

Section 75-FA-9 Windshield & Window Installation



This manual has been prepared for installation of the windshield and windows. This photo assembly manual is intended as a supplement to the drawings. If there is any discrepancy between this manual and the drawings, the drawings supersede this manual. For more information on building standards and allowable tolerances see "Construction Standards for Zenair Light Aircraft" available from Zenith Aircraft Co.



P/N: 75F12-6
Door Sill

Slide the Door Sill into position on the Cabin Frame. Clamp the Door Sill to the Cabin Frame. Use a #40 drill bit to back drill through the Door Sill into the Cabin Frame on both sides of the Door Sill and Cleco.



P/N: 75F17-6
Top Window Rib

Remove the clecos on the outboard side of the Door Sill. Cleco the Top Window Rib to the Door Sill and Cabin Frame. Use a #30 drill bit to expand the holes and cleco.



When drilling the Top Window and Windshield use a drill bit specifically made for drilling Acrylic. A standard drill bit is likely to crack the Top Window and Windshield when drilling.



P/N: 75F17-2
Top Window

Position the Top Window on the Ribs. The rear edge of the Top Window should be approximately 20mm aft of the edge of the Top Skin of the rear fuselage. Check the front edge of the Top Window; it should be approximately flush with the end of the Rib flange. Lay out the rivet line for the Rib on the Top Window, pitch 100mm. Make sure the holes are not in the crimps. Drill the holes and cleco. Expand the holes with a #30 acrylic bit and cleco.



Be careful handling and drilling the Windshield. The acrylic is easily cracked until it is installed.



P/N: 75F17-1
Formed Windshield

Set the Windshield in position on the Fuselage.



P/N: 897125
Windshield Trim

Slip the Trim on the bottom of the Windshield.

