



AERO PLASTICS INC.

Single Piece Extra Thick Windshield

Report No. 271/CON

Installation Drawing List

Applicable Aircraft Models

Beechcraft 35-33 thru 35-C33	s/n CD-1 thru CD-1006
35 thru S35	s/n D-1 thru D-7976
95-55 thru 95-B55	s/n TC-1 thru TC-954
95 thru D95A	s/n TD-2 thru TD-637

Page Numbers 1 of 6 Inclusive 4/27/94



AERO PLASTICS INC.

Report No. 271/CON
4/27/94
Page 2

Revision Control Page

Revision	Date	Pages Affected	Remarks
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AERO PLASTICS INC.

Page 3
Report No. 271/CON
4/27/94

**INSTALLATION & REMOVAL INSTRUCTIONS FOR
EXTRA THICK ONE PIECE WINDSHIELD
BEEHCRAFT 35-33, 35, 95-55, 95 SERIES AIRCRAFT**

TWO PIECE WINDSHIELD REPLACEMENT INSTALLATION

1. Follow Beechcraft service manual for removal of the left and right windshield and frame from the airframe. See page 5. After the glareshield has been removed, cover this area with a cloth to prevent debris from dropping on the instruments.
2. After the windshields have been removed from the aircraft carefully cut the center post of the frame at both the top and bottom. This will allow the frames to be removed from each windshield. Use a hack saw to make these cuts. See figure 1. Do not discard the cut away pieces, a section of this will be used in splicing the frame halves back together.
3. Two persons are required for this step. Utilizing a heat gun and at least two pairs of sheet metal type wide-billed vise grip pliers, grip the flat edge of the frame starting at the top cut. Space the pliers approximately 6" apart. Heat the metal frame on both the top and bottom to soften the sealant inside the frame. At this time one person must grip the windshield while the second pulls with the pliers, separating the windshield from the frame. Work the frame off in this manner all the way around. Heating one foot at a time. Care must be taken not to bend or stretch the aluminum frame during this removal process. You will be reinstalling it on the new windshield.
4. Once both halves of the frame have been removed from the windshield, use MEK or any other solvent to clean the inside of the frame, removing all the old sealant. Some sealants are polysulfide based (Pro Seal, PRC, Chemseal, etc.) and can best be removed using a polysulfide sealant remover, such as Eldorado SR-125A manufactured by Eldorado Chemical Co., San Antonio, Tx.
5. Using a hacksaw, cut the inner aluminum frame only, $1 \frac{5}{16}$ " from the center of the frame, 4 cuts. See figure 1. File the cuts smooth on both the top and bottom of the frame so that the approximate $1 \frac{1}{4}$ " width of the frame is maintained through the center joint of the frames. Check the fit of these frames to the new windshield by sliding both halves of the frame onto the edges of the windshield. The windshield is trimmed and the edge of the inside surface is milled to fit the frame at our factory, however a sander or file may be used to remove any excess acrylic. The inner aluminum frame inside edge varies in size and may need to be trimmed. If there is a gap between the frame halves and the frame is hitting the flange of the windshield, trim the inner frame to allow complete engagement of the frame onto the windshield. Align the original center rivet holes and cleco in place. Cut two $3 \frac{5}{8}$ " splices from the center post inner

frame which was removed from the right windshield. See page 5. This may be done by first drilling a #40 hole in the center of the spot welds. Once drilled a sharpened putty knife may be placed in the slot of the frame against the weld and struck sharply. This will break the weld. See figure 2. These splices will have the matching joggle to accommodate the windshield and should be cut 1/16" to 3/32" longer so they may be filed to proper size and fitted exactly in place. Fit these splices and clamp in place. Drill 4 equally spaced holes and countersink for flush riveting (MS20426-A4 or equivalent).

6. With the frame in final position, apply masking tape to the windshield just to the edge of the frame and also apply masking tape to the frame. This will protect both from the excess sealant. If a double layer of masking tape is used, the sealant may be smoothed with you fingers or a spatula while still wet, and the outer layer of tape can be removed leaving a clean layer to protect your surfaces during curing.
7. Place sealant (GE RTV 108, Dow Corning RTV 732, or equivalent) in the channel of the frame. The new windshield should now be fitted into the frame, allowing the excess sealant to be squeezed onto the tape. Rivet the splices into place. Fit the windshield into the aircraft and cleco it into place, allowing the sealant to cure. Remove the masking tape with excess sealant.
8. After curing, remove the windshield and apply sealant as recommended by the Beechcraft service manual. The windshield and frame assembly may now be reinstalled on the airframe using the Beechcraft recommended installation instructions in the Beechcraft service manual.
9. 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. Complete 337 form. The weight of the original windshield in .150" thickness is approximately 9.7 lbs. and in .250" thickness 11.6 lbs. The weight of the replacement windshield is approximately 12.4 lbs in .250" thickness, 15.5 lbs. in .312" thickness, 18.6 lbs. in .375" thickness, and 24.8 lbs. in .500" thickness. Account for the additional weight for operation performance in the new weight and balance calculations.

