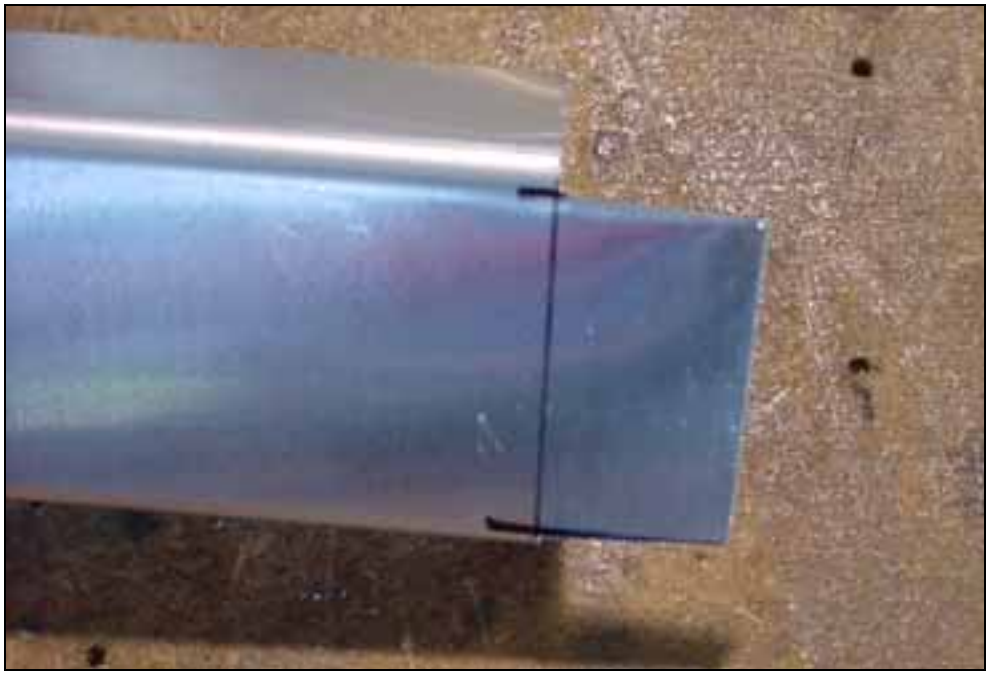
Layout the cut line along the bend tangent line on the web.

7V6-1 and
7V6-2SP

ORIENTATION: 90 degree flange is up
Layout the bend line, 20mm from the end. Ref. bottom right diagram 7-V-6
Use a square to extend the line across the top and bottom flange.

Rough cut. Cut off the top and bottom corner on the flange.

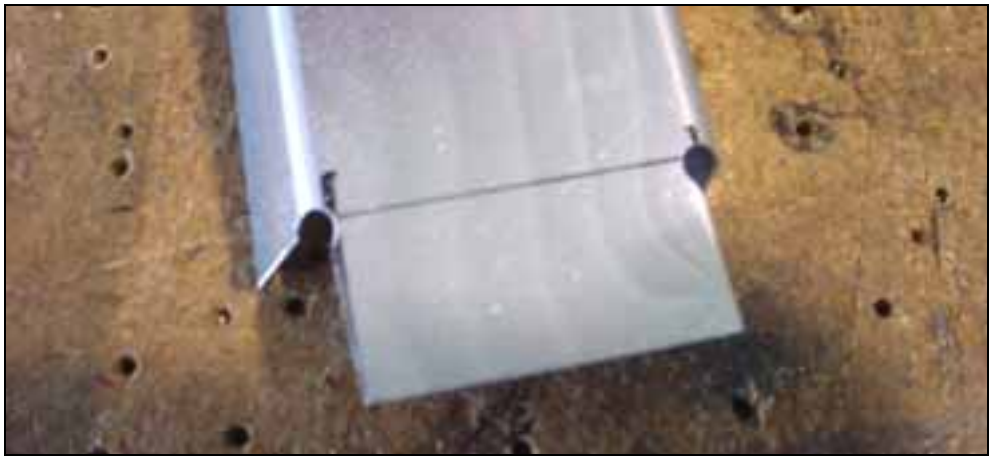
First do a rough cut. Then cut on the line.