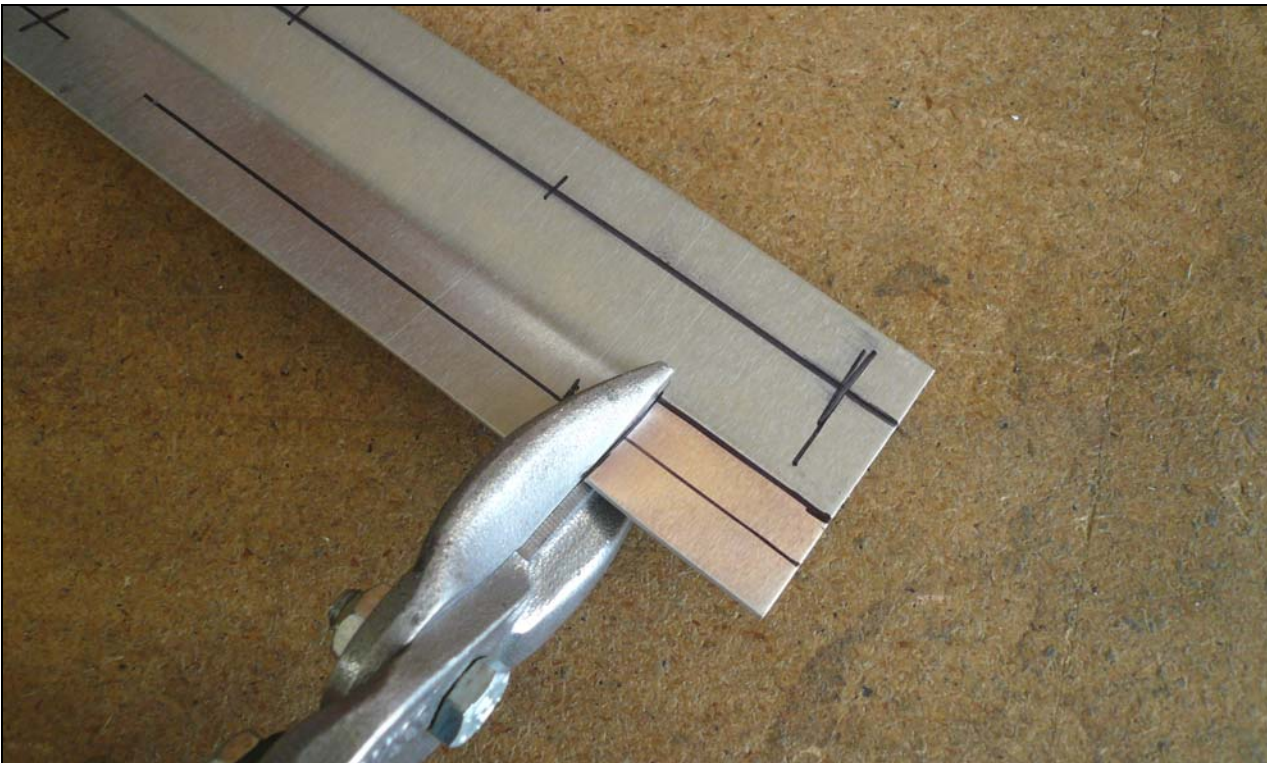


P/N: 75F17-3
Top Window Trim

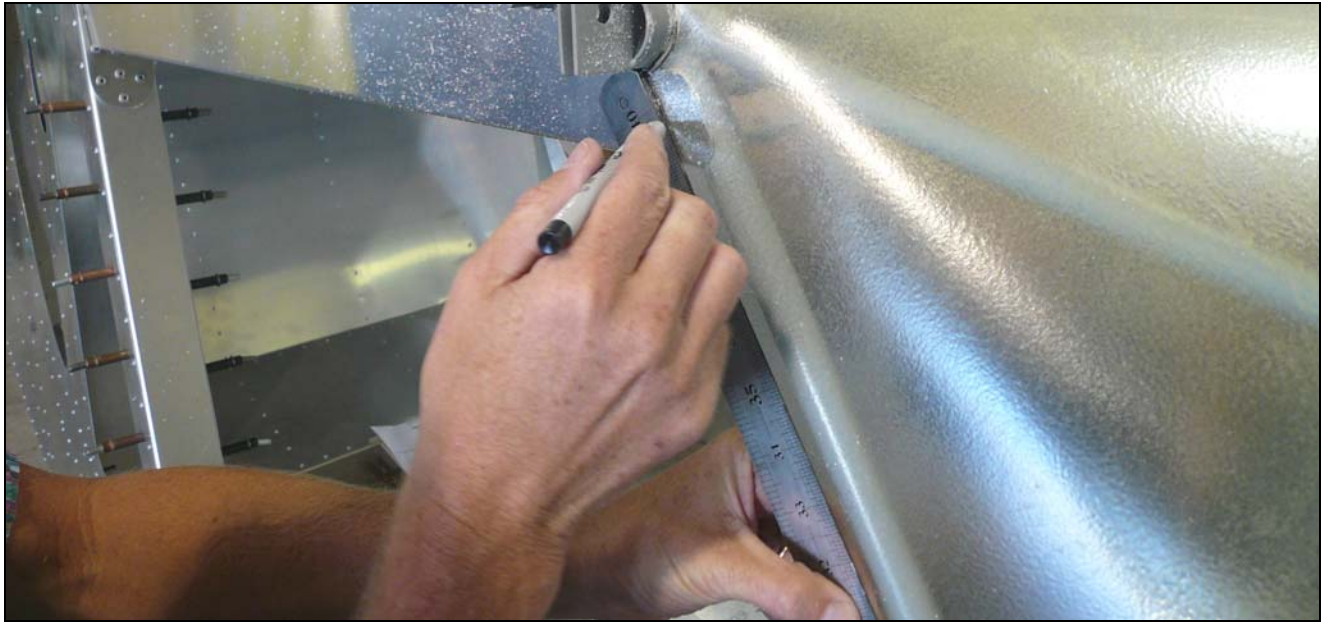
Mark the center line of the 20mm flange of the Top Window Trim. Mark a line 40mm from the end on the 20mm flange, and a line 10mm from the edge of the 30mm flange. Layout the locations for the 8 screws on the 20mm flange and 18 locations for rivets on the 30mm flange. Position the Trim on the Windshield and Top Window.



