

SERVICE BULLETIN 21

SUBJECT: Fuselage Panel Modifications

APPLICATION: All Glasair III Aircraft

DESCRIPTION:

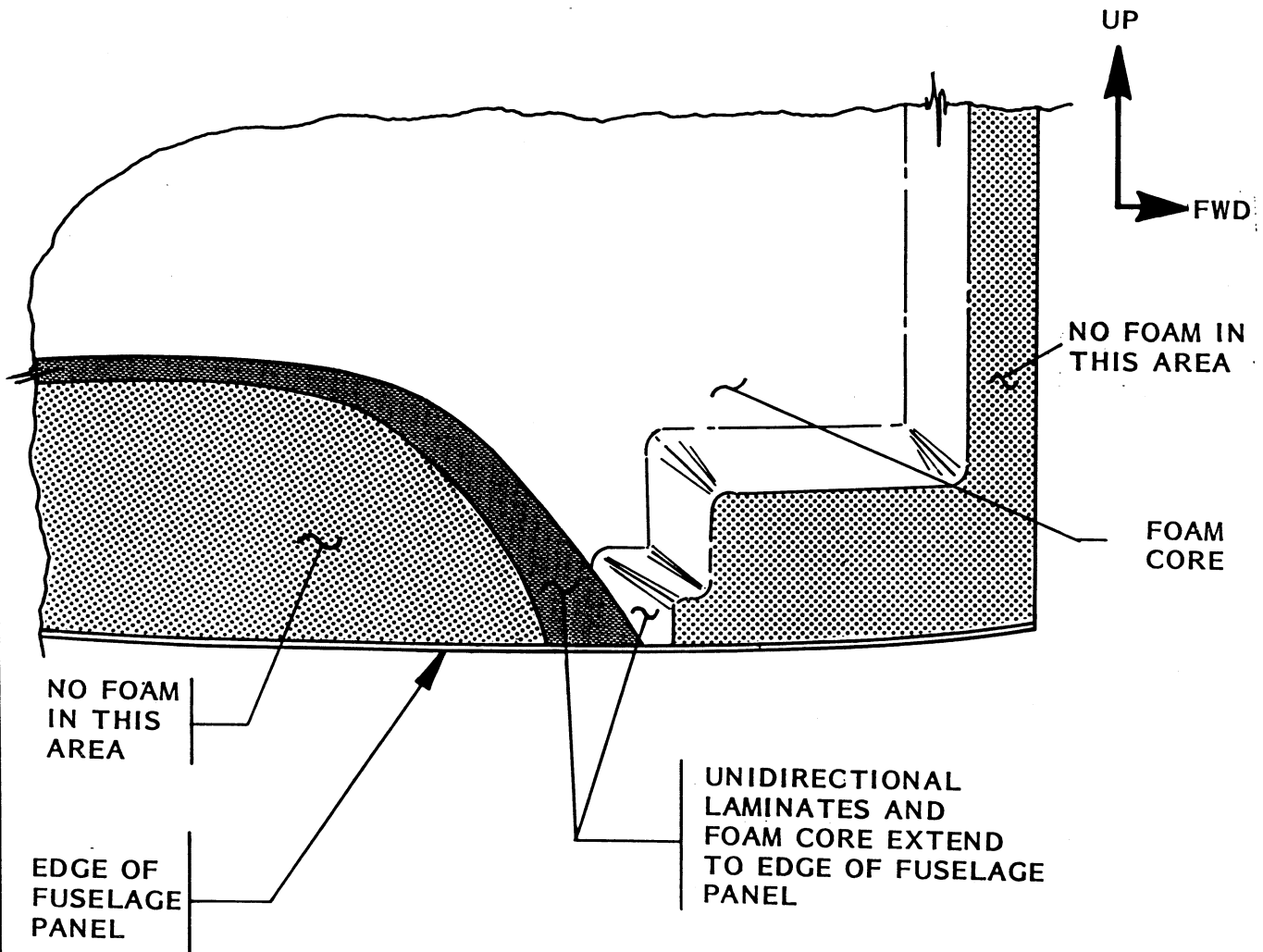



FIGURE (1)

On some of the first Glasair III fuselage panels, the unidirectional laminates around the wing cutout area of the fuselage, and the foam core just forward of the unidirectional laminates, extend into the belly section seaming area, preventing proper bonding. Refer to FIGURE (1) for an illustration of this area.