With the snips, cut the top and bottom flange. Be careful not to cut too far, don't cut all the way to the line, plan to twist the corner off. Use a round file to touch up the corner. Check there are no snip marks.

File corner relief hole with ¼" round file.

Alternative: drill corner relief holes before cutting flange.



Note: Bend line is centered through the corner relief hole.

Filed corner relief holes

Bent radius. The radius should not be too tight, approximately 1/8” radius.

Position a backing block (solid steel bar or 2x4 board) inside the flange.
Use a plastic hammer (wood mallet or rubber hammer) to bend the flange up.

CHECK: The backing block has a 1/8” radius along the bending edge.

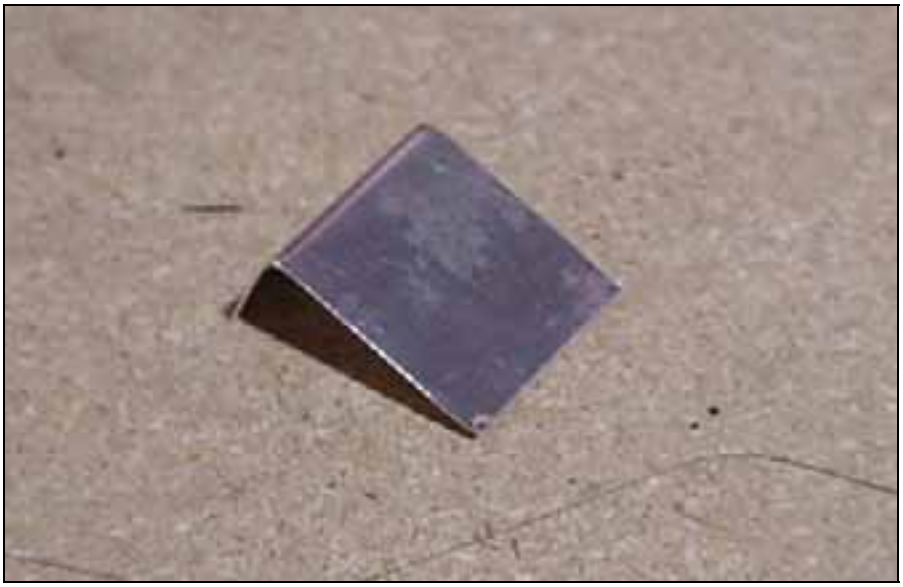
Note: The bend is in line with the corner relief holes.

Check: the end flange is square to the top flange.

Rear rib angle 7V6-3
Mark and cut each piece before laying out the next one.

Cut oversize.

Cut in from both flanges, then twist off.