Start drilling in the center of the Windshield and work out to the edges. Use a #40 drill bit (60 degree tip specifically for Acrylic) to drill and cleco the Windshield to the Cabin Frame and to drill the Trim to the Top Window and cleco. Use a #12 drill bit (60 degree tip specifically for Acrylic) to expand the holes in the Windshield. Use a #30 drill bit (60 degree tip specifically for Acrylic) to expand the holes in the Trim and Top Window.



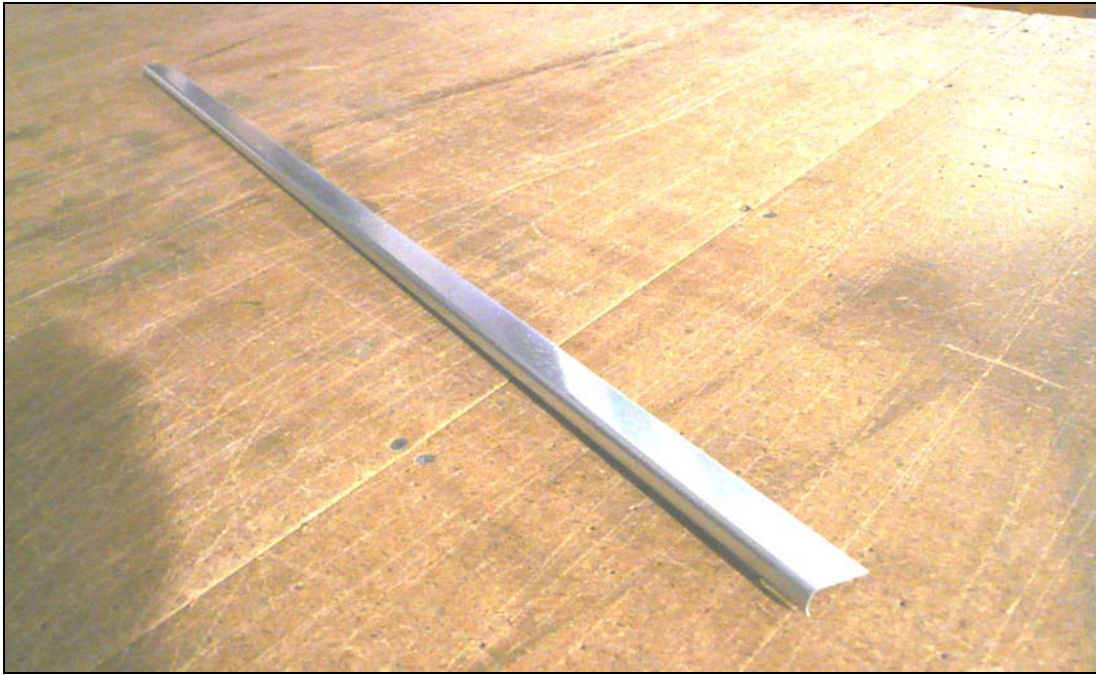
Mark the Windshield flange 30mm from each end and along the bend radius. Trim the flange on the line.



Set a straight edge even with the back edge of the tube on the Cabin Frame. Mark the edge of the tube.



Use an angle grinder with a cutoff wheel to trim the edge of the Windshield. Be careful not to nick the Cabin Frame.



P/N: 75F16-5
Windshield Side Trim



Position the Windshield Side Trim on the Windshield. Mark the bottom of the Door Sill on the Side Trim. Trim the Side Trim to lay flat on the Door Sill and Windshield.



Clamp the Side Trim to the Cabin Frame. Layout seven screw locations on the Side Trim.



Use the 60 degree special drill bit for Acrylic to drill the screw locations on the Side Trim into the Windshield and Cabin Frame and Cleco. Expand the holes to 1/4" in the Windshield only using 60 degree special drill bits and Cleco.



Mark the bottom to trim off the excess windshield. Trim the excess from the Windshield.



Install a strip of Cork between the Top Window and the Fuselage Rear Top Skin. Reinstall the Top Window. Peel back the protective coating on the Top Window to expose the holes. Attach the Top Window to the Rear Fuselage with screws and nuts.