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Fuselage panels on which this problem has been corrected have a piece of foam bonded into the forward 5 or 6 inches of the wing cutout area. If your fuselage panels have foam in this part of the wing cutout area, you may proceed to the fuselage shell construction procedures described in your Instruction Manual without performing the modifications described in this bulletin.

SOLUTION: If your fuselage panels do not have the foam bonded into the forward part of the wing cutout area, proceed with the following modifications:

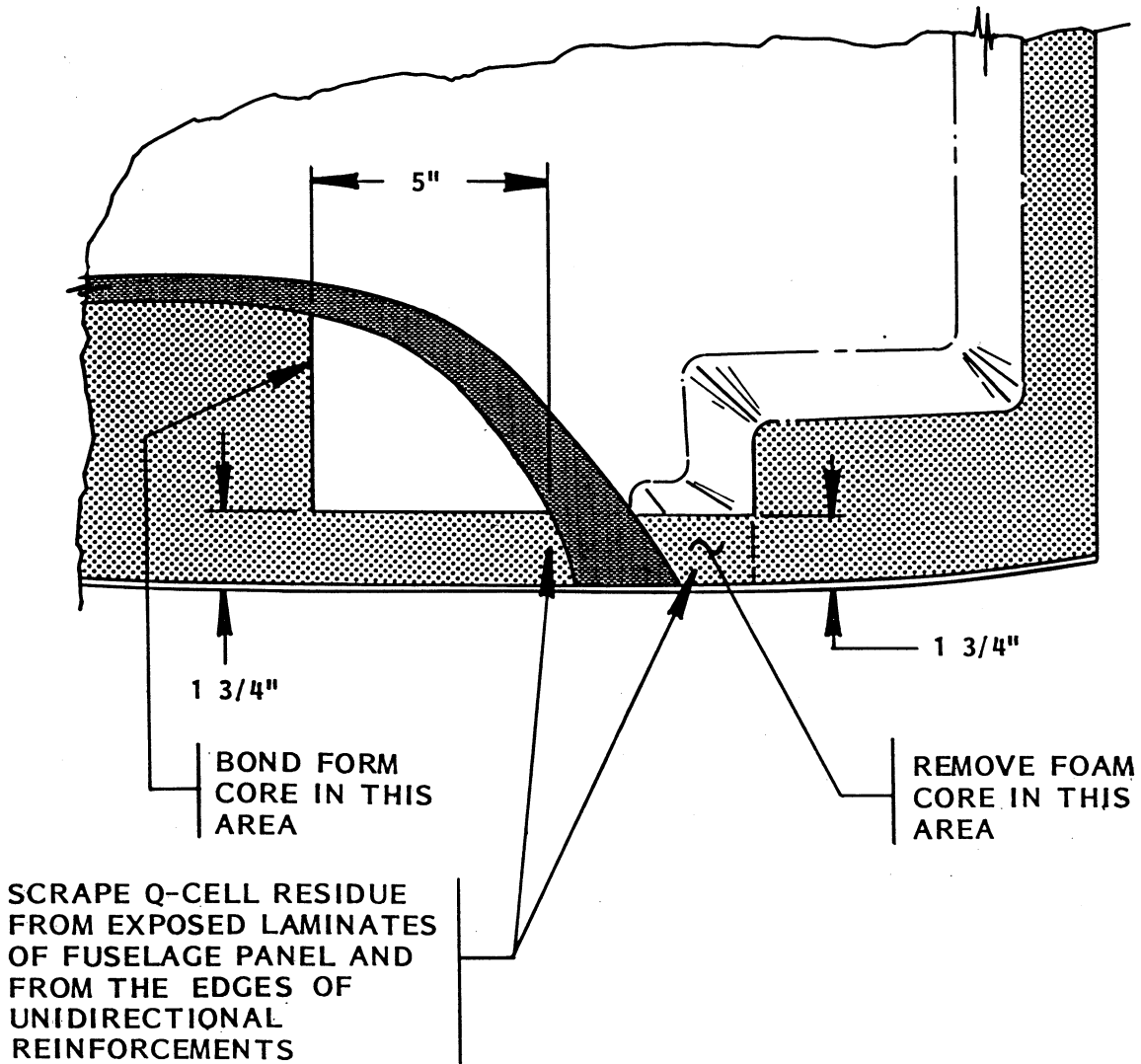


FIGURE (2)

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Remove the inside laminates and foam core in the area just forward of the unidirectional reinforcement laminates for a distance of 1-3/4" from the edge of the fuselage panel, as shown in FIGURE (2). Scrape all foam and Q-cell residue from this area to prepare a good surface for bonding. Also, scrape any Q-cell residue from the forward 5" of the wing cutout area within 1-3/4" of the edge of the fuselage panel. Finally, scrape any Q-cell residue off the edges of the unidirectional laminates at the forward end of the wing cutout area for a distance of 1-3/4" from the edge of the fuselage panel.

Use a medium Q-cell mixture to bond a piece of 1/2" 4-5 pound foam into the forward 5" of the wing cutout area, as shown in FIGURE (2), with the edge of the foam core set back 1-3/4" from the edge of the fuselage panel. Contour the exposed side of the foam filler piece to match the contour of the unidirectional laminates.



