

Rib prep, deburr and making pieces - 07/12/2013

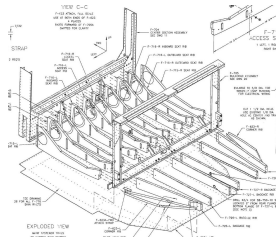
Category: 3.8. Center Fuselage

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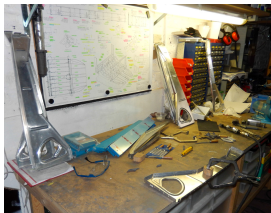
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The work on the center fuselage has started. The center fuselage is the part of the aircraft's body where the pilot and passenger sit and the baggage compartment.

It consist of joining the F704 center bulkhead (place where the wings mate) and F705 bulkhead assembly using seat ribs and attaching it all to the F-776 bottom skin. Additionally we add some baggage ribs to connect the F705 tot the aft fuselage section.



Started by hanging the new plan on the wall and deburring ribs. There's 10 seat ribs and 8 baggage ribs. This reminds me of deburring the wing ribs. Long repetitive job.

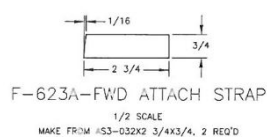


In between deburring, I devynilled the blue plastic from the bottom skin plate.



And now for the fun part. The DWG 22 plan calls out for making some parts.

One of them is a small piece that connects F705 anf F623-L and R corner ribs.



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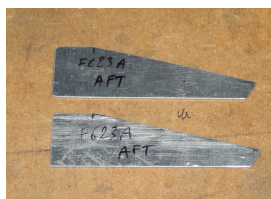
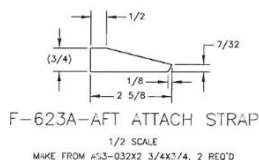
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I found some scrap .032 sheet and made the two parts below.



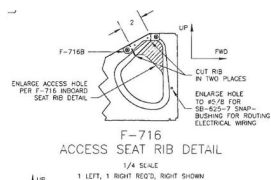
The next "Make-From" item is a bit more complicated but at this stage, you should be very familiar on making this kind of parts.

This part will connect the F623-L and R corner ribs to the F706 tail bulkhead.



Next, the plan calls out for enlarging the lightning hole in the middle 4 seat ribs. The reason why you have to do this is because the control column is running inside these lightning holes of the seat ribs. The inner 4 ones are not high enough to be able to do this so you have to cut additional material away so the control column can move freely.

There is what the plan says.



you have to cut a 1 1/2 inch diameter hole in the tooling hole that is already present.

I decided to use the fly cutter to cut this hole. Always be very carefull with this tool. It's one of the most dangerous in your shop. Don't forget to adjust you drill speed to low speed and clamp

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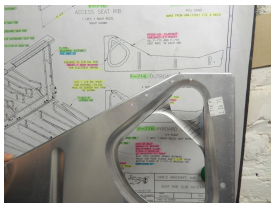
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everything tightly.

No fun flying if you lost some fingers in the process of building the plane.



And this is how it looks when the hole is cut. Then connect the dots with a line and cut out the inner part. I used a combination of snips, cutting disc.



The rough cut leaves you some more work on straightning the line between the existing lightning hole and your new 1 1/2 inch circle.



I used the vixen file and some smaller key files to get rid of the roughest part and straighten the aluminum line. The edge can than be further deburred in the traditional way with the 3M 1" wheel and some 600 grit sandpaper



And here is the finished product.

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As you probably noticed some pictures up, I slipped with the cutting piece from the diegrinder and made this marking in the side of the lightning hole in the rib. It looked like a pretty bad mark.



I buffed out most of it using sandpaper and the polish disc in my die grinder and manager to get it like this. My nail doesn't stick anymore when running over it so it should be fine.



The plan also asks for cutting out a 2 inch portion of the upper side of the two middle seat ribs.

This part will be removed so you can slide in the control column. Some people adjust 4 ribs to make it even easier to install the controls but I decided to stick to the plans this time.

Mark a line down on the extension of the upper slot. Measure 2 inch on the top flange and extend the line to the lightning hole.



Before you do any cutting ! Matchdrill the four holes through F716B. This will ensure perfect alignment of the cutout piece.

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I cut the part out using the cutting disc in the dremel. After deburring and reinstalling, it looks like this. Not absolutely perfect but I can surely live with the result.



Next step in the process is to make the flanges of the ribs perpendicular to the rib web.

The plans don't mention it but you will have to flute the bottom side of the rib to make sure the holes are in a straight line. Impossible to install the rib if you don't.

After fluting, used the plastic mallet to lightly bump on the flanges so they become 90° angled with the web. Used a protractor to measure. You have to do this to ensure the flanges rest nicely on the skin with full contact of flange and skin.



As I'm going through the process rib by rib, Cindy installed them on the F776 skin and F704 bulkhead.

