



Right wing,
Flaps down

Note: flap is hinged along the bottom of the wing.

The outboard (O/B) end of flap skin is perpendicular (square) to the trailing edge.



Note: the first flap rib does not line up with the rear ribs.

Approximately 3 to 4mm gap between the I/B end of the flap and the fuselage side skin. Final trimming may be done when the wing is fitted to the fuselage.

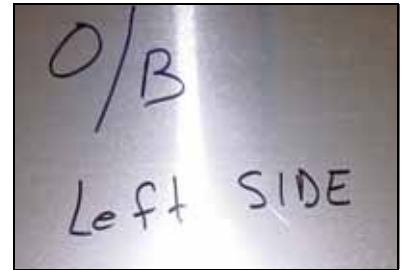
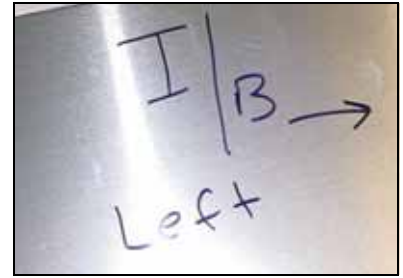
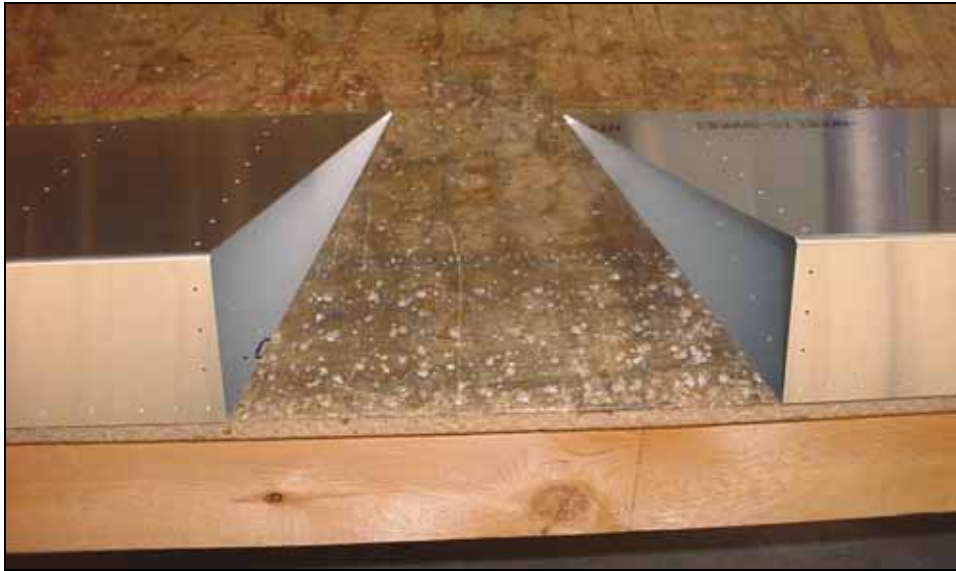
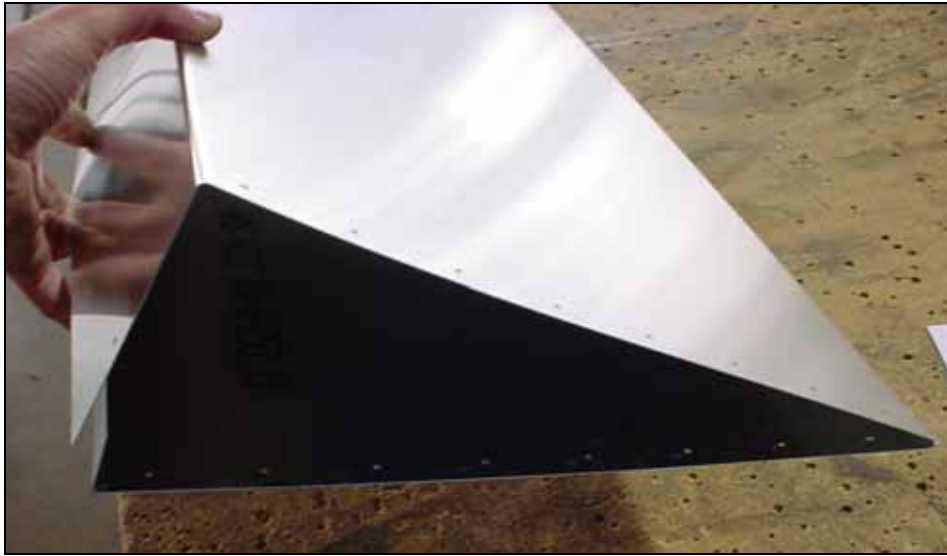


