

Another 8 hours on the counter today. Don't you just love the holidays ? I do...

I started the day with the deburring of the read spars HS603PP. Gave them a couple of wacks with the deburr tool, passed them over the scotchbrite wheel and finished them off with 400 gritt sandpaper. Real smooth. I start to have this in my fingers.

Since I could not continue rivetting the HS411 parts because of the priming requirement, I decided to move on to the next step which is the assembly of the front spar of the horizontal stabilo. re is

He is how it works. The front spar has two reinforcement bars: the HS710 and HS714, first you lay them on top of the front spar channels (HS702 flanges down!). So far all is straight and level.

At that point, you matchdrill the inboard part of the reinforcement spars to #30 drill. The attention point here is not to drill the fuselage attachment points. You only do that when you mount the stabilo to the fuselage. And we are lightyears away from that now. Difficulty nr 1 is that the spars come as rectangular stock angles and you have to taper them according to the measurements. To be precise, I enlarged the plans by photocopying 133% to 1/1 scale, cut them out and glued the paper template to the material. I love that HP all-in-one inktjet printer. The picture below shows the status at that point.



Then I removed the excess material from the reinforcement bars. Difficulty nr 2 with these parts is that once cut, they have to be bent 6° at 5inch 6/32nds from the centerline of the piece. A lot of measuring and remeasuring is needed here. After drawing the two bend lines, the pieces went into the vise for bending. You do this by hand. Put the material between some aluminum angle pieces on the bend line, make sure the piece sits in a 90° angle and then push and 'feel' the material bend.

I read from many people that they overbend. Overbending means bending back. If you do this too many times, you weaken the material which is not so good if you hear a crack and 7000feet of thin air seperates you from mother earth.

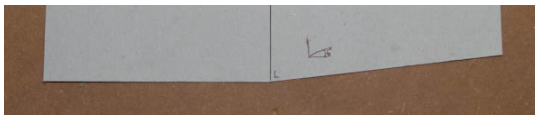
To measure things, I created this cardboard for checking the angle.

Front spar assembly 30/12/2010 - 8h

Category: 1.1 Horizontal Stabilo

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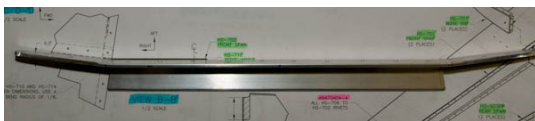
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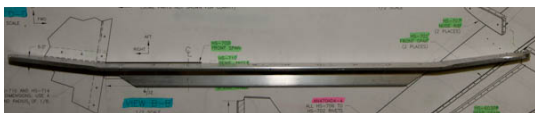
The bending went smooth and I was able to push the material couple of degrees at a time without overdoing it to exactly 6°.

I measured it in 3 different ways and in the end I put the pieces on the plans and as you can see, they match perfectly. I was really happy with the achievement as it was one of those jobs where you can easily fuck up.

HS714:



HS710:



Here is the result flat on the table.



Then I started working on the next parts. The HS702's need to be trimmed down. The pieces delivered are measured for an RV8 and the flanges need to be cut down first to the same bend line.

Then you need to make a bend relief notch. I measured for an hour and decided to call it a day to avoid making stupid mistakes because of fatigue. I'll continue tomorrow on those.