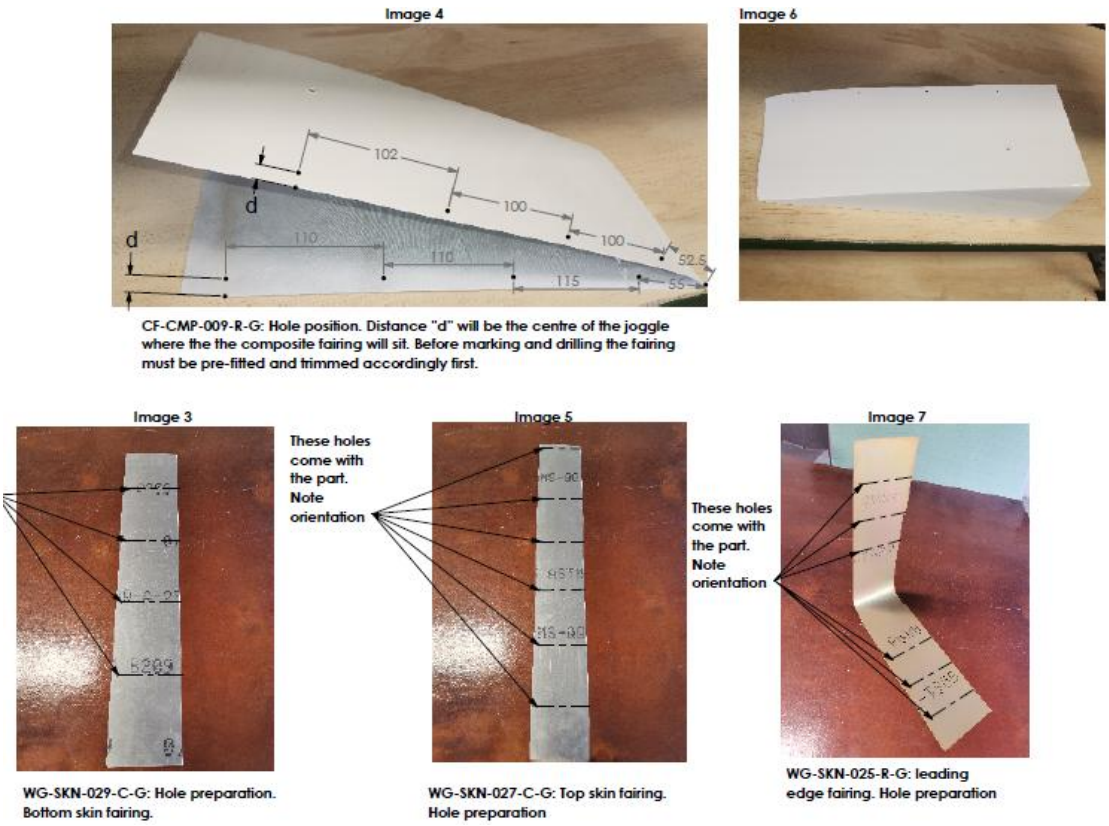

Figure 12: An extraction of images from the Sling High Wing Construction Manual (DC-KAI-008-X-G-1.2) for the wing fairings.

- Remove all existing weather seal material with plastic scraper
- Clean all mating surfaces thoroughly with isopropyl alcohol
- Allow to dry completely (minimum 10 minutes)

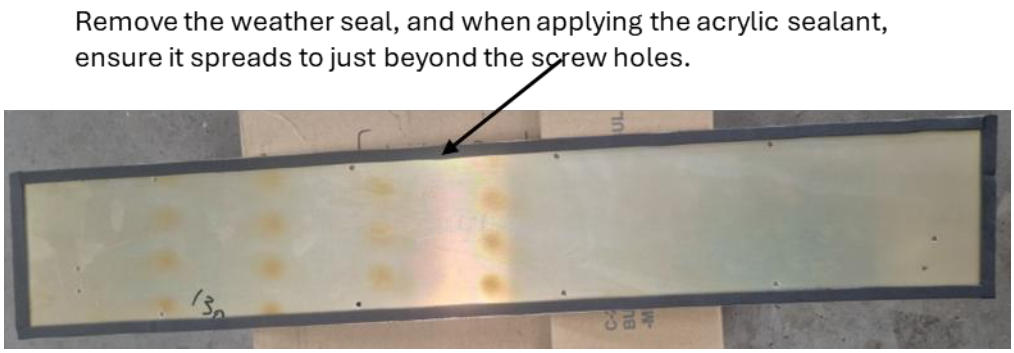

Figure 13: Wing Fairing- Sample

2. **Apply acrylic sealant**
   - Verify surfaces are clean, dry, and ambient temperature is suitable
   - Cut nozzle for 3-5 mm bead width
   - Apply continuous bead around entire fairing perimeter and around fastener holes.

