Maintenance Skills Competition – Moisture Seal Repair Procedure

NOTE: THIS PROCEDURE IS FOR THE MAINTAINANCE SKILLS COMPETITION ONLY! YOU SHOULD REFER TO THE APPROPIATE MAINTAINANCE MANUAL FOR INSTRUCTIONS TO COMPLETE THIS TASK.

WARNING: Throughout each described procedure, it is required that gloves and safety glasses be worn.

1. REPAIR – OUTBOARD MOISTURE SEAL

~~(1) Materials, Tools, Fixtures, and Equipment~~

~~NOTE: Use Moisture Seal kit PN #HSKBOEINGWBALT repair kit to accomplish the following Outboard Moisture Seal Repair procedure. The Moisture Seal Repair Kit can be obtained by contacting by PPG Aerospace.~~

~~(a) See Figure 1 and view video "PPG Hump Seal Repair" prior to accomplishing task.~~

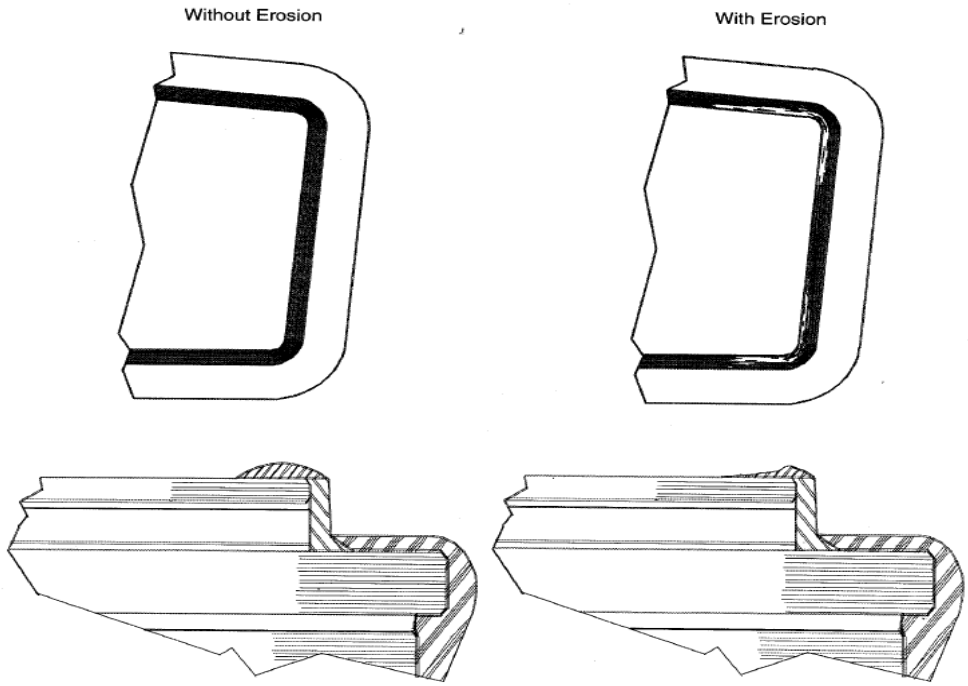

Figure 8. Typical Moisture Seal Erosion Pattern

~~1 This procedure will remove the eroded moisture seal so that following steps can be accomplished to ensure maximize moisture seal.~~

~~2 Using masking tape, mask off the outer glass surface in the area to be repaired of the window.~~

~~3 Remove the eroded sealant in the area to be repaired using a bent razor blade. Be extremely careful not to scratch the glass. Discard the razor blade after a single pass. This will create a clean, smooth glass surface for the new sealant to adhere to.~~

~~(a) Outboard Surface Preparation~~

~~**NOTE: Proper surface preparation per this procedure is required for adhesion of the new polysulfide sealant to the outer surface of the windshield.**~~

~~1 Apply masking tape to the outboard glass surface in the vision area of the windshield to protect it from damage during the repair. Leave at least 1" in. (25.4 mm) of glass exposed around the perimeter of the vision area.~~

~~2 Fill the container of polishing compound to the top with water to create a slurry. Shake the container thoroughly to mix the contents. Carefully dip delicate task wipers into the polishing compound and polish the exposed surface by hand. Continue polishing until a water-break free surface is obtained.~~

~~3 Test the surface by using the supplied sprayer filled with deionized water. A water-break free surface is when the water completely "wets" or "sheets" over the surface with no sign of drawing up or receding into droplets showing dry areas in between.~~

~~NOTE: Achieving a water-break free surface is critical to ensure adhesion of the new sealant to the outer glass surface.~~

~~4 After a water-break free surface is obtained, clean the entire area with a 50% isopropyl alcohol and 50% water solution and wipe dry with delicate task wipers.~~

~~(b) Outboard Moisture Seal Repair~~

~~This procedure will restore the moisture seal to maximize the moisture protection of the window laminate.~~

~~**NOTE: Exercise care not to touch or contaminate the previously cleaned work area.**~~

Start Here

1 Mask outer perimeter of windshield with tape to protect aircraft and windshield retainer from damage or exposure to polysulfide sealant.