FOR INFORMATION ONLY

BEECHCRAFT SERVICE MANUAL - WINDSHIELD REMOVAL AND INSTALLATION INSTRUCTIONS

WINDSHIELD REMOVAL (ONE OR TWO PIECE)

- A. Remove the glareshield and outside air temperature gage (if installed in this area).
- B. Remove the attaching screws from the defroster duct and move the duct to clear the lower row of rivets on the windshield.
- C. Remove the screws and spacer from the glareshield angles.
- D. Remove the trim strips from around the inside of the windshield.
- E. To facilitate reinstallation, mark the location of the trim strip clips.
- F. Drill out the rivets from around the windshield.
- G. Remove the windshield.

NOTE

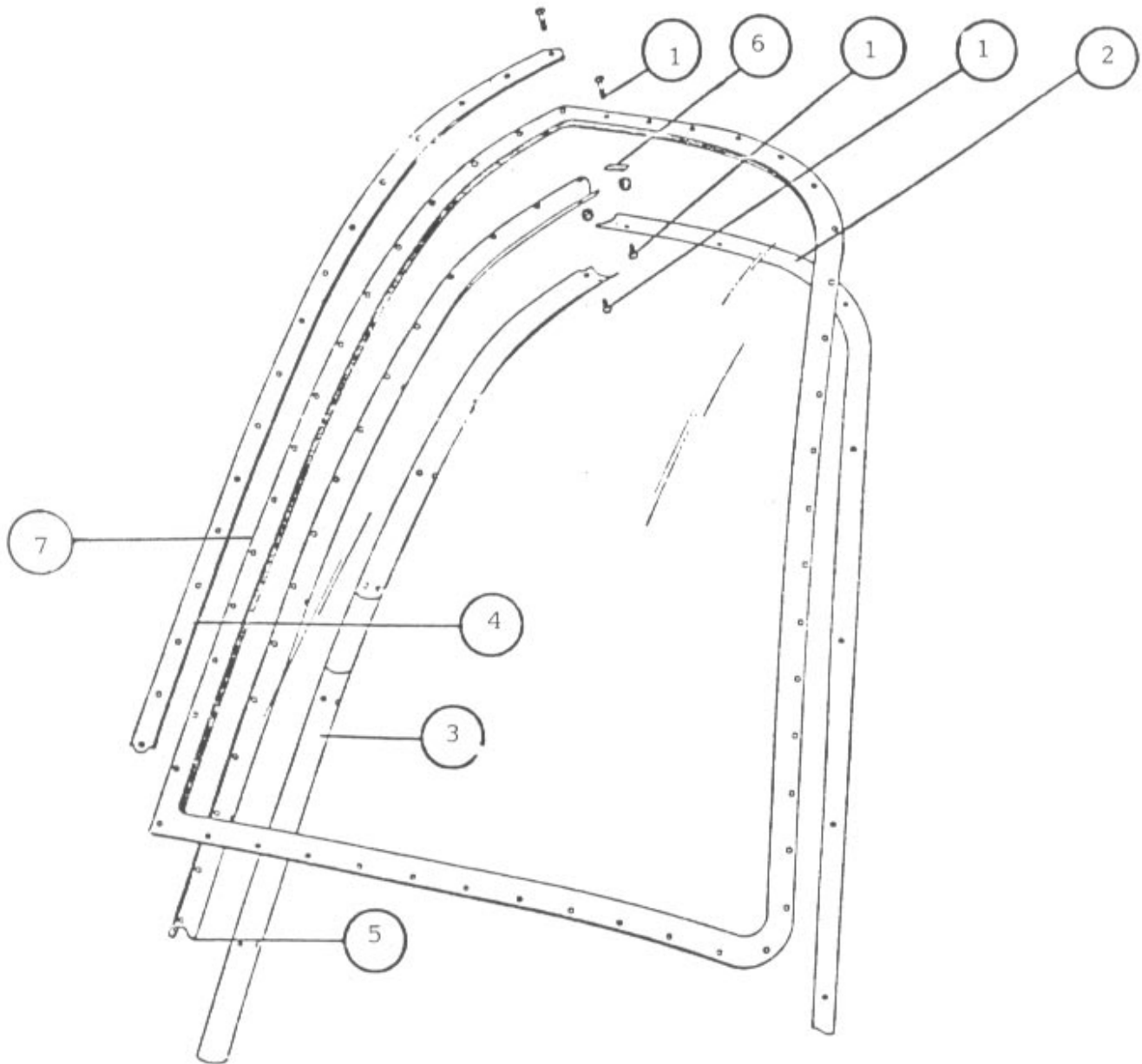
Because the window is sealed, considerable effort may be required to break the windshield loose from the canopy section.

