

Finally got to rivetting the first pieces together.

The work started with rivetting of the rear spar of the horizontal stabilo. the inforcement bars go in the rear spars and are clecoed then rivetted with 4/32" AN470 rivets.

I first put some tape on the holes that should not be rivetted yet in order not to make stupid mistakes.



The next picture is the first rivet set of the airplane. The manual said 'it takes a bit of grunt to set a 4 rivet'. They are absolutely right. Without a pneumatic squeezer this is not a feasible job.

Your's truly had a bit of a funny grin on his face when he discovered that wisdom as you can see below.



Fortunately my neighbour Jacques had some time to come out and help. We soon decided that the squeezing is not possible for this size and amount of rivets and we started using the 3x rivet gun.

Small detail: remark the David Clarck's headset as ear protection as we did not have a second ear protection set. Maybe a bit expensive for this kind of job but very efficient. It puts a whole new dimension in the plane building experience :).



The team work went really well. Jacques bucking and me pulling the trigger. We soon found a good way of working together on this which is an absolute must in this kind of work.

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I was really pleased with the result of these rivets. There are some smilies here and there on the first rivets but my skills improved as we moved on.

I only had to drill out 3 rivets because I ruined the manufactured head by not paying attention while looking at Jacques side for remaining thickness.

Good advice, when you work with 2: always look at your own side and have trust in your companion.

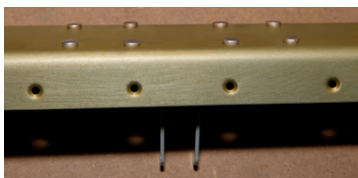
The result looks good.



Nice shop heads.



Then we put on the hinges. The shop head remain a bit bigger here as there is more rivet length. The diameter is filled to 1.5 and the shop head height is well over 0.5 in these.

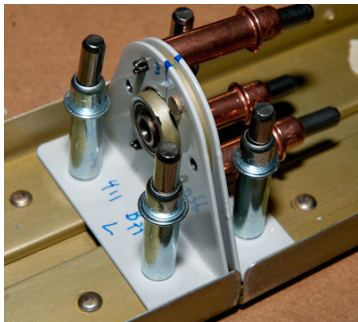


Something I did not do before was rivetting together the HS411 parts. Since I had to prime the inner piece, I postponed the rivetting of these pieces until now.

Clecoed it back to the assembly and started rivetting around to maintain proper alignment and flatness of the bottom flanges. Once all was rivetted, match drilled the holes to the spar to #12.

The only disadvantage in this is that I could not deburr the connection rear spar to reinforcement bar as it was already rivetted.

Not a big problem but could have done more intelligently.



After deburring the holes, you have to torque the AN3 bolts to 25 inch/lb using the torque wrench. My first mess-up of the day was by overtorquing the nut and breaking the bolt. Great !

Two options here: either I did not feel the click in the tool or the tool is broken. Anyway I have no idea what went wrong and I will have to test this on some other test screws later on.

This also is a definite proof of: do not test on your real pieces expecting all will work out fine... IT DOESN'T, EVER...

Then you rivet the front spar permanently together. This worked very well;. Then you rivet on the HS405 and HS404. I started with the HS405 (long parts) and rivetted the outer rivets to the front spar. This is quite easy.

Then added the HS404 to it, turned the piece around and rivetted from the other side. Easier as you can bend the ribs a bit to give you room for the rivet gun.



Close up of the front side front spar. You see the HS710 reinforcement spar on top, the HS714 at bottom and both flanges of the HS710 spars.

As you can see on the sides in the picture. I rivetted in two directions for convenience. From front for the main rivets. Then turned around for the middle attach rivets of the ribs. And also for the flush rivets in the middle that also go from the other side. You probably notice 4 open holes in the picture. Don't rivet, nor drill those. These are the assembly connection points to the fuselage later. Leave them untouched.

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Then we started rivetting HS707 front rib to the skin. This was a bit of a paint. The first part is ok, rivetting it to the top skin. But then, you have to turn it around, temporarily cleco the other ribs in and then rivet the bottom side of the front rib. As you can see in the picture, it's really 'close encounters' in there.

The skin is also not very cooperative while you do this.

I still wonder why they are not just rivetting the full inner assembly together and then slide it in. Probably for rivet convenience reasons again, but this is not convenient either. I will have to think about this one and see if I will use another sequence of work on the right stabilo.

We gave up after setting two rivets on the bottom side and left the remaining cleco's using the old idea: 'if you get tired, STOP ! or you are about to make some silly mistakes you will regret later.'

