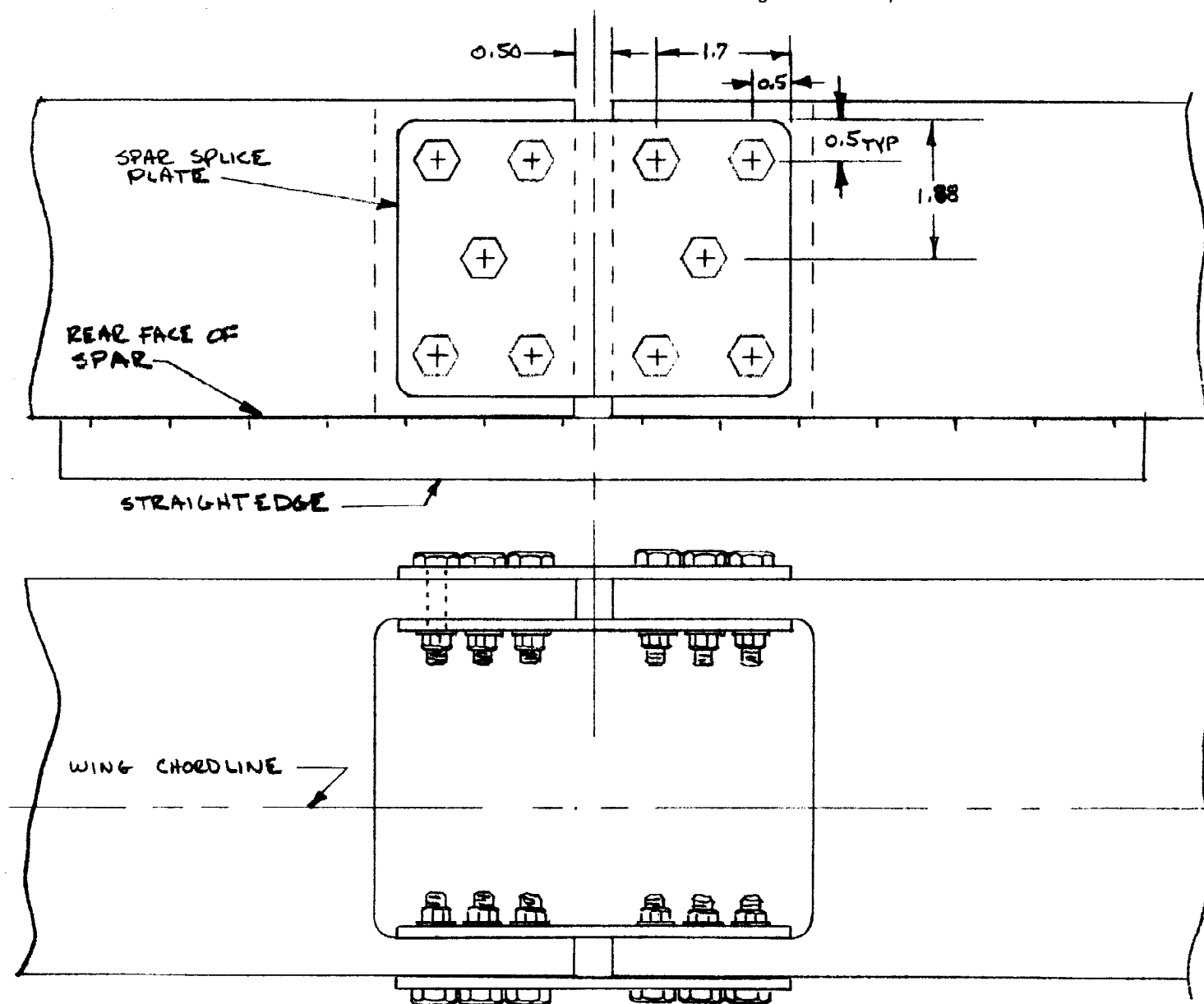