WINDSHIELD INSTALLATION (ONE OR TWO PIECE)

- A. Remove any sealer around the canopy with toluol. Touch-up scratches or bare metal with zinc chromatic primer.
- B. Trim the tooling tabs from the windshield, place the windshield in position and mark the areas where material must be removed from the windshield to obtain a proper fit.
- C. Remove the windshield and trim off excess material as determined in Step "B."
- D. Place the windshield in position and cleco in place using the pilot holes provided.
- E. Back drill the windshield frame using the existing holes in the canopy section as a guide.
- F. Remove the windshield, burr all holes and apply Presstite #567 Sealer to the windshield frame where it makes contact with the canopy section.
- G. Place the windshield in position and cleco in place.
- H. Using AN47OAD4 rivets, secure the windshield to the canopy section.

NOTES

When riveting the windshield in place, install the trim strip clips in the same locations as marked in Step "E" of the "WINDSHIELD REMOVAL" procedure.



- 1 - REMOVE INSIDE AND OUTSIDE RETAINER SCREWS
- 2 - INNER MOULDING - RETAIN TO REINSTALL
- 3 - INNER CENTER MOULDING - DISCARD
- 4 - CENTER JOINT COVER - DISCARD - NOT PRESENT ON ALL MODELS
- 5 - CENTER INNER HAT SECTION - DISCARD
- 6 - MOULDING CLIPS - MARK THE LOCATION OF EACH CLIP AND RETAIN FOR REINSTALLATION
- 7 - CUT SPLICES FROM INNER FRAME - FOR TOP AND BOTTOM JOINTS

LP Aero Plastics, Inc.	
Jeannette, PA	
Windshield frame removal	
Drawn by GAM	
Ck by JP	
Date 2/24/94	Page 5
Scale-None	Report #271/CON

