

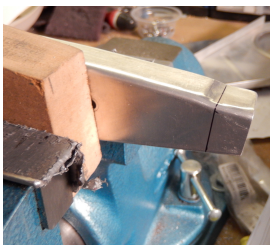
Category: 3.8. Center Fuselage

Published: Monday, 16 December 2013 10:25

Hits: 2492

I visited my friend builder Hugo this week to check out some details on the F623 corner ribs. The plans are very vague on this part. All the manual says is : "Fit and drill the F-623 corner ribs. Flute the F-623 as necessary to fit the skins". They don't mention (and also not on the plans) that you need to cut the front and back end of the 623 ribs to mate against the F705 and F706 bulkhead flanges. On top of that the side of the F623 has some notch (see picture below) in it which gives you the impression at first that it needs to butt against the F705 spar. Forget all that, the part is simply too large and needs to be cut to size before installing. This stock rib part is probably a leftover from the RV-6.

I started by marking the cut area on the F705 side. The way to do this is by clamping the F623 rib on the bottom skin and aligning the point with the notch (at the top of the triangle) in the corner of the center bottom skin. The rib will just fit. now mark the distance where the bottom flange of F705 hits the F623 rib. Take away and extend the lines. I was very conservative and first cut the part a bit longer after the line and gradually started grinding away additional material testing multiple times for a nice match.



That's how it should like when it's finished.



The aft cut is a bit more complicated. By now, the aft fuselage section is rivetted and too heavy to temporarily cleco to this assembly.

The aft end of F623 should butt against the flange of the F706

Category: 3.8. Center Fuselage

Published: Monday, 16 December 2013 10:25

Hits: 2492

bulkhead. This bulkhead will be installed on the second row from the aft edge of the bottom skin.

First I started measuring with a caliper and attached the ruler but soon found out this is very imprecise.



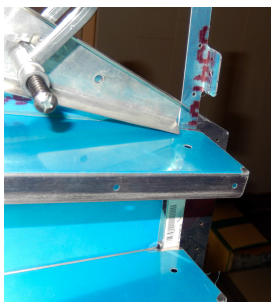
I found a much easier and more accurate method to measure this.

Find this part in your stock. It comes also in the fuselage kit. The part number is F7103-B-B.

The distance of the holes to the edge in this part are exactly the same as the distance of holes to edge of flange on the F706.



So I clecoed this part on the skin and used that to measure and test-fit the cut. Easy !



On the sides, you need to make the flanges slightly at an angle to provide room for the side flange of F705 and F706.



Category: 3.8. Center Fuselage

Published: Monday, 16 December 2013 10:25

Hits: 2492

For the second rib, I ran clecoes in the tooling holes of the F623's and marked the mirror image.



The center fuselage is now ready for matchdrilling.



A lot of holes to drill. I reamed all these to #40. Don't do the last 2 rows and the front 2 rows now !

The aft two rows are only drilled when you bring aft and center fuselage together.

The front two rows will be drilled when you have correctly spaced the F704 bulkhead halves. Needless to say this is a very delicate and critical process. Mess this up and throw away your fuselage later if you don't have the correct spacing to insert your wing spars.

You could actually already drill the second row for the aft side of the F704, but I decided I will do this when I temporarily cleco the forward bottom skin in place.

If you follow the Vans method, you will matchdrill F704 both sides now, dimple and countersink. How to matchdrill the forward skin then later if you already have dimpled the holes ?

So that's why I decided to attach the forward skin first.



F-623 ribs and Matchdrilling center fuselage - 15/12/2013

Category: 3.8. Center Fuselage

Published: Monday, 16 December 2013 10:25

Hits: 2492

Got some help from my kids, always fun to do this with your kids. Here we are matchdrilling the front flange of ribs to the F704 rear part.

