



**REAR LONGERON
6B2-1**

Qty: 2

Longeron 6B2-1 overlaps on top of the bottom skin 6B1-4

Line up the front of the longeron to the 1335mm reference line.



Clamp the HT frames to the longerons.



Slide the bottom flange of the longerons 6B2-1 between the skin 6B1-4 and the angles 6B1-5 and 6B1-6



Slide the bottom skin to overhang past the edge of the workbench.
Clamp the longeron to the skin.

Rough cut the overhang of the Longeron 6B2-1 past the end of the bottom skin. The cut-off is used to Shim underneath 6B2-2 (Shim 100mm).



**BOTTOM LONGERON
6B2-3**

**LONGERON DOUBLER
6B2-2 Qty: 2**

**LONGERON SHIM
6B2-1 Length=100mm Qty: 2**

Position the aft end of bottom longeron 6B2-3 against the front end of the rear longeron 6B2-1.
Clamp the longeron to the skin and adjust the edge of the skin as shown in the following pages.



Sides are flush

Add: position the t=.040" shim on top of the rear longeron 6B2-1



Position the Doubler 6B2-2 on top of the shim. Check there are no gaps between the parts.

100mm overlap on each side.
Ref. top diagram 6-B-2

Clamp the side flanges.



Transition from the bent longeron 6B2-1 to the extrusion longeron 6B2-3



Ref cross section A-A and section B-B, top left middle diagrams on drawing 6-B-2



At the HT frames the bend radius of the Longeron is visible.



The edge of the skin gradually tapers away from the bend radius to the edge of the skin.



At the longeron splice (top right diagram on drawing 6-B-2) the edge of the skin is flush with the edge of the longeron 6B2-3.



The edge of the skin is flush with the edge of the extrusion longeron 6B2-3
Drill and cleco A5 (#20 Drill Bit) in 6B2-3.



Splice Area:
10 RIVETS A5

Only drill the bottom flange of the Longeron Doubler 6B2-2, the side flange will be drilled when the side skin 6B3-1 is installed.



Z ANGLES

Joggle the bottom flange of the “Z” angles 6B1-7 and the “L” angles that overlap on top of the bottom longeron 6B2-3.



Joggling stiffeners.
4mm step approximately
15mm long.

Hardwood is best, but this one was made from spruce and worked well.

Make this block to produce the correct joggle in the stiffeners.



Joggling L angles:
Place the stiffener in position on the block and give it a sharp blow with a rubber mallet approaching from slightly behind the radius.

Detail of joggled end.



Trim the front end of the longeron 6B2-3 flush with the front edge of the side skin 6B1-4

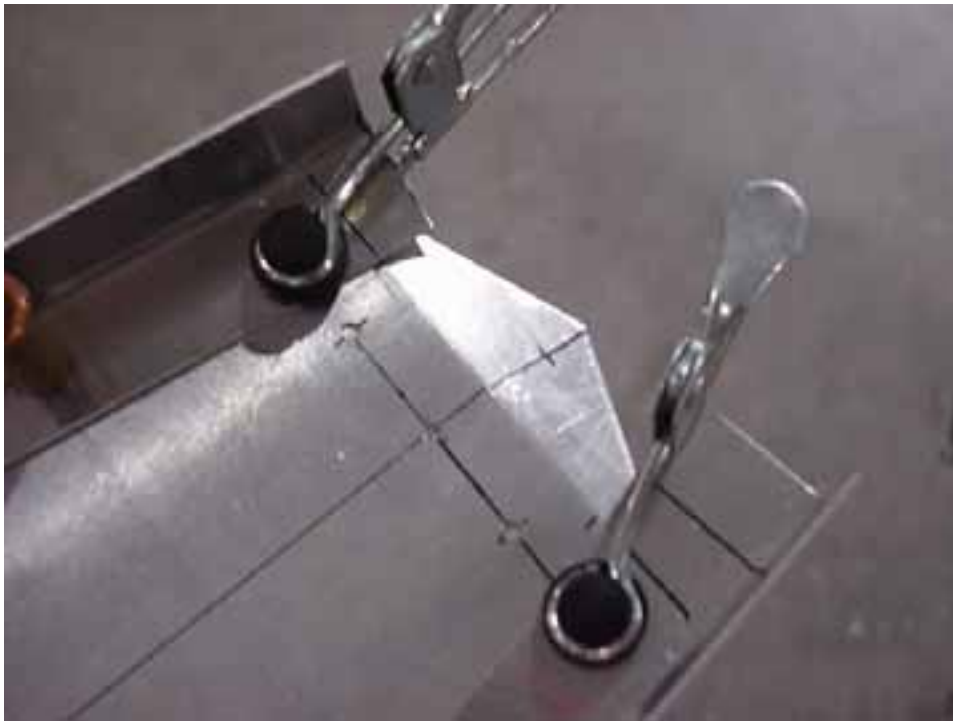
Debur, corrosion protect, and rivet the bottom fuselage section.



