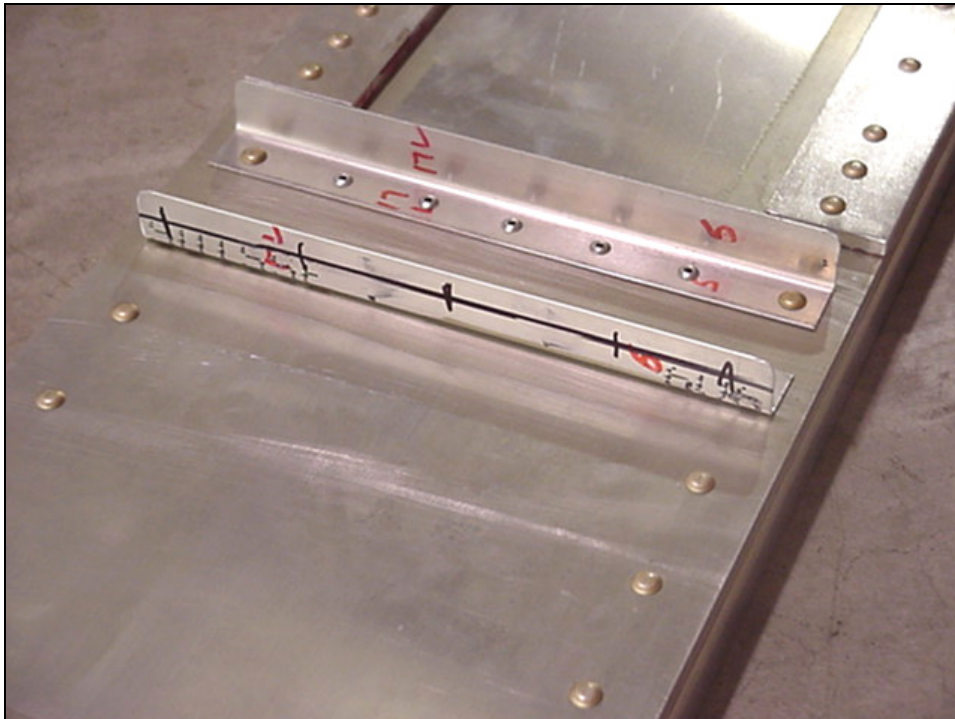


SHORT RIB ANGLES:

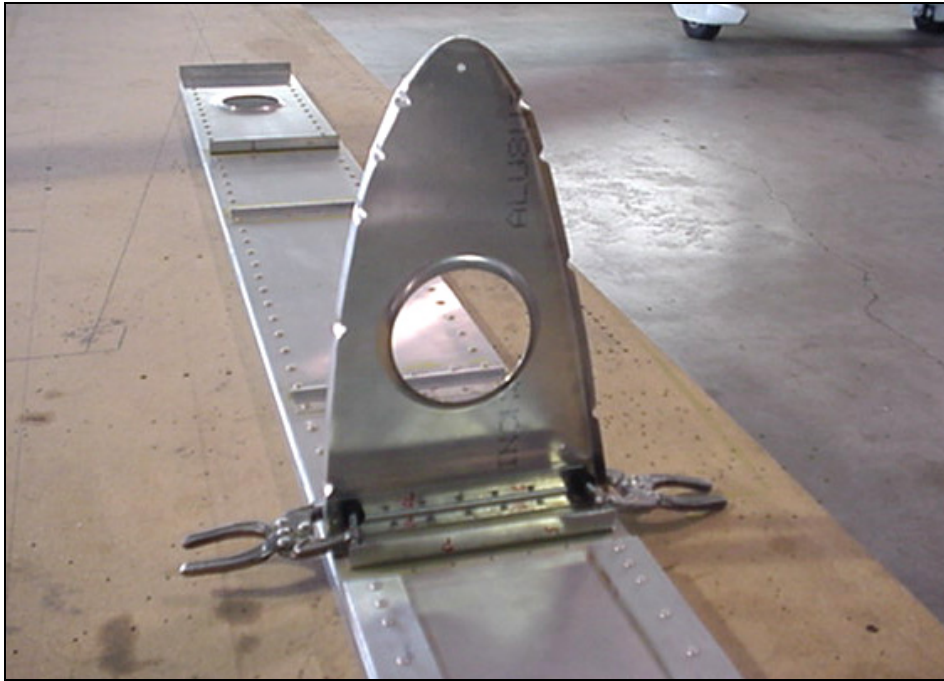
Notice the short L angles between the Spar Caps For NR #1 to #4

NOSE RIBS: Layout the rivet pitch for the Nose Ribs on the Rib Angles, 5x A5 on the Short Rib Angles, 5x A5 on the Longer Rib Angles.



