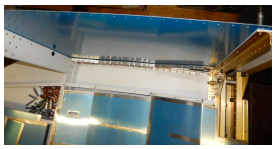
Install passenger side F715 - 09/08/2014

Category: 3.8. Center Fuselage
Published: Thursday, 14 August 2014 12:58
Hits: 1909

I came back in the shop today with a lot of doubts on how to proceed drilling the upper flange of the pilot side F-715. I can get the 0.032" required between web and side of the seat cover, but at the front and rear end, I don't see how this is possible as the rib sits so thight to the F704 and 705 bulkhead. Moreover, little adjustment was possible there at front and end as the holes were pre-drilled.I could flute some more to get as close as possible, but then again, I don't want the rib to disturb and create tention on the side skin. After clecoe-ing the side skin in place, I notices some more fluting could be done to make the match closer. After adding the seat covers, I still see no possibility to make a 0.032 near end or front. I could drill it as good as possible and grind away a bit from the seat cover. But then the question is, will there be sufficient edge distance left as these screw holes are predrilled. On the other hand, the seat covers are not structural items so edge distance is probably not that critical.

After all, I decided not to drill yet and first proceed with the center and rear fuselage mating so that the longerons are in place. Then I can re-evaluate how to proceed with these seat covers.



The work of the last session had to be repeated for the passenger side. I started again by fluting the rib on the bottom side as close as possible and gently on the top side.
As you can see in the image below, the inner flange side of the rib matches very closely to the pre-drilled holes in the skin. That's probably as close as you can get before you start drilling and adjusting where needed.

A good idea is to clamp a tungsten bucking bar against F715 rib and F704 H side doubler. This way you simulate the skin and make sure there is a smooth transition.

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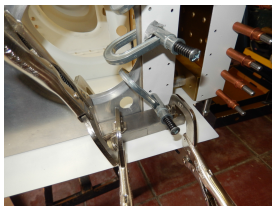
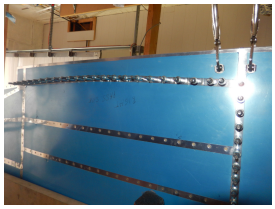
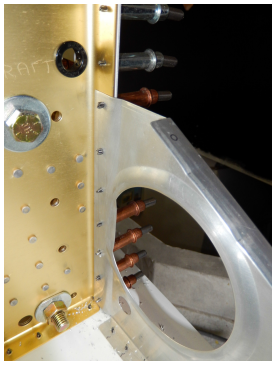


Looking from the bottom, a good match as expected. The center line clearly is visible centered in almost every predrilled skin hole. Only at the bulkhead side, there is some tweaking to do.

In the next image, all holes are matchdrilled.



Next drilled the F715 passenger rib to the F704 bulkhead.



outside view

After removing the rib, I further tuned the front edge of F715 to not

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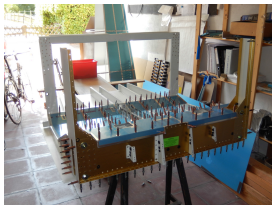
interfere with the radius in the bent of F704 web to flange.
When all was done, I reinsured that edge distance was still ok. 0.26 measuer from side of hole to edge. Minimum at mil specs here measured from hole side would be (1/8" * 1.5 + 0.03) = 0.2175"

Next deburred everything and dimpled both F715 and skin.

Reinstalled everything and prepared and cleaned all for mating with aft fuselage.

Reinstalled the seat covers. I saw on many sites that people leave baggage covers off to facilitate the mating process so I put them aside for now. Will cleco them on when both major parts are clecoed together.



That completes the work on the center fuselage. Next step will be to

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make the small cut-outs for the stabilizer bars on the longerons but that info can be found on the section on the longerons.

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