LOWER RUDDER HINGES 6B2-4 & 6B2-6

R8 = radius 8mm
(Center of the hole to edge of parts)

First drill a pilot hole then open up to 3/16" hole in the Rudder Hinges. The hinge hole is 11mm from the bend line and 8mm radius at the front. File the point to maintain 8mm edge distance.



COMMENT: wait to trim the ends of the longeron: the side flange of the Longerons 6B2-1 will be trimmed flush with the aft edge of the side skin 6B3-1.

Back drill and cleco.

Clamp the lower rudder hinge 6B2-6 on the underside of the skin 6B1-4



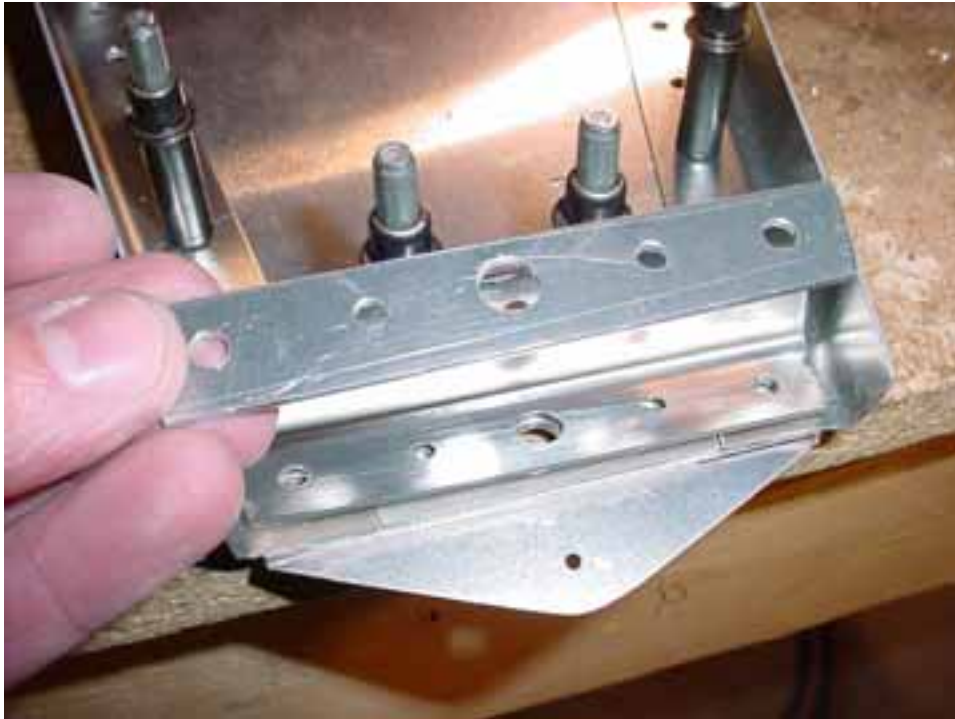
**LONGERON SHIM
6B2-5**

Trim the ends of the shim $t= .040$ " to fit between the two longerons. Clamp edge of the Longeron Shim 6B2-5 flush with the aft edge of the end skin 6B1-3. Back drill from the bottom.