LONGER RIB ANGLES:

Longer L angles with solid rivet at the top and bottom. For NR #5 to #7



Suggestion: If an angle drill will not fit in between the ribs, drill out the L angles on the spar with a #20 drill bit: hold the drill steady with 2 hands-on slow speed with short power bursts of the trigger-stop as soon as the head is free – turn the drill very slowly and push through.

Clamp the Nose Ribs to the Rib Angles: let the aft edge of the rib rest on the Spar Web.

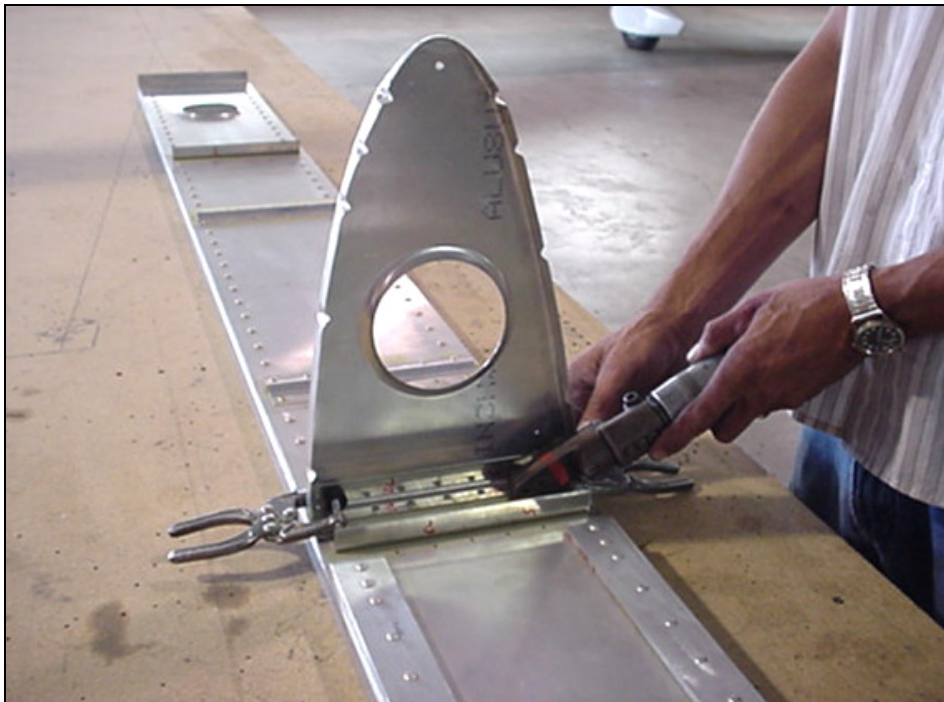


Photo of NR #6 on the Long Rib Angles.

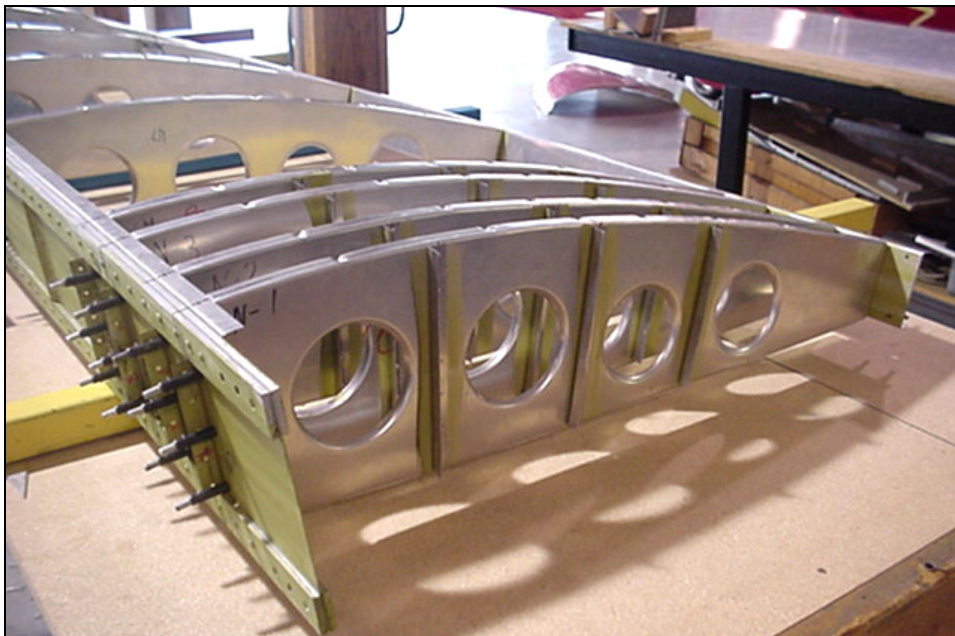
NR #8 is drilled to the 20mm flange of the Spar Web.