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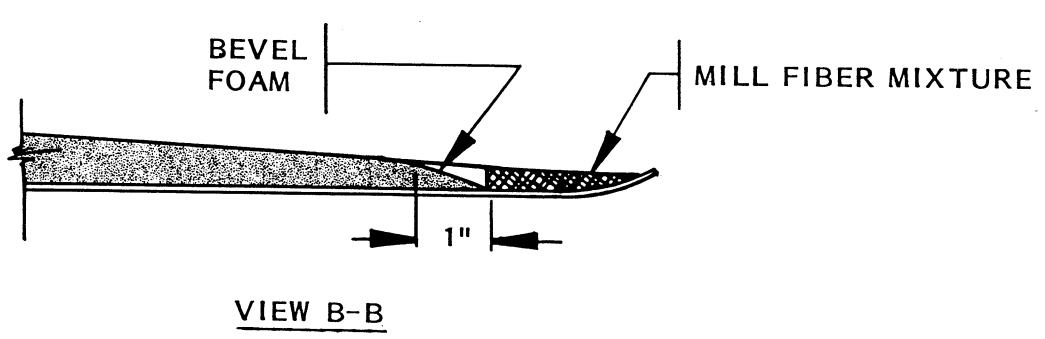
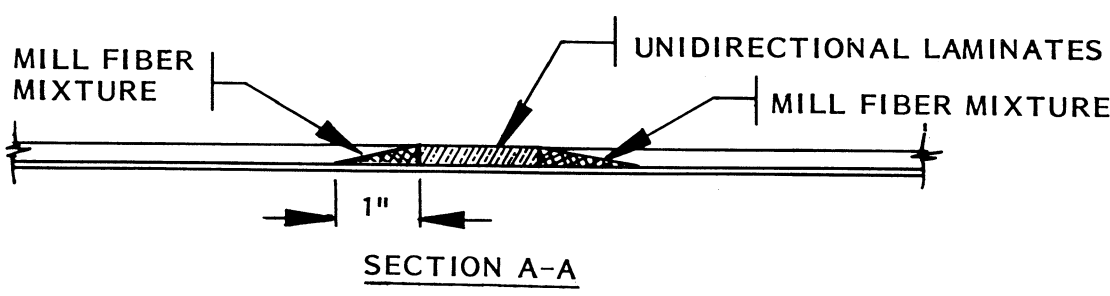
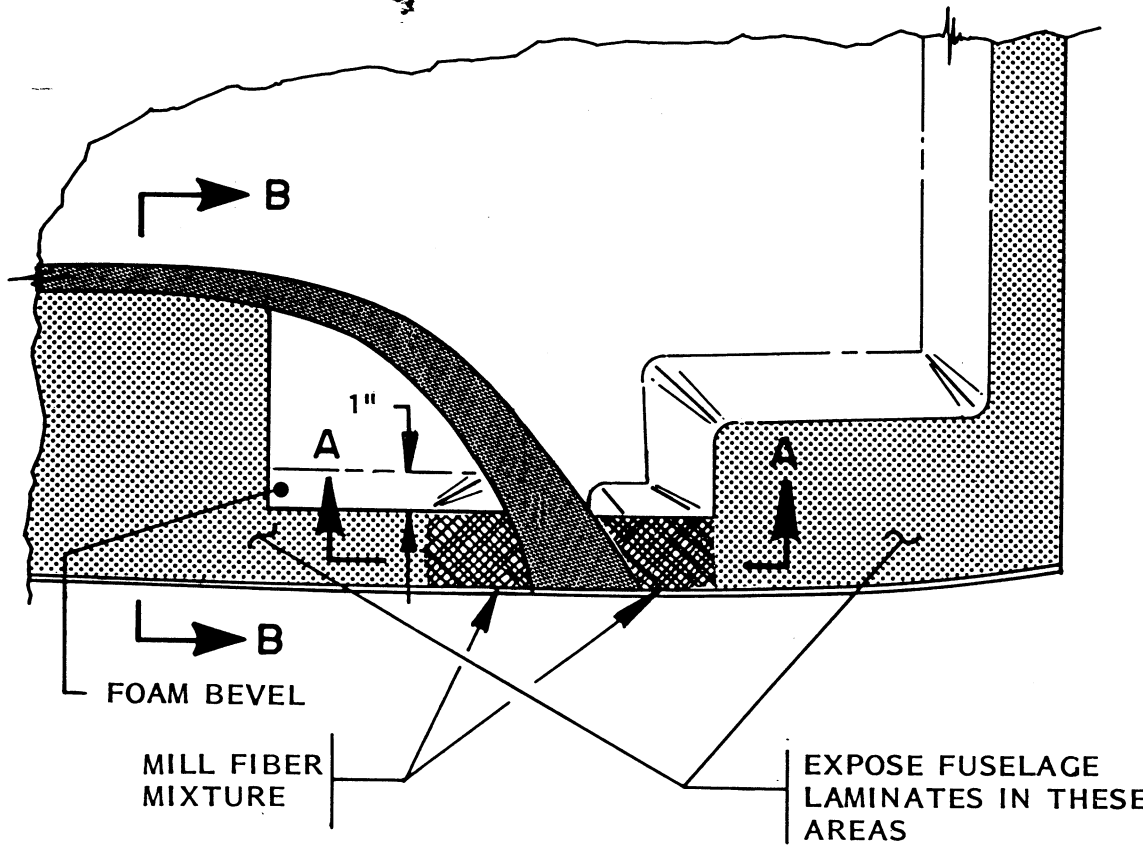



FIGURE (3)

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Fill the relieved area forward of the unidirectional laminates and the area aft of the unidirectional laminates between the new foam core and the edge of the fuselage panel with a mill fiber mixture, as shown in FIGURE (3). Shape the mill fiber mixture to match the contours of the unidirectional laminates and the existing foam core and to taper down to the inside surfaces of the outside fuselage laminates both forward and aft of the unidirectional laminates, as shown in Section A-A of FIGURE (3). Let cure.

