Firewall Battery Box - 09/03/2013

Category: 3.1. Firewall
Published: Thursday, 21 March 2013 08:46
Hits: 1879

With all the preparation of the bulkheads behind me, it's time to prime the parts.
Well, that was the plan. But the weather and a late winter offsensive have decided differently over my plans.

There is 15 cm of snow outside and it's freezing which is very unusual for the month of March in Belgium.

Well, there's aways stuff to do when you build an airplane so I decided to put some further work on the preparation of the firewall.

Many builders have told me that I should drill a lot of holes in the firewall upfront before it is rivetted to the fuselage. It's much easier to do that now. Once the stiffeners are rivetted on the firewall, it becomes much more error prone to drill and enlarge holes in them leading to the risk of having chips and burrs to form between stiffeners and firewall web. Also, drilling large holes once the firewall is on the fuselage becomes a difficult task. As long as the firewall can be turned around and layed flat on the workbench, making that same hole is a walk in the parc.
All this is off course easier said then done because I have no trust so far in the positioning of all these accessories on the firewall. I followed the advice of my collegues who are already working on the firewall forward and followed the plans where they told me it's safe to do so.

That brings us to the subproject of the battery box holder for the PC680 battery.

First step was to reassemble the firewall components. Putting in so many clecoes is a good warm up exercise for the fingers in the cold garage.
Here we are, back to where we left it some months ago.

I pulled out the battery box kit and layed out the components on the workbench.

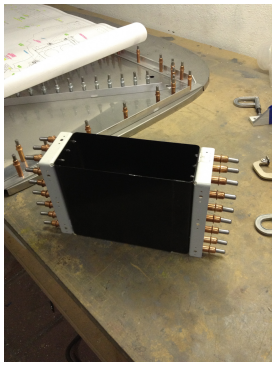
Phoca PDF

Firewall Battery Box - 09/03/2013

Category: 3.1. Firewall
Published: Thursday, 21 March 2013 08:46
Hits: 1879

You can recognize the batterbox in black, the two attach angles, an aluminum stock bar, some spacer tube, a stock piece sheet for a doubler for the starter solenoid and a bag of hardware.

First step, align the battery mount arms on the battery box.
The plans say that you should align the top of the arms with the top of the box and the back with the back of the box.
there is a clear remark that states that you should place a ,020 shim udner the arm on the right side of the box to compensate for the firewall recess if it is placed on the inside of the fuselage.
Although I read it, I forgot to do it and aligned it flush. Grrr... no big deal but it leaves a 020 gap on the right side where it would have been nicer if it would lay flush against the firewall. Well, it's too late now, the holes are drilled so 'build on'



Next step is to drill lightning holes in the battery box on both sides at specific location. Use a lot of lube to save your drills when drilling through steel and go slow.

Phoca PDF

Firewall Battery Box - 09/03/2013

Category: 3.1. Firewall
Published: Thursday, 21 March 2013 08:46
Hits: 1879

Carefullz marking the location and pilot drilling

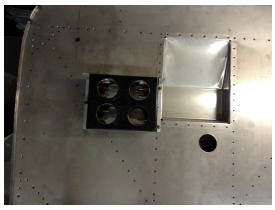
All holes drilled. This sucker is a lot lighter now then it was before. Couple of ounces here and there make a huge difference in the end.

Here is a picture of how the battery is mounted to the firewall. 3 AN3 bolts are used so you have to open some already drilled and dimpled #40 holes to #12 holes. I updrilled with various drill bits and did the final drilling from #19 to #12 using a #12 reamer.

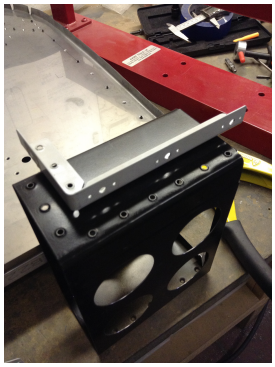
Phoca PDF

Firewall Battery Box - 09/03/2013

Category: 3.1. Firewall
Published: Thursday, 21 March 2013 08:46
Hits: 1879



Then you need to dimple the support arms and the box itself.The steel is quite thick and hard to dimple but the queezer took good care of this.
Keep in mind that the flush head is on the inside of the battery box. There is a remark on the plans that you can countersink the middle holes on the box. You don't need to do this if you have a larger yoke for your squeezer. I really don't see how you could countersink in that spot if you wouldn't have the possibility to dimple.



In the evening I continued to rivet the nutplates on the support arms and rivetted the arms on the box. All this can be done using the squeezer.

I'll continue on the firewall in the next session.

Energy levels are a bit low lately.

Phoca PDF