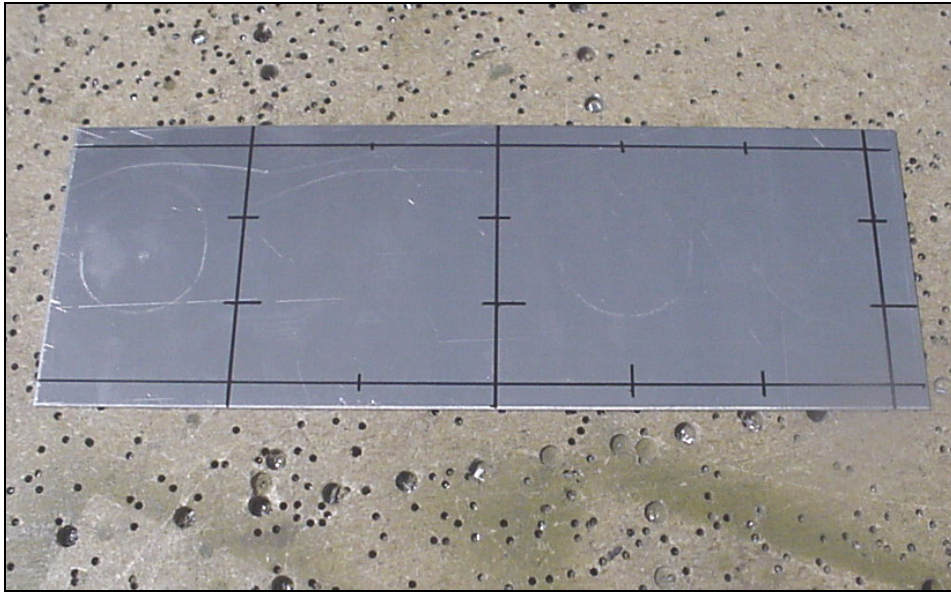
Remove the Nose Ribs from the spar to install the Rear Ribs.

The Rear Ribs are supplied with the cutout for the Spar Caps.

CHECK the depth of the cutout. If the rib has to be pushed down for the spar flange on the rib to make contact with the spar web then the rib flange may be too long: Check that the front edges of the top and bottom flange of the Rear Ribs do not interfere with the bend radius of the Spar Angle. Instead of cutting a deeper cutout, roll down the front edge of the rib flange: place a 2x4" board on the inside of the rib, and with plastic hammer, gently hammer the front edge of the rib flange to bend it in.