Photo of the left and right inboard end of the flap.
 ORIENTATION: Carefully label the inboard and outboard ends, top side.
 I/B = inboard end
 O/B = outboard



Rivet lines are at 87 degrees to the trailing edge, except for the O/B rib, which is at 90 degrees.

Photo of the Inboard end.
 Ref. middle diagram on drawing 6-W-1



Flap Skin 6W1-2

Orientation: The 20mm flange is on the bottom, overlaps on the backside of the front side.



Position the skin upside down on the workbench: bottom side up.



Pre-drilled holes in the skin.

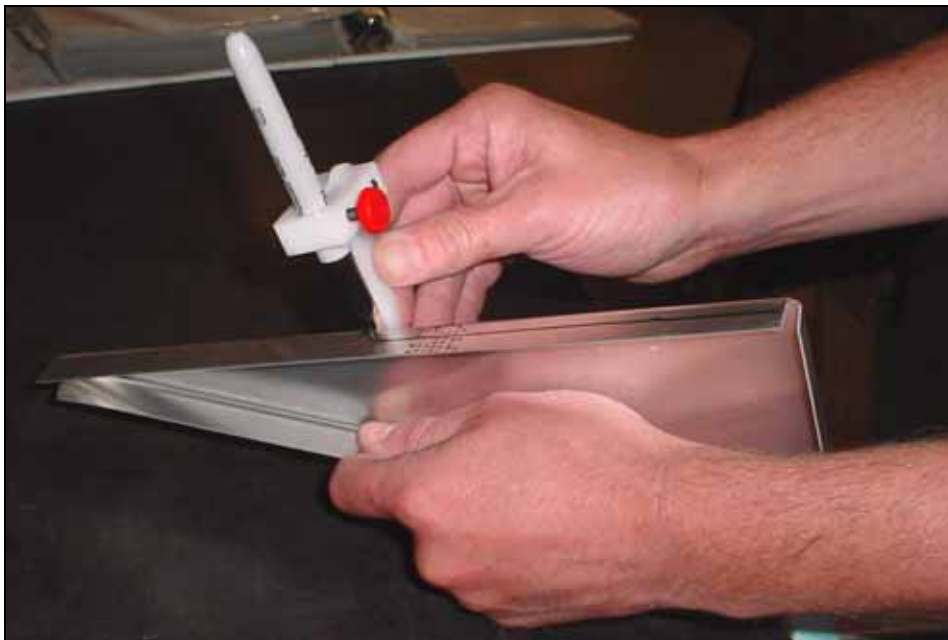


NOTE: The layout of the pre-drilled holes in the skin allow approximately 10mm edge distance for the end holes in the rib flange.



With a marker, mark the flange rivet line on all three flanges for each rib.
 Edge distance = 10mm
 Measured from the edge of the flange to the center of the rivet line.

Front flange



Edge marking block
 P/N 6352

Using an edge marking block to layout the rivet line. In the top photo, the marker is held by hand using a finder as a gauge against the side of the rib.



Position the ribs inside the flap skin.



Except for the end rib, the flanges point outboard.



Clamp the front flange of the rib to the skin.



CHECK: There is no gap between the top skin and the rib.



