23/02/2017 Countersink missing #30s on forward longeron - 1h

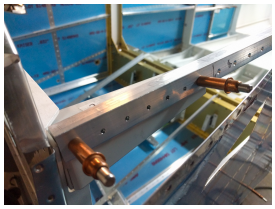
Category: 3.9. Forward and Center fuselage
Published: Friday, 24 February 2017 10:20
Hits: 1673

I my gosh, I feel like i'm on a roll here... I've been putting more articles up in the last week then in the last year.
That probably means I'm all back into it again and eager to finish up the upside-down canoe.

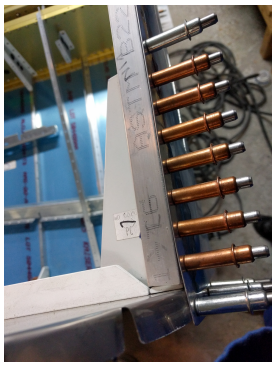
While clecoe-ing away some days ago, I found out that the joint of the forward side skin with the upperlongeron on the engine mounts looked really really awefull.

Well guess what... I found out today why my countersinks were so bad. There were no countersinks at all ! I just forgot those while doing the numerous #40 holes on the longerons.
Need more convincing why you need to reassemble once more before priming ? don't think so.

Well here is the before picture.



And here is the reassembled longeron to firewall mount after countersinking. Nice and snugg.



And same on the passenger side.

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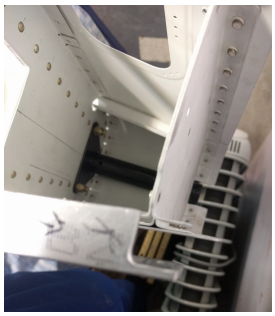
Next problem.

This is one I knew about. I countersunk the longeron at the aft end but knew I hadn't dimpled the side skin there yet.

The reason why it wasn't dimpled yet is the problem shown in the picture below.

The F712 tabs interfere with dimpling and leave a very tinys space, just enough to slide the longeron in between.

How the hell to dimple this ? Even te 3/32 pop dimpler doens't work here and F-712 is almost completely riveted so no chance to peel the skin back.



As you could see in the previous pictures, the longeron was already countersunk.

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So I decided that I could use the countersink hole in the longeron as female die and squeeze the dimple in with the longeron in it's final position.

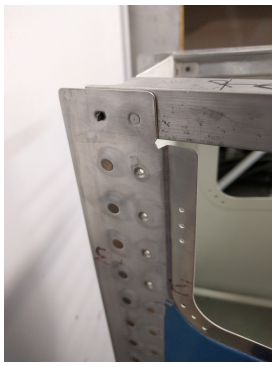
Now I know this is not the ideal way of doing this and that it's probably inappropriate, but it's the only way I could do this I guess unless drilling out all those rivets holding the F-712 to the side skin.

I remember that was a very thight spot to dimple so that was a total no-no ! I hate drilling out rivets and I'm convinced it leaves the result weaker then if you would leave them in. So decided to go this way.

I used the squeeze with a C-yoke for the last hole and put the male dice at the pusher and a flat rivetting die on the top. The hole thing with longeron, F712 tab and skin is thick enough so the male die will not push into the flat rivet die although I had to completely close it to get the desired result.

And here is the result with both done. The black thingy in the last hole you see is a cleco from the other side to keep it all close toghether while doing the dimple. The right side shows how nice my diple sits in the longeron.

I had to use a G-yoke on the hole with the rivet to reach around the longeron.



same without the rivet

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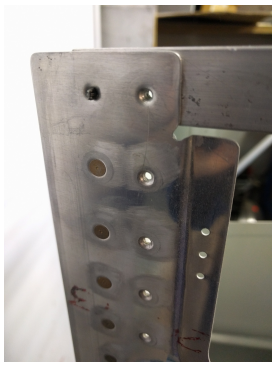

Longeron fully ready now, up to the next task on the checklist.

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