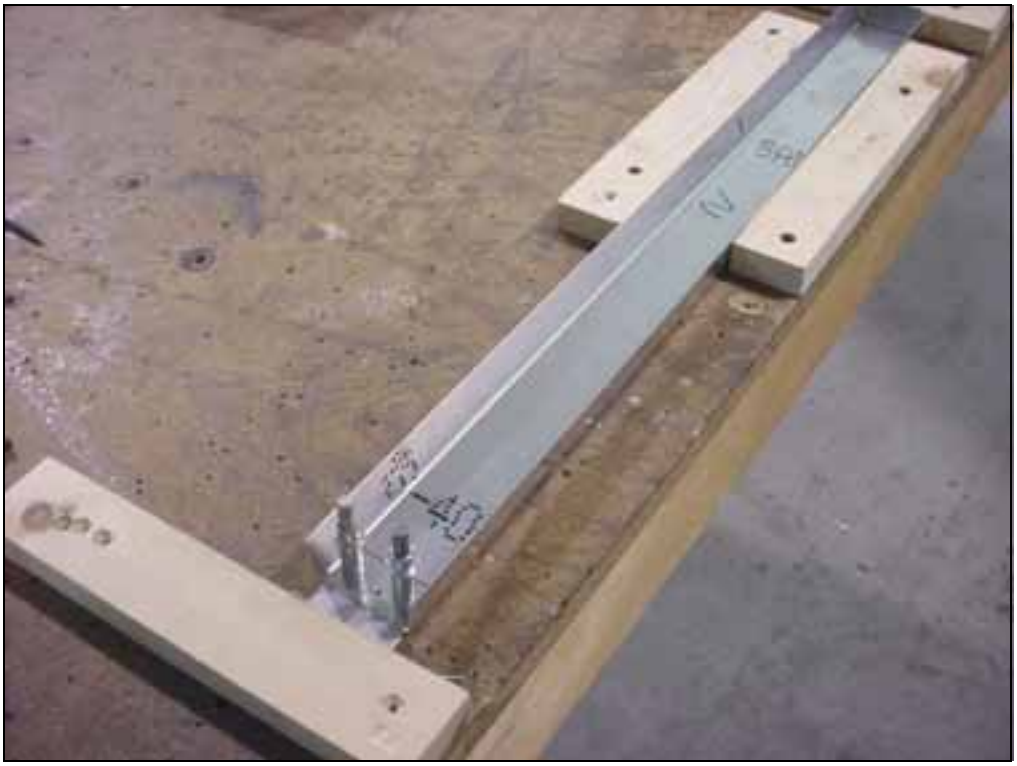
Rear Rib Angle from 7V6-3
Length = 40mm long.

Final cut on line.

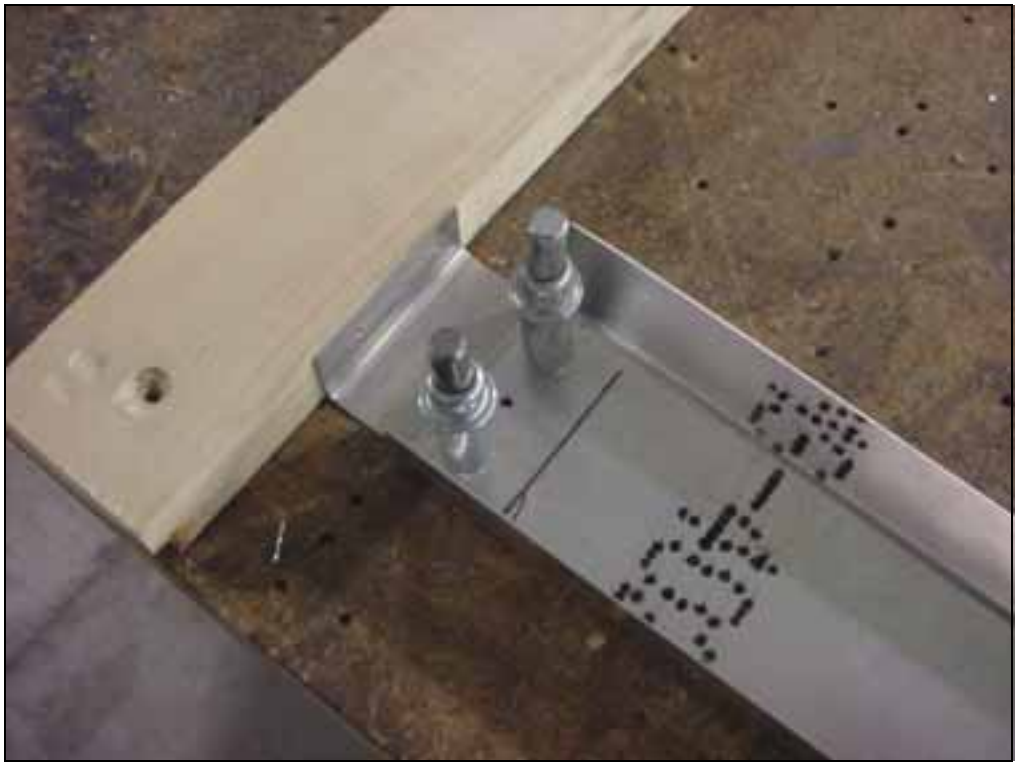
Distance between ribs,
See 7-V-3

STN = Station

JIG to set the rear rib angles 7V6-3 to the rear channels 7V6-1 and 7V6-2SP. Hold a carpenter square along the edge of the workbench to set the end boards square to the long sides.
First screw the end boards 600mm apart, then move them in to 400mm for channel between ribs #3 and #4.