Note: the rivet line for the piano hinge 6W1-4 is drilled later when the hinge is installed.



CHECK: flange rivet line is visible through the pre-drilled holes in the skin.



Drill and cleco the top hole first.
 COMMENT: Hold a wood block inside the rib flange to help support the rib while drilling.



Drill and cleco each rib to the front of the flap skin.



Start at the trailing edge. Drill and cleco the last hole in each rib.



Don't push too hard when drilling the end holes. Check that the drill bit does not bend or distort the rib flange down.



Photo looking at the bottom side of the left flap assembly: ready to be turned over.

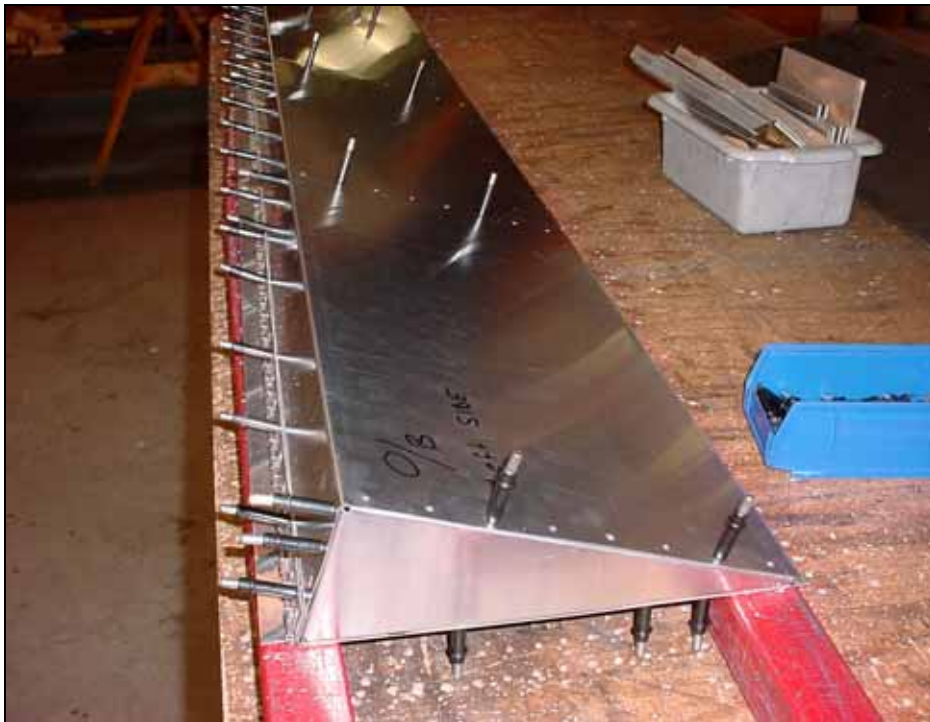


Drill and Cleco: Start at the trailing edge and work your way towards the front.



The purpose of the steel beam is to elevate the flap assembly above the clecoes.

There is no twist in the flap. Keep the two beams level.



Start at the trailing edge, drill and cleco.

It is a good idea to first drill with 3/32" or #40 holes. Then go back and open the holes to #20 for the A5 rivets.



Rivet spacing at I/B & O/B ends 10, 20, 20, 40 etc.

REFERENCE: Line up the end of the hinge flush with the O/B end of the flap skin.



Layout the rivet line on the hinge, edge distance see bottom left diagram on drawing 6-W-1

A5 PITCH 40



Only mark one flange of the piano hinge, the other is drilled through the bottom skin 6W8-2
Wait to trim the hinge until after the holes are drilled.



Layout the ribs on the hinge.
Note: There will be a total of 4 rivets in the rib flange: the bottom hole is through the piano hinge.



Rivet at the intersection of the rib station with the rivet line through the piano hinge.