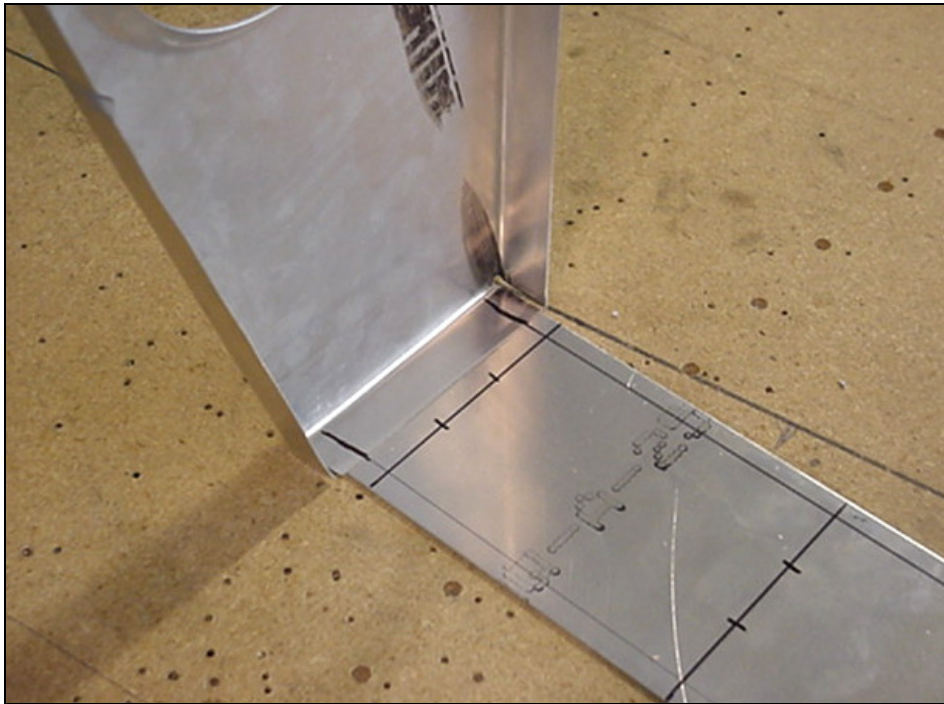


Clamp and Cleco the ribs to the Spar: drill through the pre-drilled pilot holes in the Spar Web when the rib flange centerline is visible. For more detail on RR#9, see drawing 6-W-5; Rib is installed at station 3150 (30mm to edge of Spar Tip 6W5-1)



**DOUBLER
6W7-2**

Layout the rib station for RR1, RR2 and RR3 on the Root Doubler. The rivet lines are at 90 degrees to the sides.



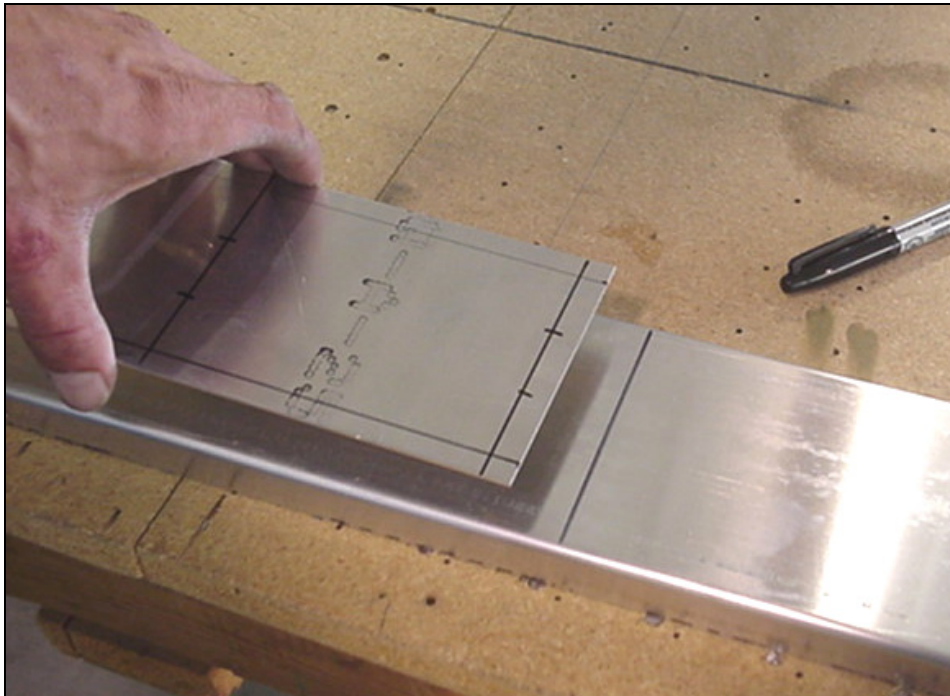
The vertical rivet lines in the Doubler is the same rivet line that will be drilled through the Rear Ribs

CHECK: Hold a Rear Rib on the Doubler, check the edge distance for the top and bottom end hole in the rear rib flange is 10mm
Pre-drill the twenty holes with a #30 drill bit in the Doubler.



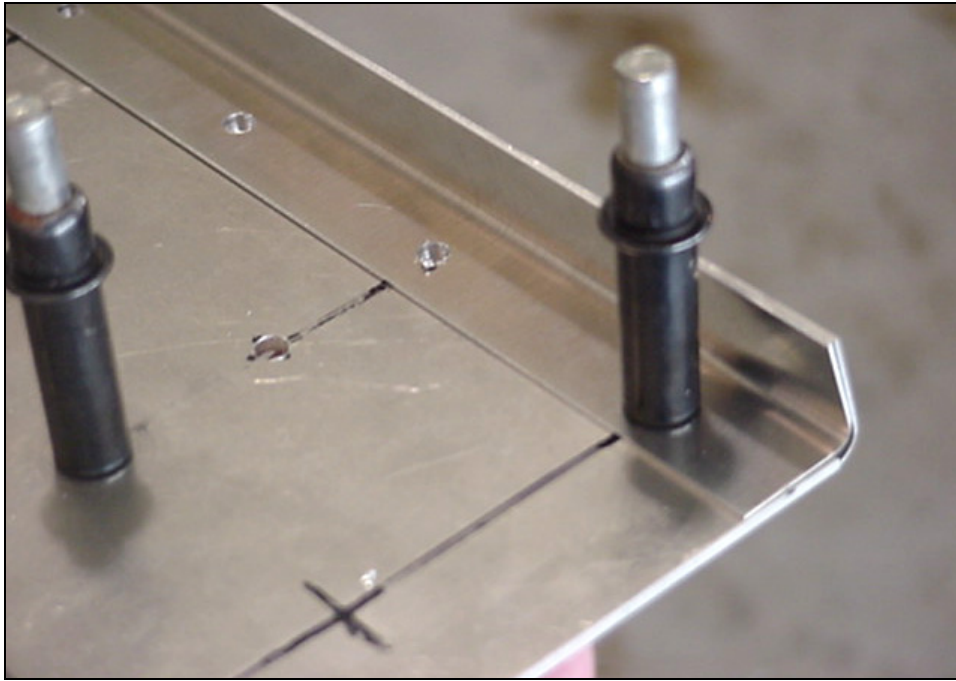
Using the Doubler to layout the rivet pitch

