

SERVICE BULLETIN 50

SUBJECT: ERRONEOUS TRIM LINES ON LEFT CANOPY FRAMES

APPLICATION: Glasair II kits shipped prior to 4/07/88.
Glasair III kits shipped prior to 4/07/88.

DESCRIPTION: Left canopy frames manufactured prior to 4/07/88 had the forward and aft edge trim lines mislocated too far forward. If the left canopy frame were to be trimmed to these lines, the canopy would not center properly on its seal and would require trimming additional material off the forward edge and adding material to the aft edge.

SOLUTION: Disregard the trim lines along the forward and aft edges of the canopy. Trial fit the left canopy frame in the fuselage opening. Determine where the existing trim scribe line can be used and whether additional material must be added to the aft edge of the canopy frame so it fits the fuselage canopy frame recess without an excessive gap.

STEP 1 TEMPORARILY FITTING THE CANOPY FRAME

To accurately position the canopy frame within the fuselage opening, first trim the sealing flange on the fuselage to an even width all around and then install the rubber bulb seal, as described in the Canopy Latch and Hinge Installation subsection in the FINAL ASSEMBLY section of your Glasair Instruction Manual. Then, set the canopy frame into place in the fuselage frame allowing it to be centered by the bulb seal contacting the stiffening channel of the canopy frame.

STEP 2 DETERMINING TRIM LINE FOR THE LEFT CANOPY FRAME

The canopy frame must have sufficient material on all edges so that it can be trimmed to fit neatly into the fuselage frame recess. If the left canopy frame has already been trimmed to the scribe line or if an excessive gap exists between the edge of the canopy frame and the fuselage recess, the edge of the canopy frame must be lengthened by building up the edge with additional bidirectional laminates.

NOTE: Whether or not the gap is excessive is determined by each builder's esthetic judgement.



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STEP 3 LENGTHENING THE CANOPY FRAME EDGE (if required)

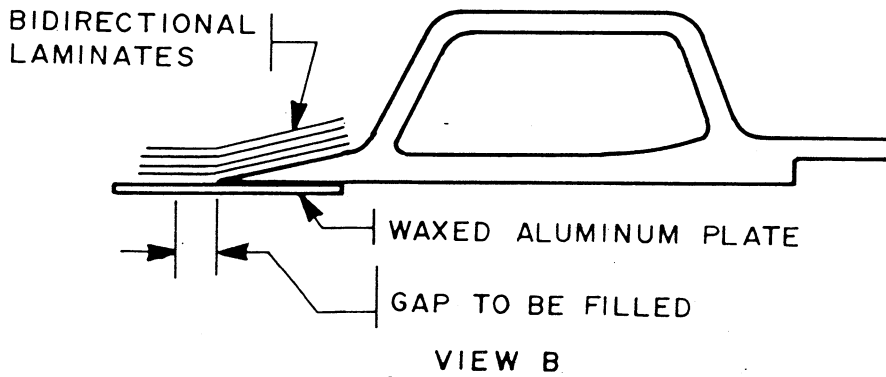
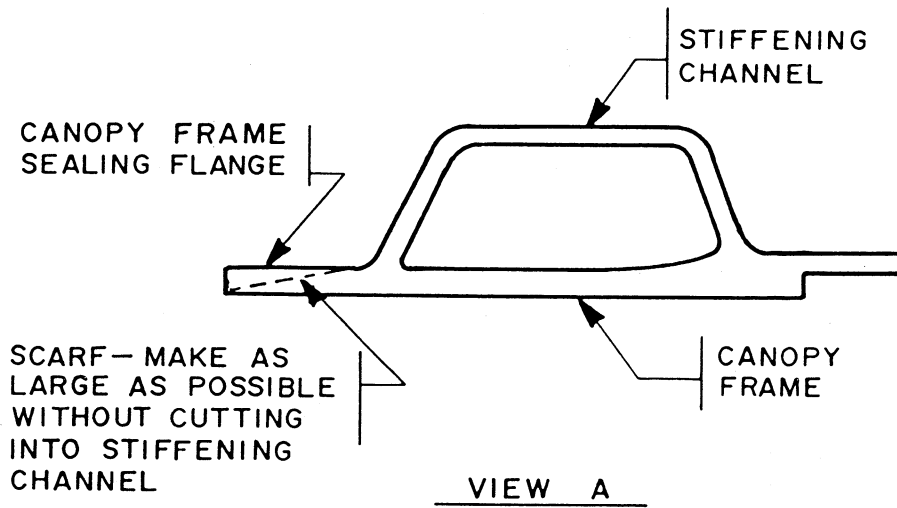


FIGURE (1)

If an excessive gap exists between the edge of the canopy frame and the fuselage canopy recess, remove the canopy frame from the aircraft and complete the following modification.

The canopy frame edge(s) where excessive gaps exist can be lengthened, as shown in FIGURE (1). First, scarf the inside surface of the canopy frame edge to the largest possible width, as shown in FIGURE (1), limited by the distance from the edge of the canopy frame to the canopy frame stiffening channel. Ideally, the width of the scarf should be 10 times the thickness of the canopy frame laminates, but there is insufficient space to achieve this minimum, so make the scarf as wide as possible without cutting into the canopy frame stiffening channel. The scarf provides the maximum area for bonding the edge extension laminates to the existing canopy frame without increasing the thickness of the flange.



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To provide a mold for the edge extension laminates, hot glue or tape a piece of waxed aluminum on the outboard surface of the canopy frame extending beyond the canopy frame edge, as shown in FIGURE (1).

Cut pieces of bidirectional cloth on the 45° bias of sufficient width to fill the width of the scarf and also to extend beyond the edge of the canopy frame to completely fill the gap between the canopy frame and the fuselage recess.

Apply the bidirectional laminates, as shown in FIGURE (1), and let cure.

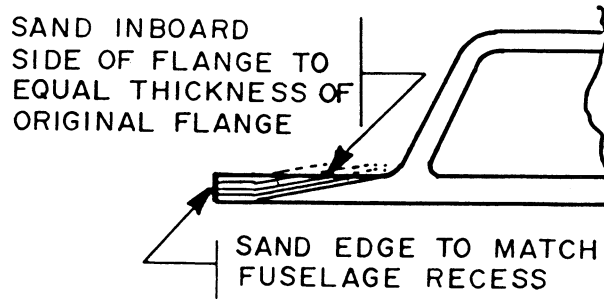


FIGURE (2)

Remove the aluminum sheet from the canopy frame and fill any depressions or gaps between the additional laminates and the existing canopy frame with a Q-cell/resin mixture. Let cure.

Sand the inboard side of the additional laminates as required to achieve an edge thickness equal to the thickness of the original flange. With the canopy centered on the seal in the fuselage, mark the canopy flange recess in the fuselage onto the outside of the canopy frame. Carefully trim the canopy frame by trial fitting it several times while using the marks as a guide. Final trim and sand the edge of the canopy frame as required to achieve the desired gap between the canopy frame and the fuselage recess.


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