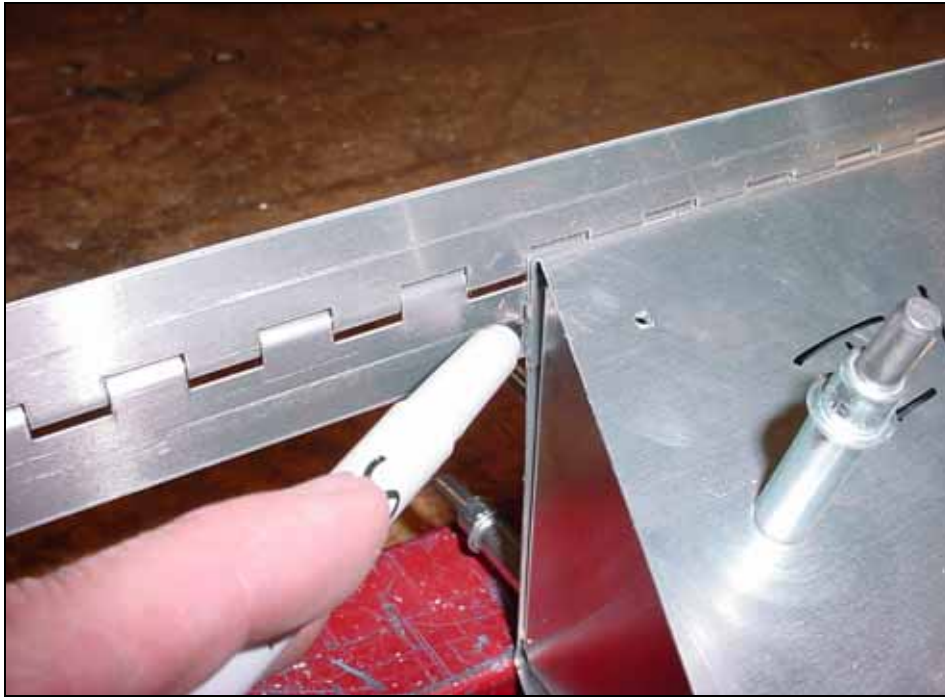
Remove the hinge to layout the rivet pitch.
 Pre-drill with #40 holes.
 The flap assembly rests on the beams.
 Position the hinge on the beam, then slide a 1/8" spacer block between the hinge and the beam.



3mm offset from the bottom of the hinge to the bottom of the skin.

CHECK: Top edge of the piano hinge is approximately even with the top edge of the 25mm flange.

Drill and cleco the hinge to the skin.



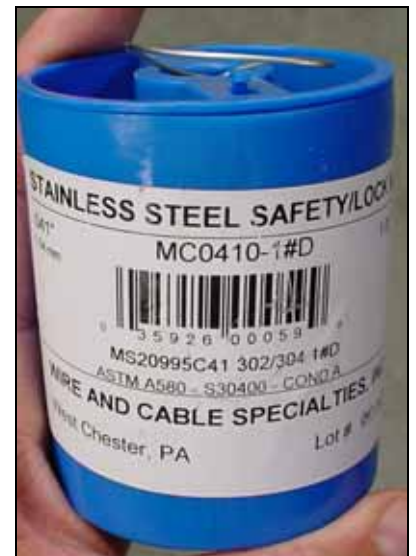
Trace the I/B end of the flap on the hinge.
Slide the pin out to cut the hinge.



Detail of the 3mm offset
between the top of hinge and
the skin.
Ref. 6-W-00 and 6-W-1



Photo of the I/B end of the flap (left wing). Flap assembly upside down
with hinge on top.



.032" Safety wire
Ref. top diagram on drawing
6-T-2



Cut the pin approximately 5mm shorter than the hinge on each end.
 1/16" hole in spine.
 Braid the wire (twist).

Safety wire both ends of the
 flap hinge to prevent the rod
 from coming out.



CONTROL PLATE 6W1-3
 Suggestion: Install the control
 plate with the wing bolted to
 the fuselage.

Disassemble to de-burr and corrosion proof.
 Reassemble with Clecos, check for no twist.
 Rivet with A5 rivets.