- Pay attention to corners and complex contours
- Complete within sealant working time (refer to manufacturer data)

3. **Install fairing**
   - Position fairing while sealant is workable
   - Install all fasteners finger-tight
   - Tighten progressively from centre outward in multiple passes
   - Torque to Maintenance Manual specifications
   - Verify continuous sealant bead is visible around perimeter
4. **Cleanup**
   - Remove excess sealant with cloth dampened with isopropyl alcohol (within 30 minutes)
   - Clean fasteners and surrounding areas
5. **Curing**
   - Allow to cure per manufacturer instructions (temperature dependent)
   - Do not expose to rain or wash aircraft until fully cured
   - Avoid flight operations until fully cured
   - Verify firm bond and continuous seal before return to service

6.2 POST-INSTALLATION VERIFICATION

- Verify continuous seal around entire perimeter
- Check proper adhesion with no gaps or voids
- Confirm all fasteners properly torqued
- Verify no air gaps between fairing and fuselage/wing

7 DOOR SEALS

7.1 INSPECTION TO DETERMINE SEAL REPLACEMENT NEED

Before removing existing door seals, perform a water leak test to determine if replacement is necessary:

- **High-speed water leak test:**
  - With doors closed and latched, use high-pressure water spray around entire door perimeter to simulate flight in rain
  - Check interior for any water ingress
  - Pay particular attention to top and side door seal areas
- **Determination:**
  - If no water ingress is observed: Existing door seals are satisfactory. Door seal replacement is not required.
  - If any water ingress is detected: Door seal replacement is required. Proceed with Section 7.2

7.2 INSTALLATION PROCEDURE

1. **Surface Preparation**
   - Remove old door seals completely
   - Clean all mounting surfaces thoroughly with isopropyl alcohol until no residue remains
   - Allow to dry completely (minimum 10 minutes)
2. **Install improved seals**
   - Seal orientation (as shown in Figure 15)
     - The shorter side of the seal is where adhesive is applied
     - The open side of the seal faces outwards
     - Verify correct orientation before applying any adhesive
   - Starting point: Begin at location shown in Figure 14
   - Application method
     - Work in 10 cm segments

- Apply small amount of PR100 adhesive to middle of seal (shorter side) and spread evenly with wooden spatula - thin coverage only (excess damages paint)
- Note: Adhesive cures quickly - position seal immediately after applying
- Position seal at very edge of door frame (essential for proper door closure)
- Press firmly until adhesive is dry and holding firmly. Remove any excess adhesive immediately with a clean cloth before it cures
- Continue around entire door perimeter, one segment at a time.

- Seal continuity
  - Ensure seal ends meet properly with no gaps
  - Verify seal is properly seated along entire length
- Final sealing:
  - Apply a thin, continuous bead of Silicone sealant along the edge to ensure an effective seal (refer to Figure 15)
  - Smooth sealant for professional finish
  - Allow to cure per manufacturer's instructions

Figure 14: Door seal installation

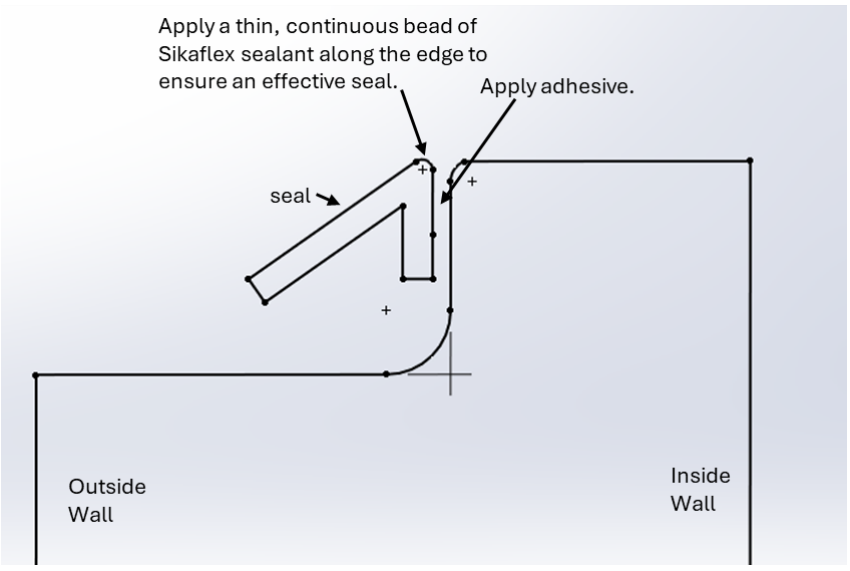

Figure 15: Seal Orientation Schematic

7.3 POST-INSTALLATION VERIFICATION

- Verify continuous installation around entire perimeter, open side outward
- Check smooth door operation with no binding
- Confirm proper latch engagement and uniform seal compression
- Low-pressure water spray test for leaks

8 CONTINUED AIRWORTHINESS

8.1 INSPECTION REQUIREMENTS (at each MPI)

1. **Door seals:**
   - Check for damage, deterioration, compression set, gaps, or tears
   - Verify proper compression when door is closed
   - Test for air leaks
2. **Wing root fairing seals:**
   - Inspect for gaps, cracks, separation, deterioration, or hardening
   - Reapply sealant each time fairings are removed for access for inspection and/or maintenance.
3. **Drainage holes:**
   - Verify clear of debris and contamination
   - Check for cracking, delamination, or hole elongation
   - Confirm functioning correctly

8.2 MAINTENANCE ACTIONS

- **Cleaning:** Clear drain holes with compressed air or non-rigid tool
- **Door seals:** Replace if deteriorated or ineffective
- **Wing fairing seals:** If deteriorated, remove fairing, clean surfaces, reapply fresh sealant per Section 7.1
- **Documentation:** Record all findings and actions; report recurring issues to Sling Aircraft Technical Support

APPROVAL

Signed on this the 16 day of January 2026

ACCOUNTABLE MANAGER
MR ANDREW PITMAN

9 Appendix

Figure 16: Imagery illustration (Tricycle belly drain holes)

Figure 17: Imagery illustration (Bulkhead and inter-rib transfer holes for both configurations)