20/11/2016 - dimpling F772 forward bottom skin - 2h

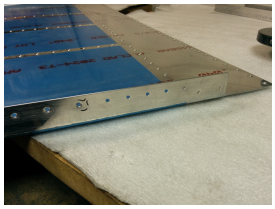
Category: 3.9. Forward and Center fuselage
Published: Monday, 21 November 2016 11:07
Hits: 1816

The forward fuselage prep work is coming to an end. Last week I prepped and deburred the sides of the F772 bottom skin and today, it was time to dimple.

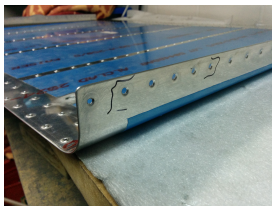
It's all pretty straightforward but you have to keep in mind that some of the holes do not have to be dimpled.

The last 2 rivets on the side flanges of the skin do not get dimpled, these mate with the F704-H center section side plates and take a AN470AD4-6 rivet and a LP4-3 pop rivet

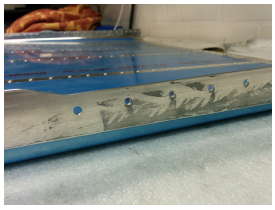
If you are building a taildragger like I am, you will not dimple the last five rivets before as well (see image below). For now, these are still #30 holes but they will be drilled for AN3 bolts when the fuselage gusset F-7114 is installed (see DWG34).



On the front side, the 5 rivets that attach to the brackets of the motor mount on the firewall are dimpled #30. But pay attention, the very first rivet has to be dimpled and is a #40 rivet the holds the firewall flange.



Another hole not to dimple is the AN3 size hole on the bottom of the fuel tank attach bracket. This will get countersunk later for an AN509 bolt. (see also DWG38, detail FE)



If you build a taildragger you also want to dimple the two pilot holes in the rear of the bottom skin which will be "rivets to nowhere". These holes are used on the RV7-A to enlarge for the brake lines.

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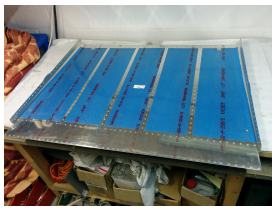

I was in doubt of how to handle those 4 rivets that meet with the stiffeners in the floor and the F704 so I asked Sterling Langrell at Vans Support.

On DWG 28. There are 4 holes on the bottom forward skin F722 where the forward line mates with the F776 center bottom skin and the F704 flange. In this line, there are 4 positions where you cannot dimple through each part. At note 1 and section B-B of the same plan it states : "machine countersink through F776 and F704A and not to dimple". There is a note 1 with arrowas and if you look carefully you only see two arrows to the F704 and F776 but not to the F772.

I was not very sure about how to handle this.

The correct way to do this is to dimple the forward bottom skin 722 and then cleco the 776 center bottom skin to the F704 center bulkhead (already rivetted mostly by now) and countersink through 776 and 704 simultaneously to accept the dimple of the 722 forward skin.

The forward skin is ready for priming.

I also dimpled some missing dimples on the front bulkhead of the tail cone. As I already installed and rivetted the F729-A bellcrank (made an update on article aft fuselage rivetting no to do that), I have difficulties in dimpling the bottom side of the F-706B fuselage bulkhead. I was possible to move the 706 aside for a lot of rivets but for about 10 rivets in the middle, I had to double squeeze the material to dimple.
I had to use the squeezer to dimple both materials simultaneously by squeezing skin and bulkhead together. It works, but it's certainly not ideal.

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