Layout the rib stations for RR4 to RR9 on the Rear Channel 6W7-1
Suggestion: Use the Root Doubler 6W5-2 as a 90-degree square to mark the rivet line and rivet spacing.



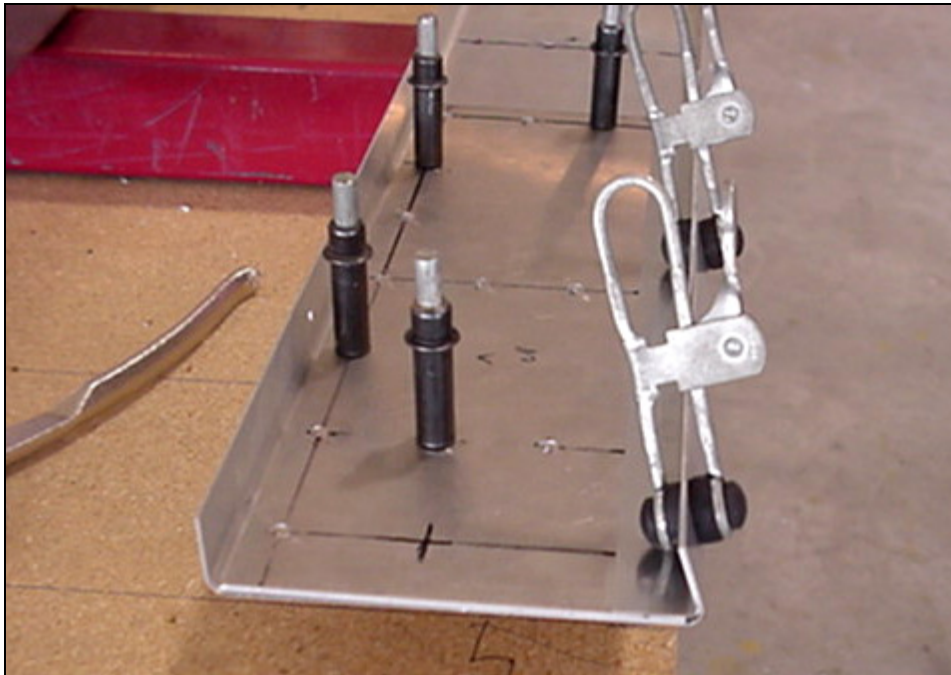
Doubler shown on the backside of the Channel, the Doubler could also be used on the inside of the channel!

Pre-drill the holes in the Rear Channel for rib stations #4 to #9 with #40 pilot holes.