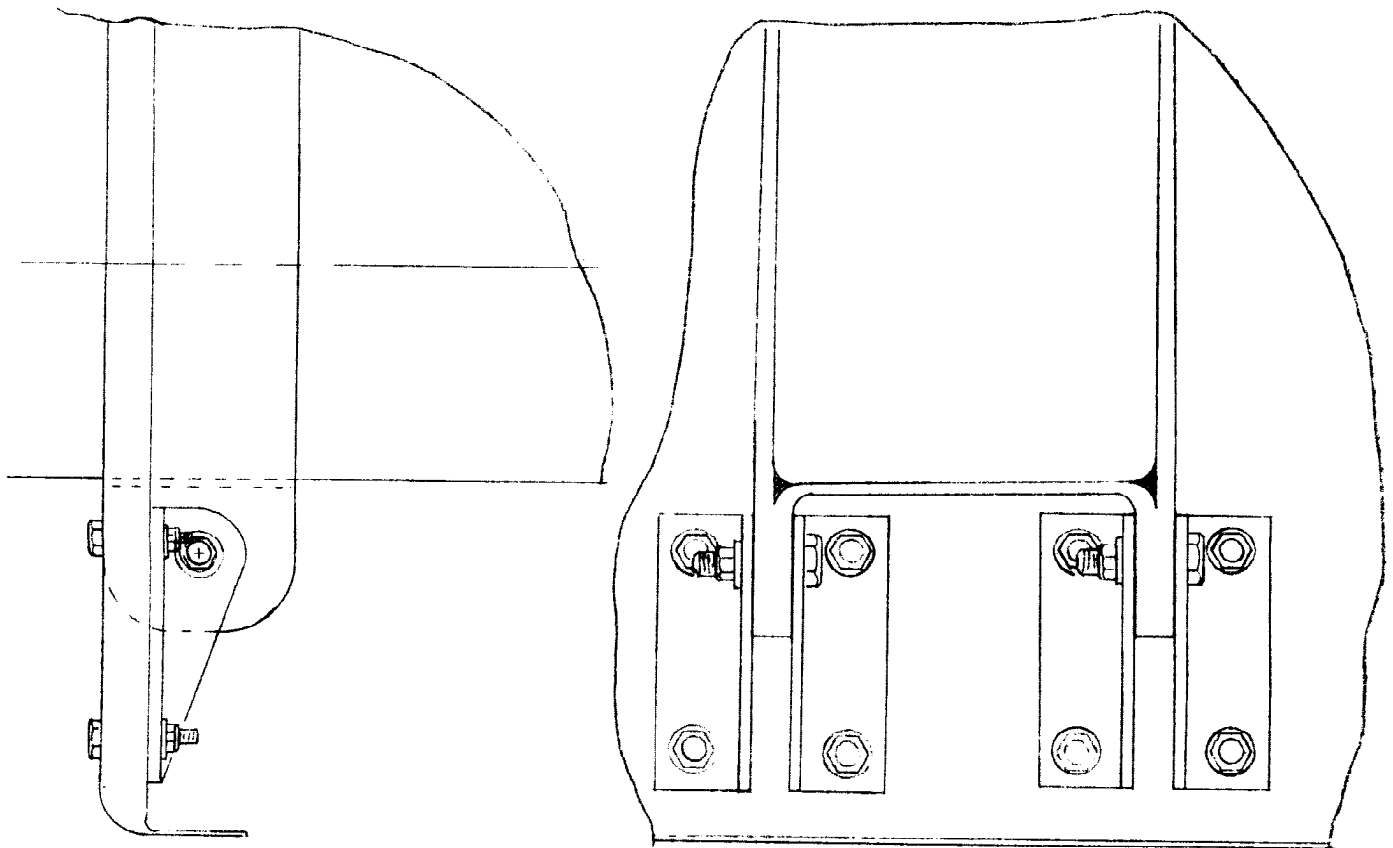