JIG: Screw the board into the workbench.



Layout 3 holes 10mm from the end of the channel.

Spacing between holes, see second diagram from bottom right on drawing 7-V-6

First pre-drill the 3 holes in the channel, position the parts in the JIG, back drill when the rib angle is centered across the channel.

CHANNEL POSITIONING TEMPLATE

Ref. middle diagram on drawing 7-V-6

Layout the template on ½" plywood.

Clamp the channel positioning template to the side of rear rib #1

CHECK: The top of the template is pushed up against the aft edge of the upper spar cap 7V2-2 (3/4” extrusion).

CHECK: The aft edge of the template is even with the top and bottom of the rib.

Slide the bend end of the rear channel over the end of the template. Bend flange fits between the side of the rib and the template.

Detail: looking back, channel fits over the end of the template.

COMMENT: Template used in photo has been reinforced with a doubler plate riveted to the plywood. The 3 holes at the end are from doing the left wing.

Detail: view from inboard side.

Push the channel against the end of the template.
Drill and Cleco with pilot holes.
(Photo: view from outboard side)

3 RIVETS A4
(riveted later with 7V6-3)

Position the template on the next rear rib, clamp to the rear rib.

Drill and Cleco the outboard end of each channel to the rear ribs.

CHECK: template fits over the upper and lower spar cap 7V2-2 and 7V2-3

Detail: aft edge of extrusion touches the inside cutout of the template.

The purpose of the template is to set the distance and angle of the rear channels to the side of the rear ribs.

Detail: aft edge of the channel on the top flange of the rear rib.

Hold a straight edge along the back of the channel, mark the rib flange.

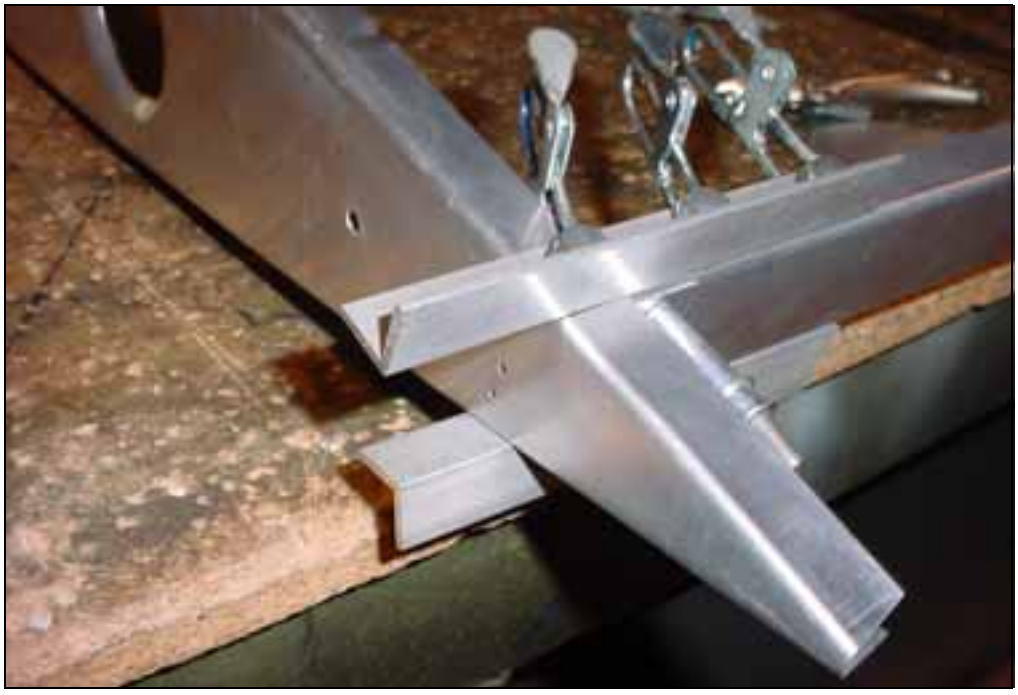
Detail, aft edge of the channel on the bottom flange of the rear rib.