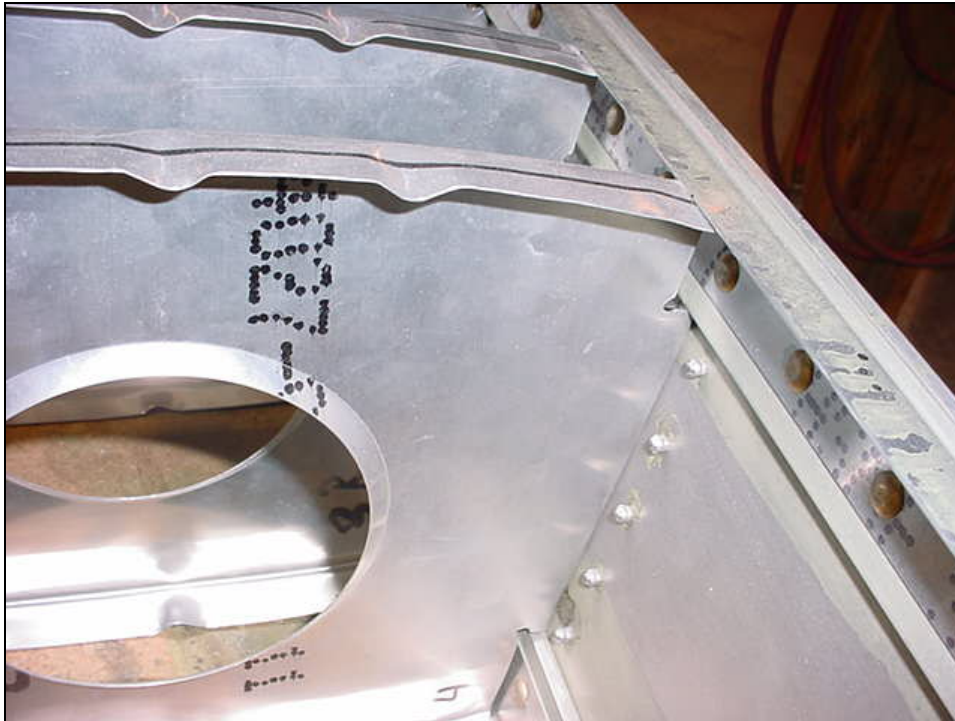


The Hinge Doubler **6W7-3** fits in the bottom corner of the Doubler 6W7-2 with the Channel 6W7-1.

Clamp the Root Doubler on the backside (inside) the Rear Channel; line it up flush at the root. Check that it is centered up and down. Drill and Cleco with #30 holes. Remove any Cleco at Rib stations 1, 2 or 3.

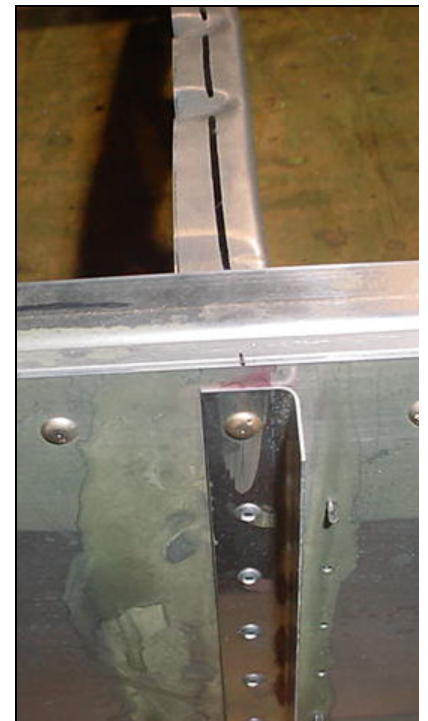
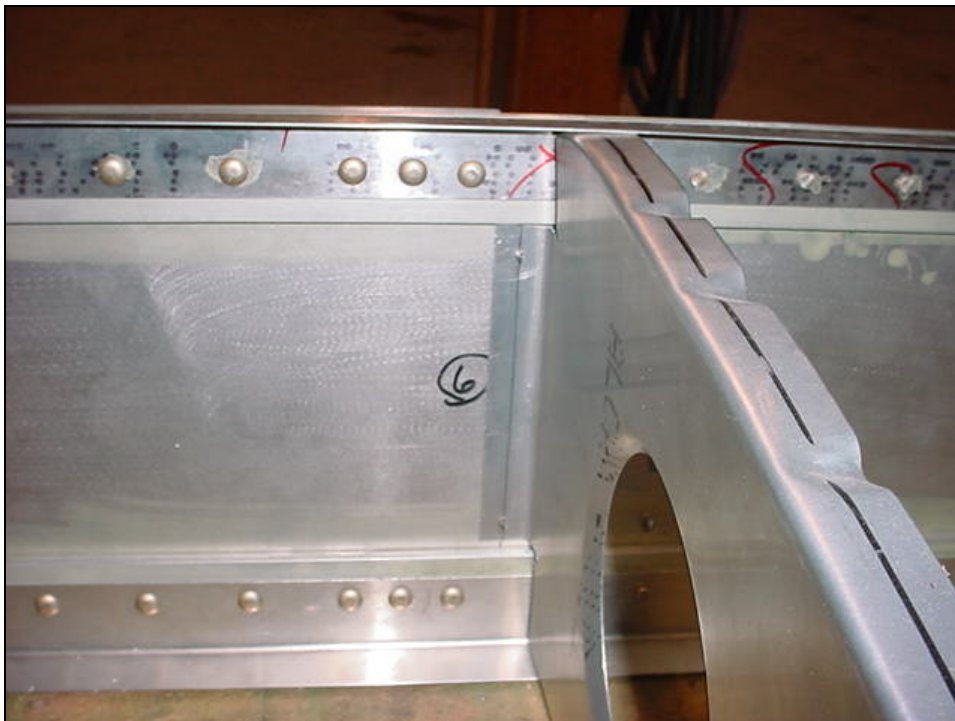


Clamp the bottom flange of the Hinge Doubler to the bottom flange of the Rear Channel.