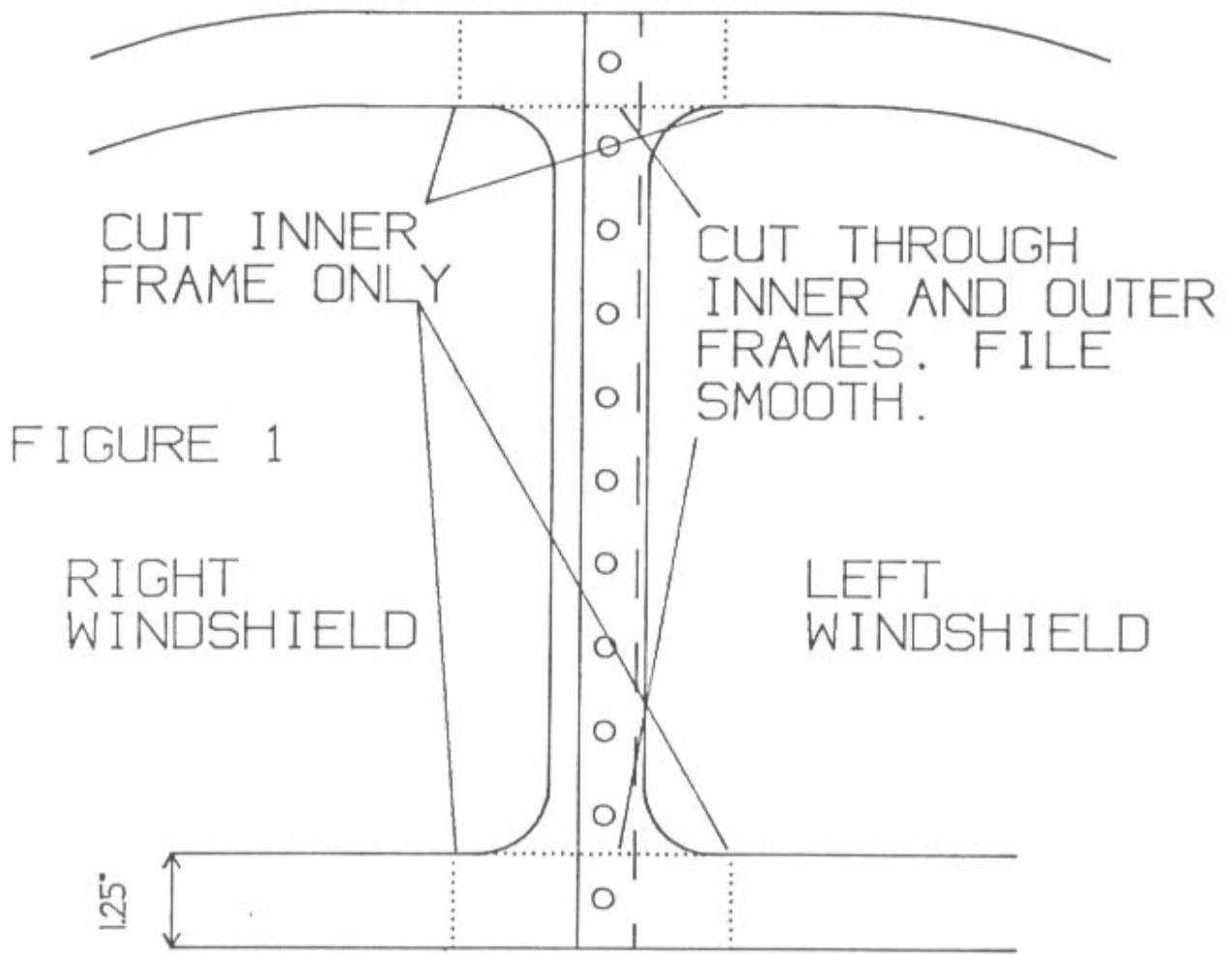


FIGURE 1

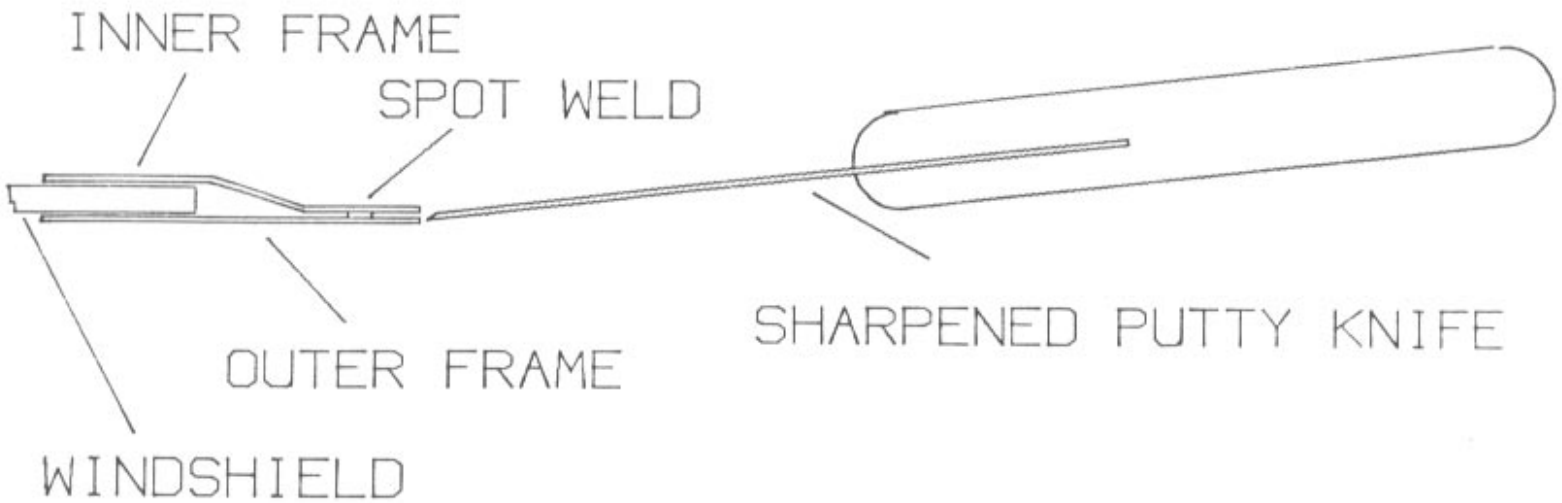


FIGURE 2

LP AERO PLASTICS, INC.	
JEANNETTE, PA	
WINDSHIELD FRAME REMOVAL	
DRAWN BY GAM	
CK BY JP	
DATE 4/27/94	PAGE 6
SCALE-NONE	REPORT #271/CON