6B1-6 ANGLE

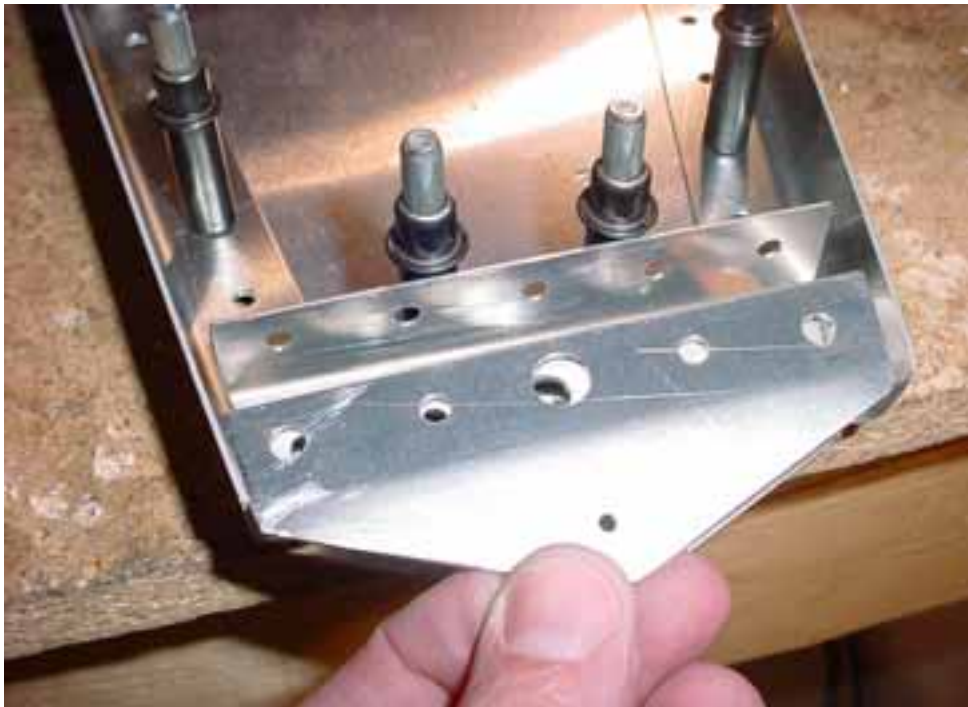
Position Angle 6B1-6



**HINGE SHIM
6B2-10**

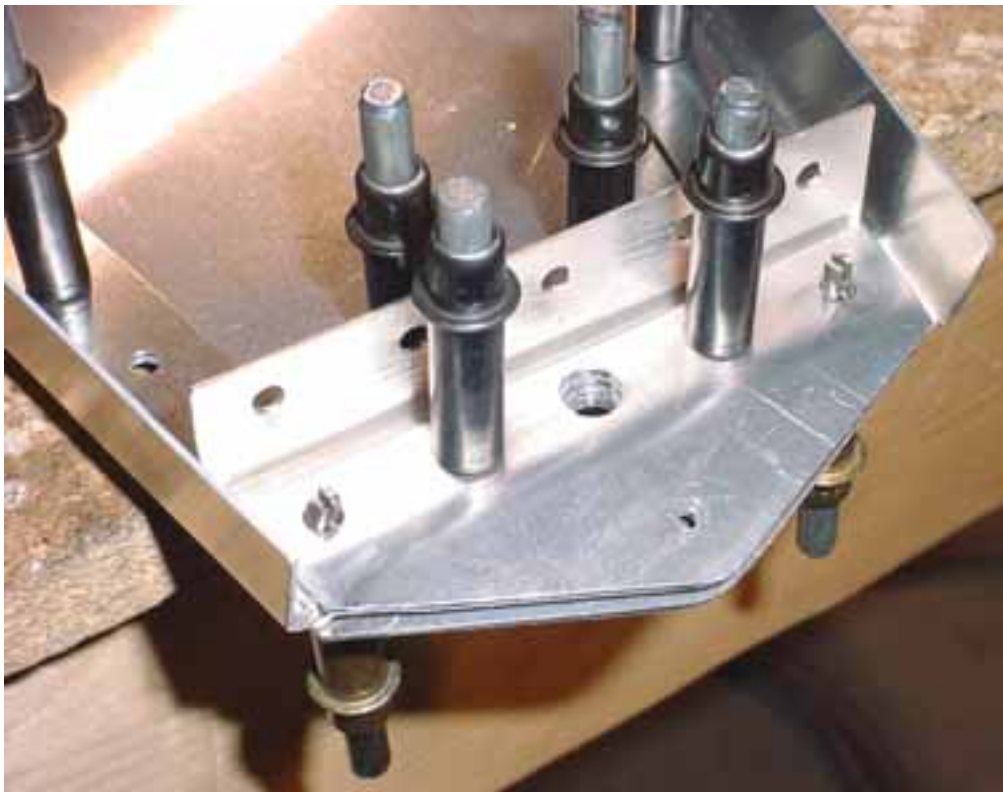
Trim the ends to fit between the Longerons.

Position the Hinge Shim 6B2-10 and back drill. The Hinge Shim may need to be trimmed so it will not sit on the radius of 6B1-6. To drill the parts it will make it easier to work with one part at a time by clamping directly to the lower skin and drilling separately.



**LOWER RUDDER HINGE
(TOP)
6B2-4**

Insert the AN3 bolts through the underside of the bottom hinge, add the bushing 6B2-9, then insert the top hinge 6B2-4. Back drill the holes.



Middle hole is for the tie down ring 6B4-1



The two outside are drilled to 3/16" AN3-5A Bolts and the two rivets on each side of the center are A5 rivets (see DWG 6-B-2).

The center hole is opened up to 5/16" (check the diagram of the tied down ring) for the Tie Down Ring 6B4-1.