RR 1, 2, 3, 4, 6, 8
 The spar flange is bent towards the root or I/B side, the top and bottom flange (also the rear flange) of the rear ribs point O/B

Looking at the O/B side of rear rib #4. The rivets line is the rivets through the L angle on the front side of the spar.



NOTE: The rivet line (center line) on the top and bottom of the rib are in line with the rivet line on the nose rib flange.

L angle for nose rib on the front of spar

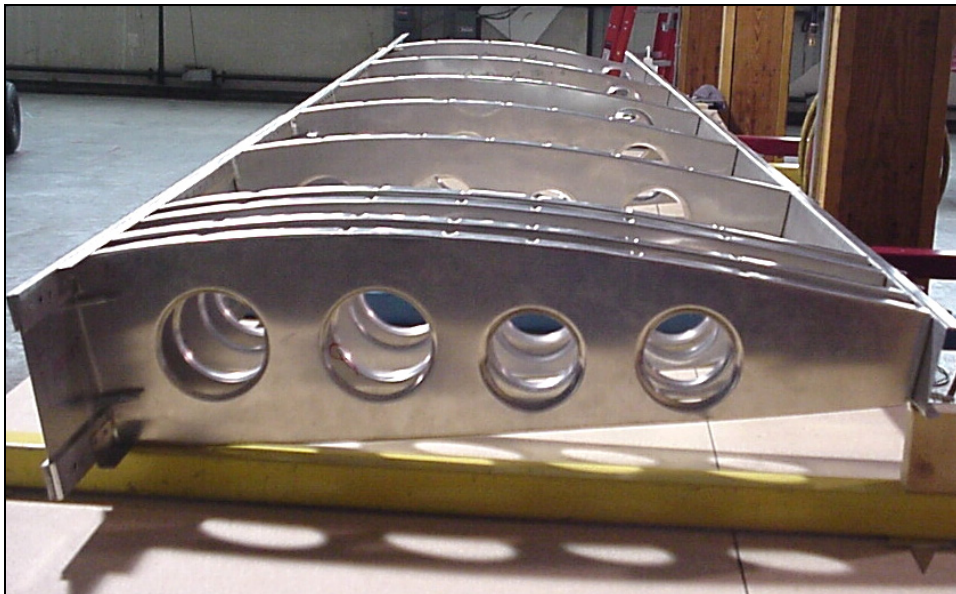
Layout the rib stations for the NOSE RIBS 6-W-3 along the top edge of the spar cap angle, check that these line up with the top flange center line



CLAMP: Check that the ribs are flush with the top and bottom flanges of the channel

DRILL: #20 drill bit and Cleco when the rib flange centerline is visible through the pre-drilled pilot holes in the Channel.

Clamp the Rear Channel 6W7-1 to the Rear Ribs that are clecoed to the Spar.



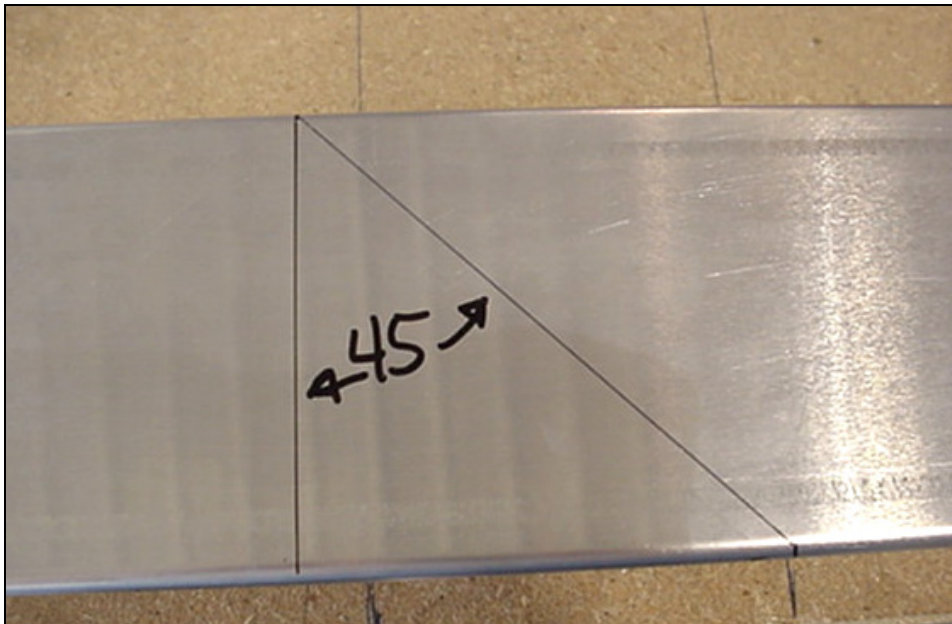
SUGGESTION: Look over the rib flanges by sighting down the wing, the flanges must all be in line; the rear flange is 3 degrees closed. Flexing the rib flange by hand can make small adjustment. In some cases a tap with a plastic hammer will eliminate a high point; high points are usually the edges of the crimps.