2 Apply 1-inch masking tape to the outboard glass surface at the edge of the moisture seal forming tool as shown in Figure 2.

3 Locate and apply vinyl strip guide next to the 1" masking tape as show in Figure 2. This will ensure the proper moisture seal profile and position when using the moisture seal forming tool.

4 Clean the seal repair area with a 50% isopropyl alcohol and 50% water solution.

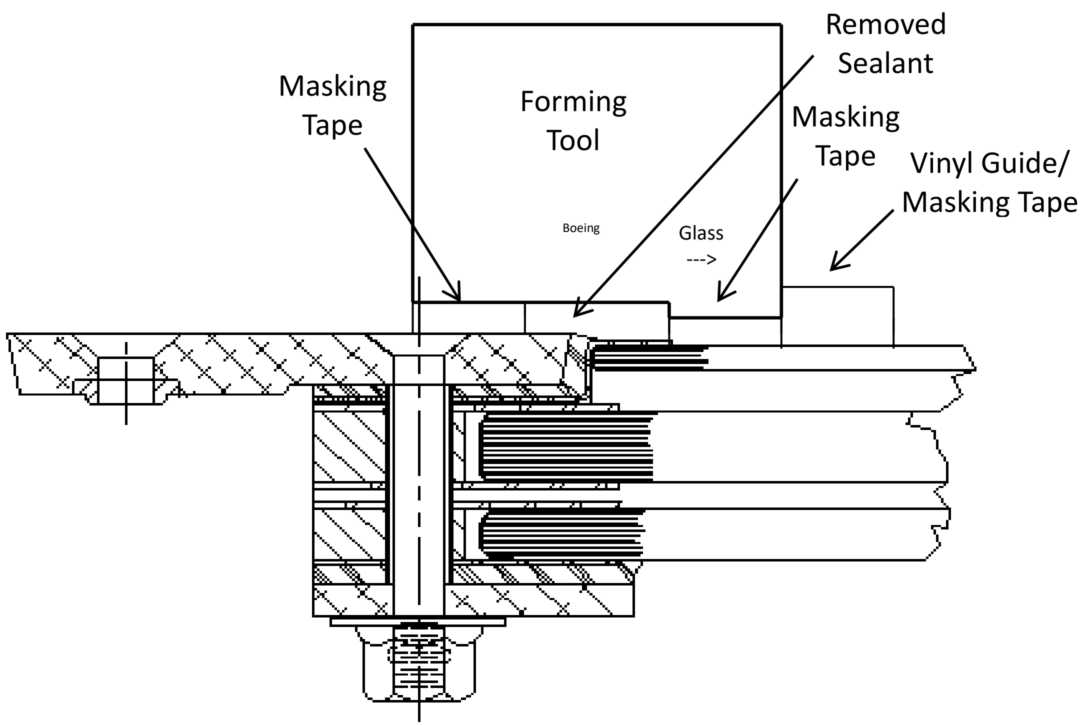

Figure 2 – Hump Seal Forming Tool Guide

Due to time constraint, please skip this step for the competition.

NOTE: The primer must be applied to the windshield immediately after cleaning the windshield to prevent dust particles and other airborne contaminants from settling on the cleaned surfaces. Any contaminant on the surface can adversely affect the adhesion of the sealant to the substrate.

5 ~~Using a gauze pad, apply a thin coat (enough to cover without running or dripping) of the PR-1861 Primer/Cleaner to the surface of the glass, the retainer, and the exposed moisture seal. Allow the primer to air dry a minimum of 30 minutes.~~

6 Thoroughly mix one PR-1425CF B ½ Semkit. Mix Semkit per instructions on kit (approximately 5 minutes). Working time for sealant is 1/2 hour. If needed, mix additional Semkits after first is applied.

NOTE: Complete mixing is essential. Be sure to follow the mixing instructions provided with the PR-1425CF B 1/2 . Wear safety glasses and gloves while mixing.

7 Using a cartridge dispenser, apply the PR-1425CF B ½ to the cleaned and primed surfaces.

8 Form the outboard moisture seal by pulling the correct supplied moisture seal forming tool from kit along the supplied guide strip.

CAUTION: Use the correct moisture seal forming tool for the aircraft type the repair is being performed the work on.

9 Immediately remove the 1” in. masking tape and smooth the surface of the wet sealant by rubbing the surface lightly and briskly with the cellulose sponge saturated with water. Use only light pressure for this step.

10 Inspect for voids and repair as necessary. Allow the sealant to cure per Semkit instructions