

Aft fuselage drilling - 9/9/2013

Category: 3.7. Tail Assembly

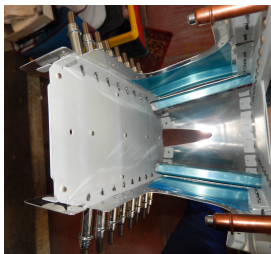
Published: Tuesday, 10 September 2013 09:52

Hits: 1578

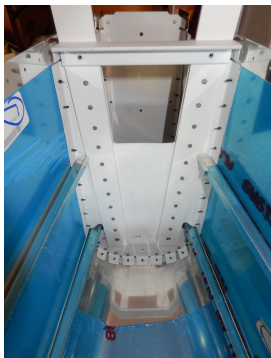
After my cleco session to assemble the aft fuselage, I found out that the flanges of the F711 and F712 didn't match nicely with the side skins of the aft fuselage.

I took them apart again today and used flat pliers to re-orient the flanges slightly. After doing this, the match was much better as you can see in the three pictures below.

From the top, you can clearly see now that the flanges fit very nicely.



View from inside looking at F711 to the back



Next step was to align the aft fuselage and check for twist. The manual is pretty explicit on this so I assume it's quite important to work precise here.

I found a good method on Bruce Swayze's site using a metal ruler and a small plumb bob.

You tape the rules so that the inch marking is in the center of the opening where the elevator push rod will pass. Then you hang the plumb bob from the top tooling hole with some fishwire and make sure the height of the bottom point is more or less just above the ruler. You may have to lift the back of the aft fuselage a bit - as I had to do -

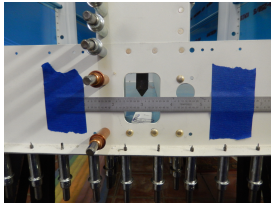
Aft fuselage drilling - 9/9/2013

Category: 3.7. Tail Assembly

Published: Tuesday, 10 September 2013 09:52

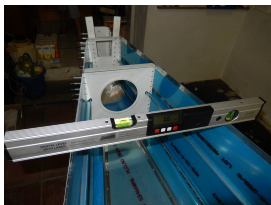
Hits: 1578

to bring the plumb bob closes to the F706 bulkhead for a more accurate reading. I had to shim a little on both sides to fixate the assembly and get the plumb bob to sit exactly in the middle.



The I did the same on the tail side with a plumb bob on the upper tooling hole of F712 making sure it fishwire is visible in the center of the lower tooling hole.

As a final test, I put my digital level at three stations on the side skin and read three times exactly 0.0 degrees. Absolutely level.



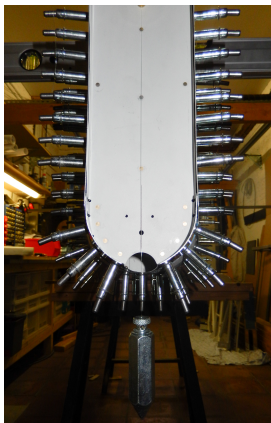
Here's a picture at the back of F712 showing the fishwire center in the tooling hole.

Aft fuselage drilling - 9/9/2013

Category: 3.7. Tail Assembly

Published: Tuesday, 10 September 2013 09:52

Hits: 1578

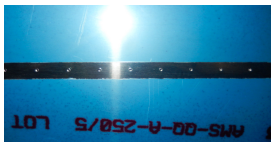


Now that all is level, matchdrilling can start.

The first task is to drill the J-channels to the side skin. I started with the upper J channel.

First check front and rear near the end of the J-Channel so it sits well positioned there, then verify that you can see your centerline through the predrilled holes of the skin.

You may need to adjust and hold a little as you drill. It's easier if somebody helps holding it while drilling as the aft fuselage assembly tends to move and will mess up your levelling.



I finished the right side completely and started doing the left side.

You first locate the J-channels by drilling every 4th or 5th hole.



Once these are drilled, you drill all the holes between them and put a cleco in it.

Aft fuselage drilling - 9/9/2013

Category: 3.7. Tail Assembly

Published: Tuesday, 10 September 2013 09:52

Hits: 1578



I ran out of clecoes and courage for the session so called it a day and will continue tomorrow.

Except for the tendency of the assembly to move around while drilling, I'm pretty happy with the progress made.