



AERO PLASTICS INC.

Heavy Gauge Window Installation

Report No. 905/CON

Installation Drawing List

Applicable Aircraft Models

Piper	PA-28-140	S/N 28-20002 through 28-7225612
	PA-28-150	S/N 28-1 through 28-4377
	PA-28-160	S/N 28-1 through 28-4377
	PA-28-180	S/N 28-1 through 28-7305611
	PA-28R-180	S/N 28R-30005 through 28R-7130019
	PA-28R-200	S/N 28R-35001 through 28R-7335455
	PA-28-235	S/N 28-10003 through 28-7310187

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**INSTALLATION INSTRUCTIONS FOR WINDSHIELDS
LP-905 Left, LP-907 Right - .250" THICKNESS**

Applicable to: Piper PA-28

REMOVAL OF WINDSHIELDS

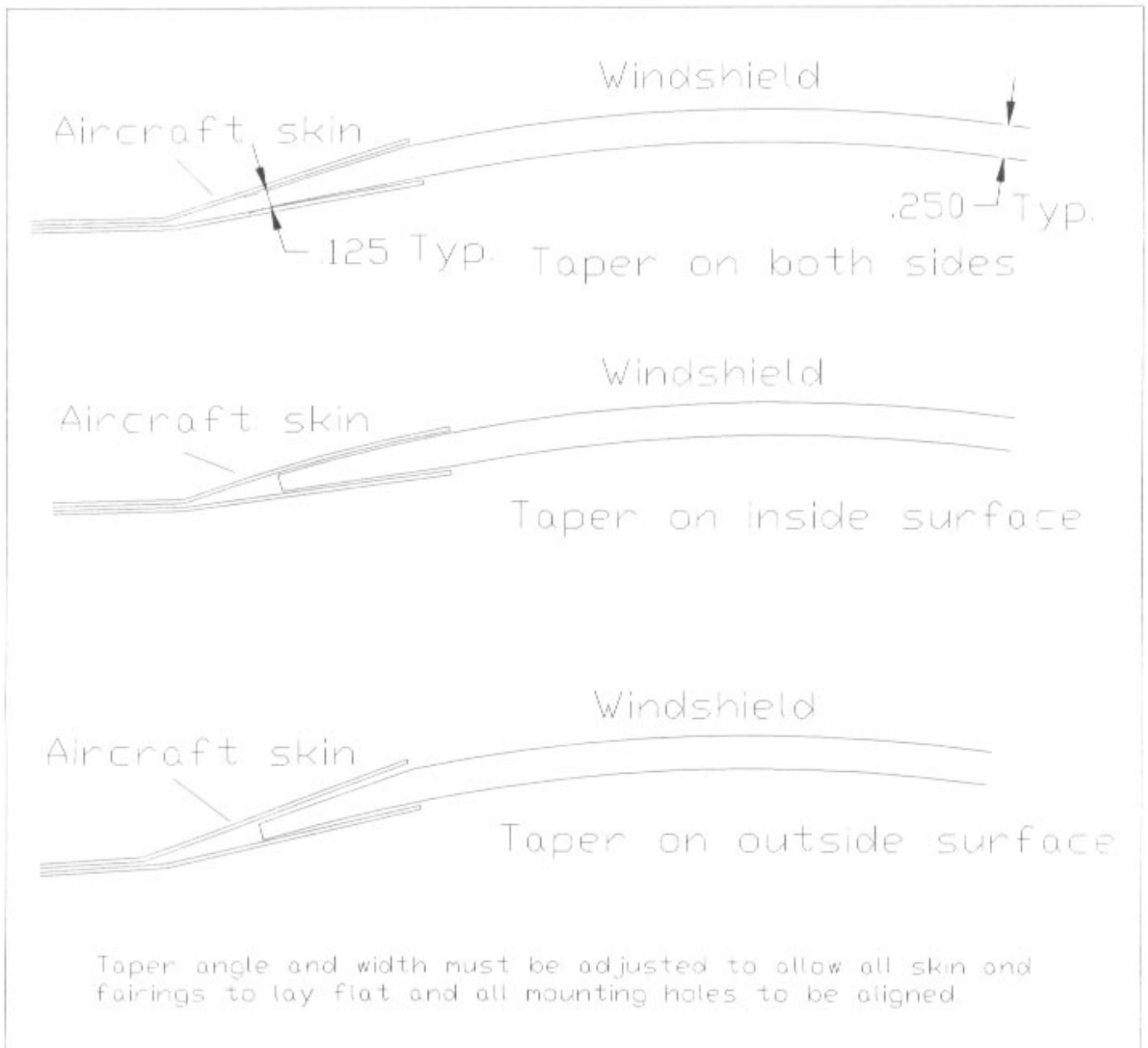
1. Remove the retainer molding from around the bottom of the windshield and the trim strip from the center of the windshield halves by removing the attaching screws.
2. Carefully remove the windshield from the frame by lifting the lower portion and pulling it out and down to disengage it from the top and side retainers.
3. Remove all tape and sealant residue from the windshield frame and retainers.