LABEL the end of the channel with appropriate rib station.
Remove (un-cleco) the channels from the rear ribs.

Mark the back of the channel along the bottom flange of the rear rib.

CHECK: Extrusion is even with the web (back portion of the channel – same reference used to mark the rib on page 10).

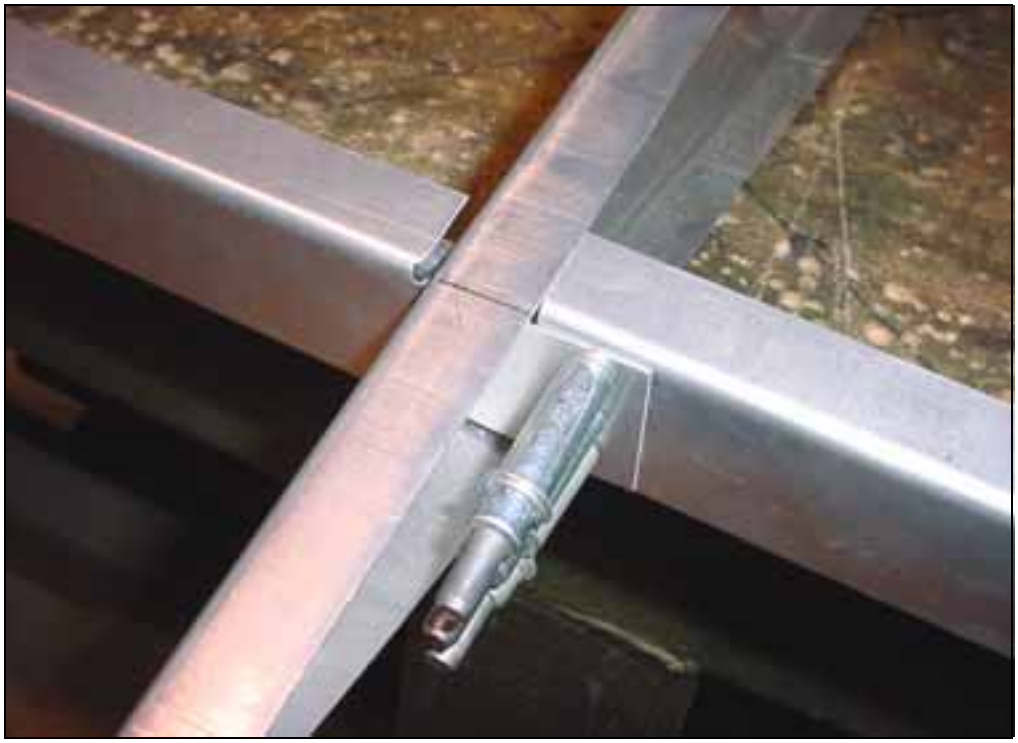
NOTE: The rib angle was installed to the channel on page 5
Clamp a piece of extrusion across the top and bottom flange of the channel, let it overhang approximately 30mm.



Clamp the extrusion to the rib flange.

Back drill and cleco.

Slide the channel assembly between the top and bottom flange of the rear rib. Line up the edge of the extrusion with the lines on the rib flange (top and bottom).



The inboard channel is in line with the channel on the outboard side of the rib.

Reassembly the channels to the ribs.
NOTE: The rib angle 7V6-3 overlaps on the aft side of the channels.

Right wing.

Wing assembly with rear channel clecoed to the side of the rear ribs.