Looking at the Root end of the right wing.



ORIENTATION: 45 degrees is in the same direction as the angle on the Spar Tip 6W5-1

O/B end of the Channel before it is cut.



Layout the tip at 3525 Mark the 45-degree line and cut. Make some rough cuts to remove the material to approximately 10mm from the line, and then do a final cut on the line.



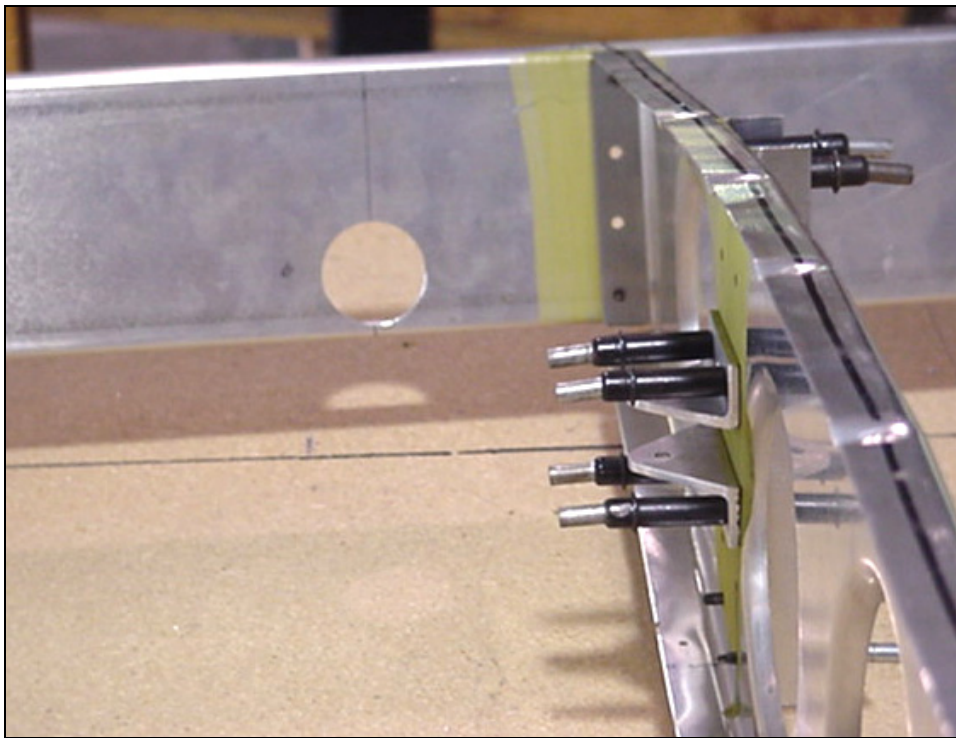
To avoid cutting the angle the wrong way, mark the 45 degree angle with the channel on the skeleton.

Cut the tip of the Rear Spar at 45 degrees; this can be done when the skeleton is disassembled to deburr the holes.



Locate the center of the 1-1/2" hole for the Aileron Rod 92mm outboard of RR7. and 20mm up from the bottom flange. Use a hole saw to drill the hole. Equally effective is a fly cutter, to avoid damage, turn the tool by hand.

SUGGESTION: to avoid simple mistakes, layout the location of the hole with the channel clecoed to the skeleton.



Location of the 1-1/2" hole 20mm up from the bottom flange.

RIVETING: Check that the rivets are set straight: the special riveter head will cause the edge of the rivet to make contact with the skin; there should be no gap between the circumference (edge) of the rivet and the skin.

Disassemble, de-burr, clean, apply corrosion protection and re-assemble with Clecos – A5 Rivet.

Set the rivets from the front side of the Main Spar and from the backside of the Rear Channel (Rivet head on the web).

The Nose Ribs are installed later after the rear skins have been positioned.