

SERVICE BULLETIN 25

SUBJECT: CONTOURING OF UPPER SURFACE MAIN SPAR CAP

APPLICATION: GLASAIR II kits S/N 1003, 1009, 1010, 1012, 1014, 1015, 1017, 1019, 1021, 1023, 1025 thru 1028, 1030, 1031, 1033, 1034

GLASAIR III kits S/N 3002 thru 3008, 3013, 3015 thru 3023, 3028 thru 3033, 3035

DESCRIPTION: It was noted on our Glasair III prototype that, prior to painting the aircraft, a considerable amount of filling was required to achieve a smooth contour over the main spar cap area of the upper wing panel. This was a result of the upper surface of the main spar cap being too flat (not matching the wing contour exactly in this area).

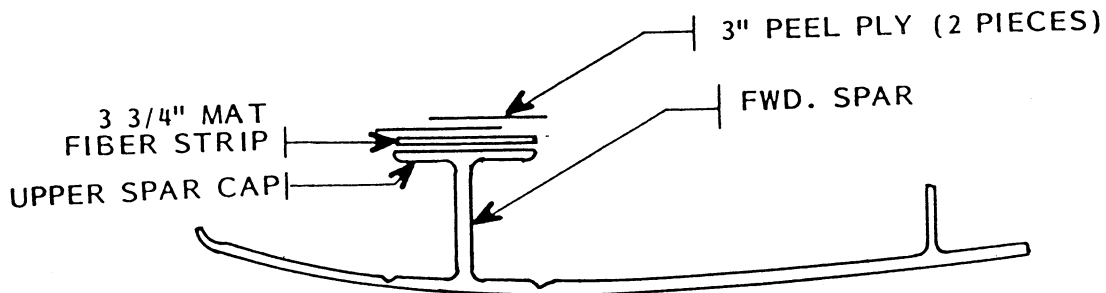


FIGURE (1)

SOLUTION: To reduce the time required to achieve a smoothly contoured upper wing surface in preparation for painting the airplane, we recommend applying an additional layer of fiberglass mat to the upper surface of the main spar cap, as shown in FIGURE (1), before fitting the wing ribs, so that the spar cap will more closely match the contour of the upper wing panel, as shown in FIGURE (2).

Cut a strip of 2 oz. fiberglass mat 3-3/4" wide and of sufficient length to run the full span of the spar cap.

NOTE: The fiberglass mat is an unwoven material (shipped in a 50" wide piece) made up of randomly oriented fiberglass strands pressed together. Do not confuse the fiberglass mat with the unidirectional roving which is shipped in a 3-7/8" wide roll.

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Thoroughly sand the gloss off the upper surface of the spar cap and center the 3-3/4" wide fiberglass mat strip on the spar cap. Cut slits in the fiberglass mat strip to allow it to fit around the wing attach fittings. Laminate the fiberglass mat strip to the surface of the main spar cap, and then laminate (or press in place) the strips of 3" peel-ply (supplied with the kit) over the fiberglass mat. Let the peel-ply extend for an inch or two beyond the ends of the spar cap to provide a good grip for removal. After the resin has cured, remove the peel-ply.

NOTE: The peel-ply placed on top of the mat strip will provide a smoother surface, and will make the sanding in the next step much easier.

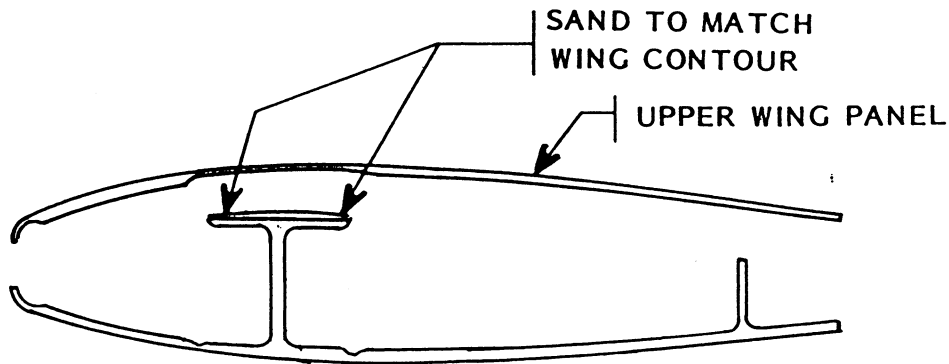


FIGURE (2)

Cut some cardboard templates of the upper skin contour over the spar and use these as guides to sand the forward and aft edges of the fiberglass mat strip to form the upper surface of the main spar cap to a slightly convex shape, as shown in FIGURE (2). Use a long sanding board to prevent an uneven or wavy surface.

CAUTION: Do not sand into the original spar cap laminates, thereby reducing the strength of the main spar.

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