

## Rear Top Skin 6B21-6

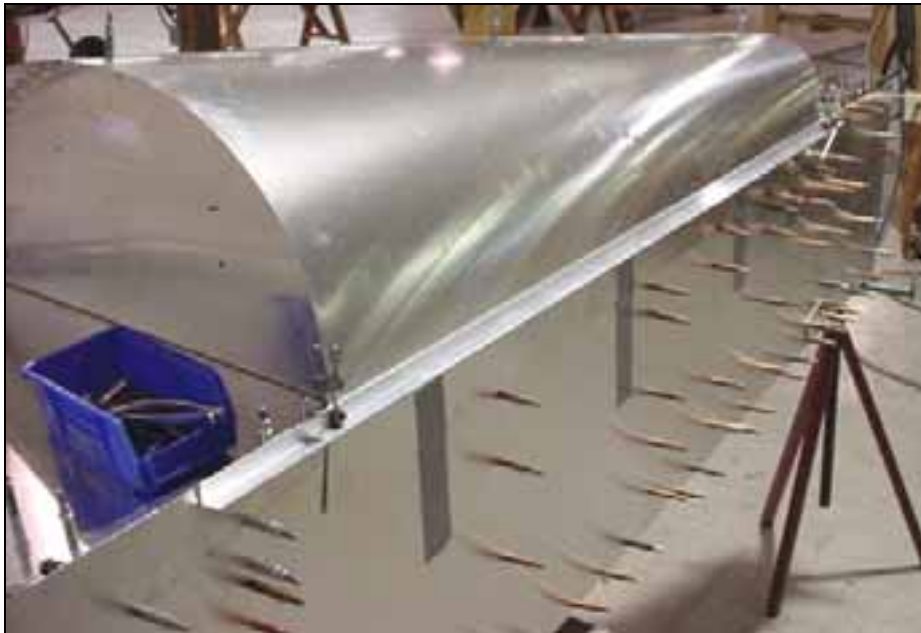


Note: bulkheads were  
pre-drilled in section 6-B-12

On the aircraft center line, layout the position of the bulkheads, Ref  
bottom diagram on drawing 6-B-21

Pre-drill the 3 holes on the aircraft centerline for the bulkheads

Cleco the skin to the bulkheads.



Check that the skin is square  
to the bulkheads (hold square  
on bulkhead center line).

Tape down one side of the fuselage.

In the photo, a length of extrusion is clamped along the top edge of the  
fuselage side skins to help hold the skin flat against the fuselage.



To help keep the bulkhead straight, it is a good idea to back it up with a plywood form.



**SUGGESTION:** Tape a length of 1x2 board along the edge of the skin to make it easier to lift up the skin to work inside the fuselage.

lift open one side of the top skin to back drill the skin through the aft bulkhead 6B12-3



Before drilling, check the fuselage is level (top edge of the rear side skins 6B3-1).



Plumb line: Check the center line on the top skin lines up with the center line on the bottom skin 6B1-4



First drill one side, with one side taped to the fuselage, lift open the other side of the top skin to back drill through the bulkhead.

Start in the middle and cleco each hole.



**SUGGESTION:** Have an assistant hold a backing block (wood) on the skin while back drilling.



The middle bulkhead is back drilled by reaching in through the bottom fuselage access door 6-B-3



Tape both sides of the top skins to the sides of the fuselage.



Back drill the baggage back bulkhead 6B12-2 to the skin. Set the Clecocs from the top.

**IMPORTANT:** The skin is cut oversize, do not set the edge distance from the bottom edge of 6B21-6.

**A4 PITCH 40**

6B21-6 to 6B3-1 & 6B2-1

Layout the rivet line. From inside the fuselage, check for proper edge distance on the flange of the rear longeron 6B2-1



First rivet 80mm back from the intersection of the longeron rivet line and the bulkhead rivet line. Rivets will be added after the front tube 6B21-1 is installed.