INSTALLATION OF WINDSHIELDS

1. Check the size and contour of the new windshield (LP-905 left side, LP-907 right side) against the windshield which was removed from your aircraft as well as checking the fit of the new windshield to the airframe. This may be easily done by making a paper overlay of the original windshield. Place a sheet of heavy craft paper over the outside surface of the original windshield, aligning the edge of the paper along the straight edge of the windshield. Tape this edge in place. Pull the paper taut and tape at the opposite tip. Use a razor to cut darts in the paper to allow it to lay flat on the compound curvature and tape these darts. Once taped, follow the edge of the windshield with a razor knife cutting the paper to the exact size of your original windshield. This pattern can be taped to the outside surface of the new windshield and a trim line transferred with a grease pencil or marker. Trim the new windshield to fit.
2. The new windshield is twice as thick as the original .125" installation, therefore the edge of the new .250" windshield will need to be tapered to fit the channels and allow the retaining strips to properly align. Starting at the top center of the windshield and proceeding to the lower outside corner, taper the inside surface of the windshield to approximately .125" edge thickness. (Fig. 1, Page 5) Use the original windshield as a guide by marking the acrylic which was engaged in the channel on the new windshield. Masking tape may be used on the inside surface of the new windshield to mark this limit. This inside surface may then be sanded to the proper taper using a disk or orbital sander. **Do not sand any portion of the windshield which will be exposed after final installation. Extreme care must be taken during these sanding steps to protect the surface of the windshield.** Slide the windshield into position. At the lower outside corner you will note that the skin is bulging. Taper the outside surface of the windshield in this area to allow the skin to lay flat. Taper the bottom edge of the windshield

on the outside surface to an edge thickness of approximately .125". At the lower outside corner the windshield will need to be tapered on both the inside and outside to allow it to transition from the area covered by the front retaining strip to the area cover by the permanent skin. The top and bottom center of the windshield should be tapered on the outside surface to allow the center strap to slide under the upper fuselage skin and lower windshield retainers. Allow clearance between the two windshield halves for expansion.

3. The Piper Service Manual windshield installation instructions for your aircraft model may be followed or you may follow the following instructions. If channel clearance permits, apply Behr-Manning vinyl foam sealing tape no. 560 or equivalent to both sides of the windshield around the outer edges. The foam tape measuring 1 1/4" x 1/16" may be centered along the edge of the window and then folded down on both the inside and outside surface of the window.
4. Before applying sealants to the windshield or frame, align the windshield in the airframe opening. Install all retainers with several screws and mask the windshield, fuselage skin and retainers. Allow a slight gap when masking the windshield to allow the sealant to fillet around the perimeter. This will protect both and aid in clean up of excess sealant which will squeeze out when the windshield is pressed into place. When masking is completed, remove the retainers and windshields. In addition to or in place of the foam sealing tape, you may apply Behr-Manning sealant no. PRC 5000, Dow Corning RTV-732 or equivalent around attachment flanges and mating surfaces.
5. Insert the windshield into the frame and install the retainer moldings. These retainers should not need repositioned to accommodate the thicker window. Secure the windshield retainers with the attachment screws. Smooth all sealant around the perimeter with your finger or a tool to produce a smooth fillet. Fill all gaps at this time.
6. Remove any of the excess sealant. Allow the sealant to cure. Remove all masking tape. Adhesive residue may be cleaned with mineral spirits. Clean windshields.
7. Complete 337 form and perform weight and balance computations. The original .125" windshields weigh approximately 3.8 lb. per side and the .250" windshields weigh approximately 7.6 lb. per side.
8. Follow the guidelines on acceptable maintenance procedures in the FAA Advisory Circular AC 43.13-1A, or latest revision, in completing all phases of the installation.



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