Cut the spar outline in the fuselage side panel using a saber saw and a fine toothed plywood blade. Try to keep the hole as tight as possible and still be able to assemble the wing and fuselage. Smooth the edges of the hole and plug both spar ends into the fuselage. Use saw horses or packing cartons and foam blocks to support the wings outboard. Use a straight edge to align the rear faces of the spar plugs as shown below and clamp the four splice plates firmly into position. Check the wing's sweep by measuring from B.L.O. at the closeout bulkhead to the trailing edge at the wingtip on each side. The distances should be the same plus or minus one inch. Verify that the wing is centered left to right on the fuselage and that the dihedral is the same on each side, (eyeball is fine). Once everything is set, drill the twenty 0.250 dia. bolt holes shown and install AN4-12A bolts. Use AN960-416 washers and MS21042-4 nuts on all twenty bolts. As you drill the holes, try to get half of the bolts installed before removing the clamps.

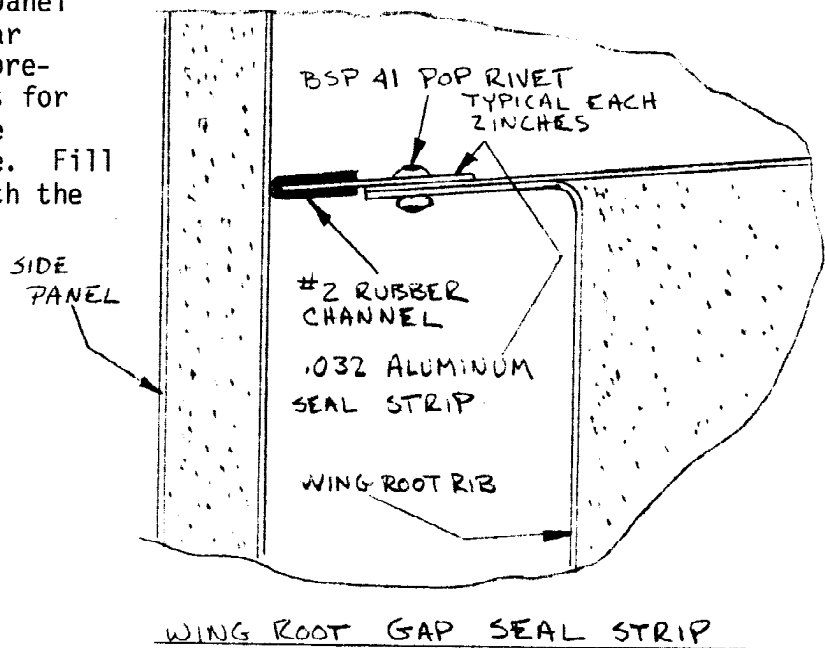


Once the center splice is secure, brighten the bases and bond the eight shear fittings to the fuselage side panels with 5 min/flox. Use a right angle drill attachment to drill first the number 40 pilot holes, then increase the hole size to 1/4 inch. Install four AN4-11A bolts, AN960-416 washers, and MS21042-4 locknuts. Drill the 16 shear fitting holes (#11) through the fuselage side panels and install AN3-11A bolts, AN960-10 washers, and MS21042-3 nuts. If your spar hole layout and trimming were done accurately, the wing incidence will be correct (zero at chordline). You can check the incidence of each wing by leveling the top canopy rail (W.L. 24 top edge of side panel) or side consoles, then use the long forgotten outboard midspan jig block template against the top surface of the wing (just outboard of the flap) and a bubble level. The level waterline reference of the jig block should be level when the consoles and side panel edge are level. Check both wings. They should be the same.



Before removing the wings, cut strips of .032 aluminum (6061-T4, 5052-H34, or 2024-T3) to make a wing root gap seal. Fit 3/32 x 3/8 (aircraft spruce #2) rubber channel onto the inboard edge as shown in the sketch. The gap seal should be a tight fit to the fuselage side on both top and bottom surfaces. Pop rivet the seal strip each two inches as shown.

Remove the wings. Use your rotary file to route out the first 1/2 inch of side panel foam core around the spar hole (not plywood) and prepare the inside surfaces for a floc corner. Fill the edges with floc and cure. Fill the cured floc flush with the edges of the hole.



While the wing is out of the way, we will install the flap actuator. Go make the latch plate, torque tube, flap handle, belhorns and pushrods shown on the following drawings. Bore the aileron pushrod and flap torque tube holes (3/4" Dia.) through the fuselage side panels in the locations marked inside. Bond two 5/8 I.D. 3/4 O.D. 3/4 long flanged oilite bronze bushings (bunting FL62-6) into the flap torque tube holes with 5 min/floc. Measure the distance between the inboard faces of the two bearings left and right. The flap torque tube must be cut 0.05 inch shorter than that.