Bevel the lower edge of the foam filler piece in the forward section of the wing cutout area, as shown in FIGURE (3). When the foam is contoured satisfactorily, apply a thin Q-cell mixture to all exposed foam surfaces and let cure.

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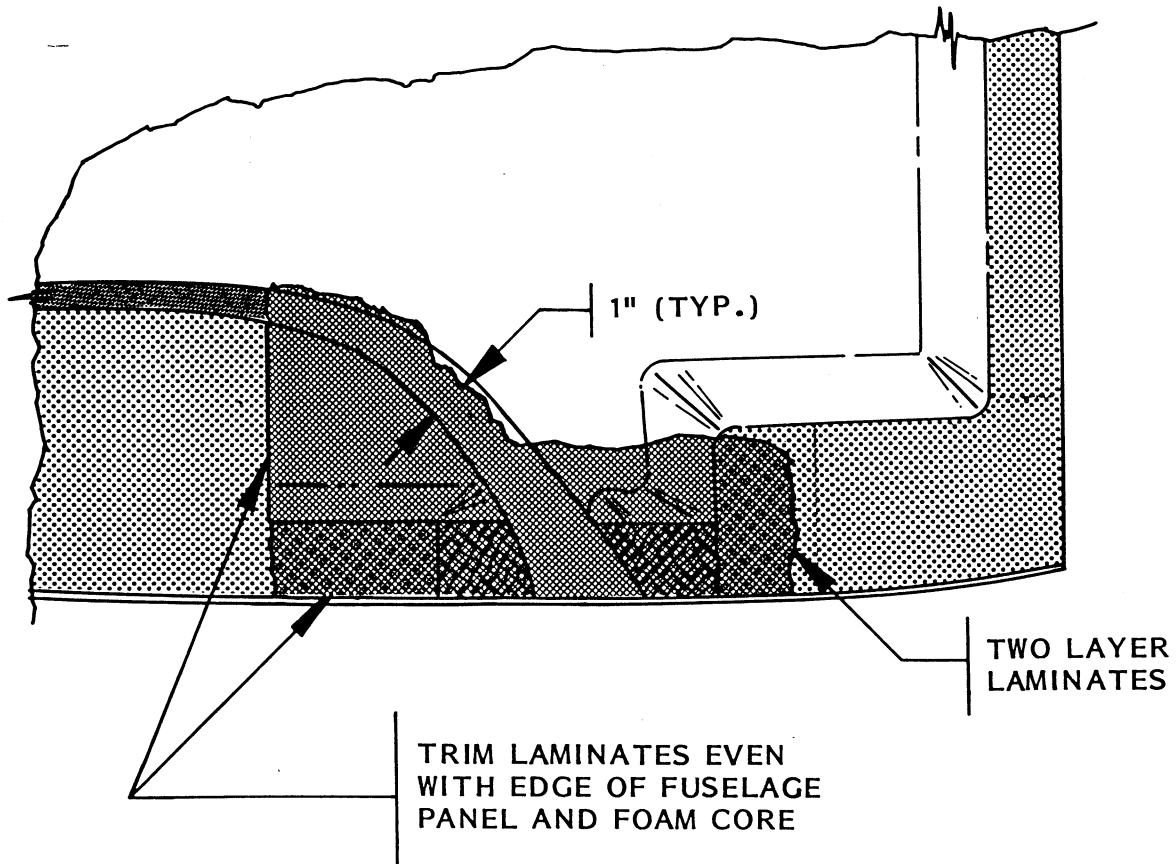


FIGURE (4)

Apply two layer laminates over the foam filler piece and the two mill fiber areas, as shown in FIGURE (4). Extend the laminates onto the existing inside fuselage panel laminates by at least 1" all around. Trim the laminates even with the edge of the fuselage panel and the aft edge of the foam filler in the green cure state.

When these laminates have cured, the fuselage panels are ready for fuselage shell construction.

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