P/N: AD44ABS200
Soft Aluminum Rivets

Rivet the sides of the Top Window to the Ribs using the AD44ABS200 Soft Aluminum Rivets. **Be careful not to mix these rivets up with A4 rivets, these are soft NON-STRUCTURAL rivets for use on the windows ONLY.**



P/N: 897125
Windshield Trim

Peel back the protective coating around the edges of the Windshield. Slip the Windshield Trim on the bottom of the Windshield and Cleco the Windshield on the Fuselage with the other Trim parts.



Use a thread locker that will NOT attack thermoform plastic on the Screws and screw the Trim and Windshield to the Cabin Frame.

Note: Most types of Loctite will attack thermoform plastics, be sure the product used does NOT attack thermoform plastics.





Pull back the top of the Windshield trim and apply the Adhesive to the Windshield Trim. Follow the instructions for the Adhesive and glue the Windshield trim to the Windshield.



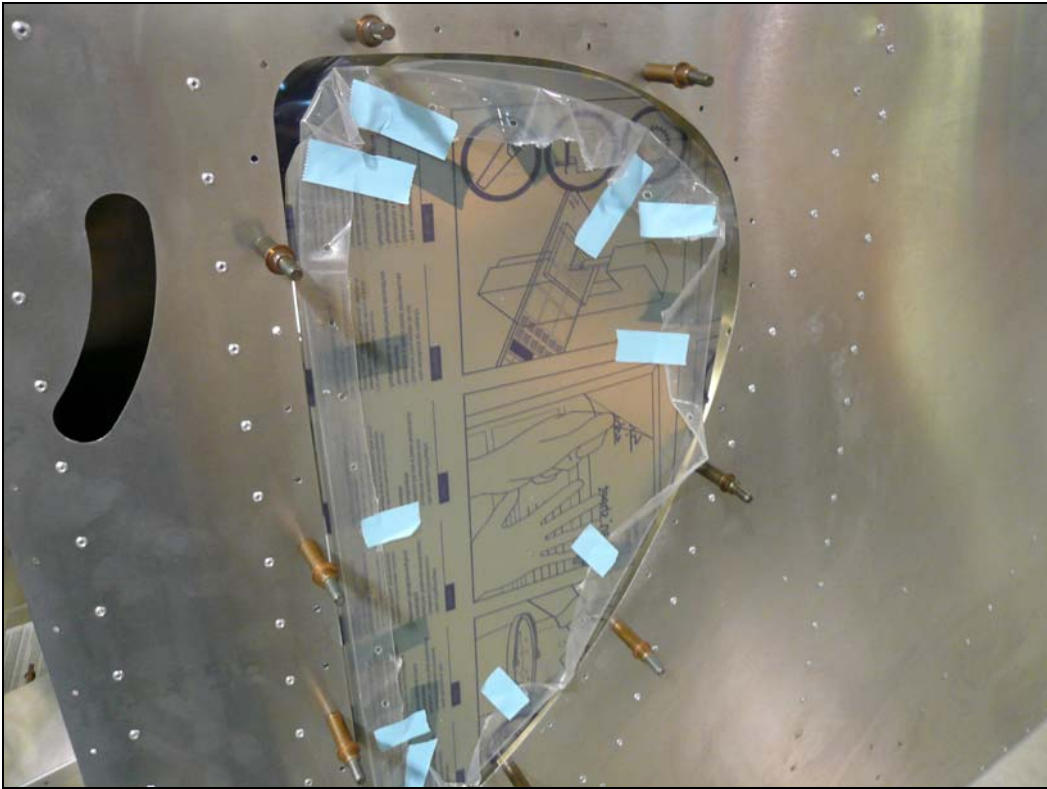
P/N: 75F17-4
Middle Window



Cleco the Middle Window to the Fuselage. Use a #30 drill bit to expand the holes and Cleco.



P/N: 75F17-5
Rear Window



Cleco the Rear Window in the Fuselage. Use a #30 drill bit to expand the holes in the Rear Window and Cleco.



Rivet the sides of the Middle Window and Rear Window to the Fuselage using the AD44ABS200 Soft Aluminum Rivets.

Be careful not to mix these rivets up with A4 rivets, these are soft NON-STRUCTURAL rivets for use on the windows ONLY.