Note: When the front edge of the middle top skin 6B21-7 is cut square to the aircraft center line, then the skin overhangs unevenly past the front of the bulkhead 6B12-2 (ref trapezoid shown on 6B21-7)



Rear top skin 6B21-6  
Drill & Cleco both sides.

Start in the middle and work out towards the ends.



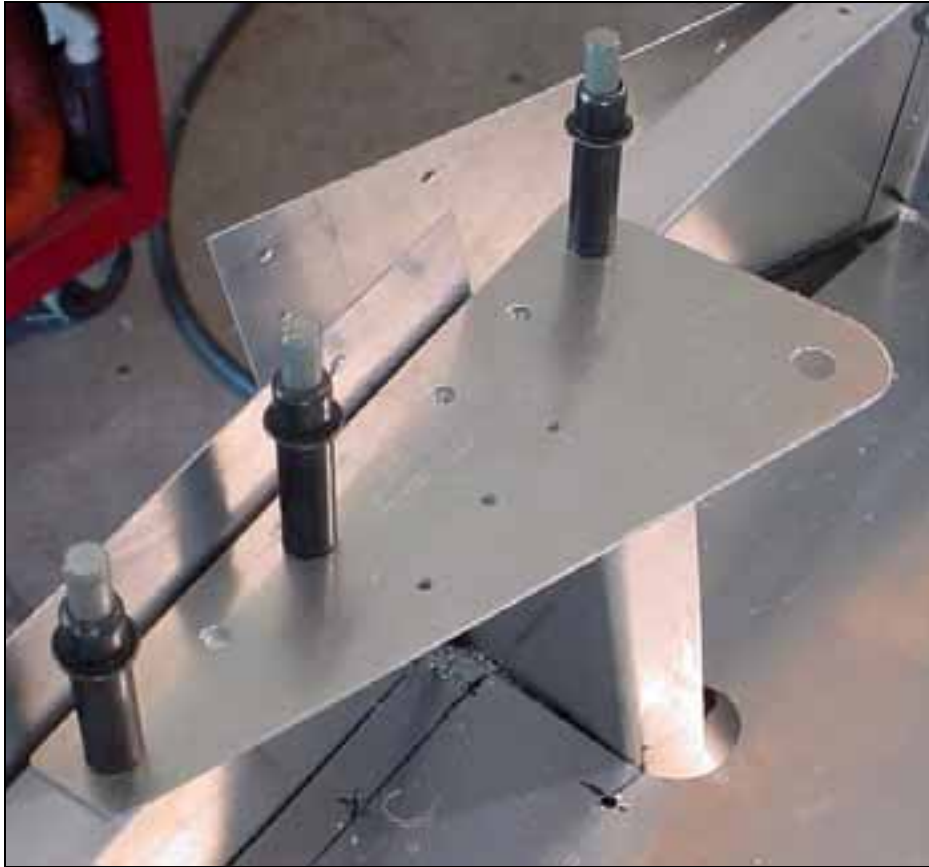
**SHOULDER HARNESS  
FITTING 6B21-3**

Orientation: The 90 degree corner of the fitting overlaps on top of the Longeron 6B11-1



Mark the location of the upright channel 6B5-6 on the top side of the front longeron 6B11-1. Layout the center of the tube frame 6B21-2 on the side of the fuselage.

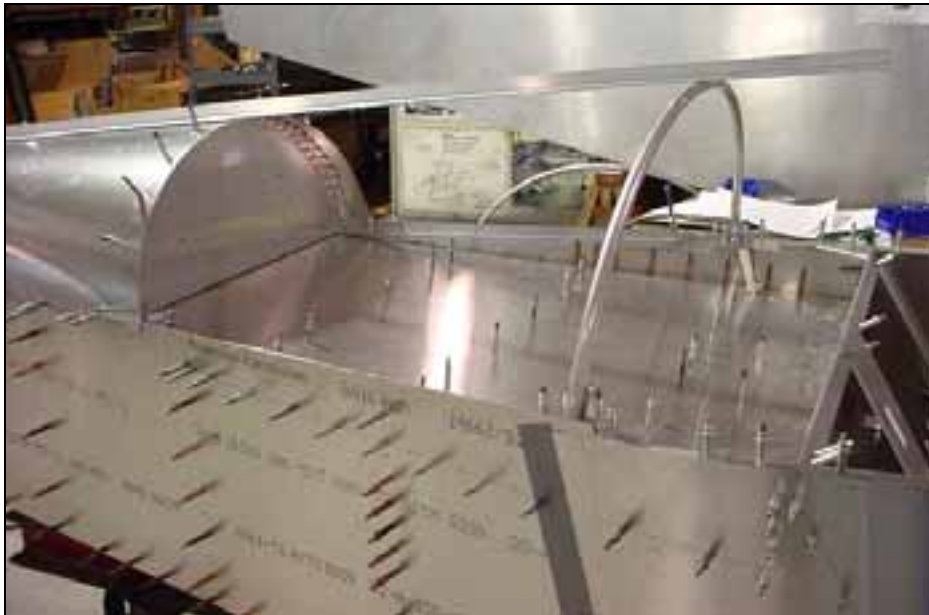
Layout 80mm from the front of the fitting 6B21-3. Position on fuselage and line up with mark on side skin.



**3 RIVETS A5 in front and behind the tube frame 6B21-3**

Drill the 5/16" hole for the shoulder harness.

Drill and Cleco flush to the side of the longeron 6B11-1



**B3 TUBE FRAME 6B21-2**

The length of the tube is supplied oversized.

860mm between B4 and B3 (Rivet line to rivet line)

The height of the tube frame B3 is determined by the projection of the rear top skin forwards.

Lay a straight edge (extrusion or board) on top of the rear skin.



Clamp a piece of extrusion to the fitting 6B21-3 to keep the bottom of the tube frame in place.

TIP: Make B3 a little taller, allow for a small gap (2 to 3mm) between the straight edge and the top of the bulkhead B2. This will make for a better overlap of the Middle Top Skin 6B21-7.



Spacer: Add a piece of 3/4" tube in front of the tube frame 6B21-2 (this will be the position for 6B21-1 tube).

POSITION THE TUBE FRAME 6B21-2  
Clamp a piece of extrusion to extend the seat angle to the tube frame.





**GUSSET  
6B21-4**

Drill the center hole on the aircraft centerline where the straight edge touches the tube frame.



Gusset to attach the bottom of B3 to the Shoulder Harness Fitting 6B21-3.  
CHECK: The O/B side of the tube Frame is flush to the side skin.



**2 RIVETS A5**  
6B21-4 to 6B21-2  
**3 RIVETS A5**  
6B21-4 to 6B21-3



The skin is supplied oversized.

Layout the center hole through the bulkhead 30mm from the aft edge of the skin.

Pre-drill the 2 holes on the aircraft center line.

6B21-7 overlaps on top of the rear top skin 6B21-6.

Tape down one side of the skin to the side of the fuselage and proceed to drill from the inside by lifting up the skin; same procedure as when rear skin was drilled for bulkhead 6B12-3



With a marker, trace along the front and aft edge of the Tube Frame.

Remove the skin from the fuselage to locate the rivet line between the two lines. Layout the rivet line and pre-drill with #40 pilot holes.



**A4 PITCH 40**

Re-install the skin on the fuselage and back drill into the Tube Frame.



Layout a rough cut line on the skin (only cut the portion above the longerons - see next page). More than one cut will be necessary.



The tube frames butt together at the top. The bottom is even with the floor support 6B16-6 (Ref bottom right diagram on drawing 6-B-21).

**FIRST TUBE FRAME  
6B21-1**

Tube is supplied oversize.



Detail of front bottom corner,  
Ref middle bottom diagram on  
drawing 6-B-21

Rough cut to remove the overhang of the skin past tube frame.



Drill and Cleco the hole on center line.  
Keep trimming back the skin until it is even with the front of the tube.