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AMA Charter
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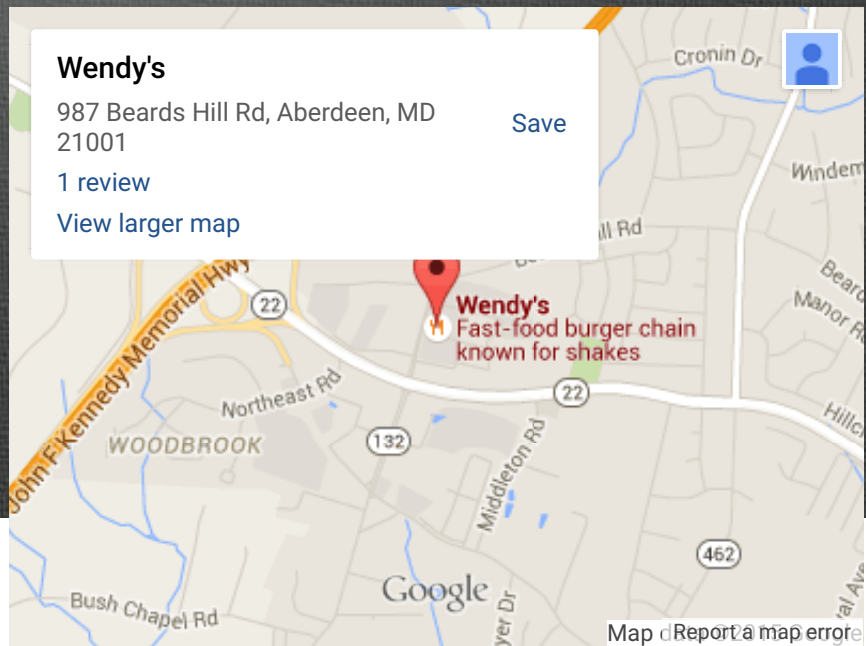
Volume 26,
No.05

The Newsletter of SWAN HARBOR RC
www.SwanHarborRC.com

May 2015

70 members currently

Meeting took place at Wendy's:
987 Beards Hill Rd, Aberdeen, MD 21001
Phone: (443) 327-6706



Club Minutes: May 12th, 2015

1. Got Bungies for other tarp will put up this week.
2. Chris M. and Steve Slotnick dug the trench to drain Swan Lake.
3. Chris M., Steve Slotnick and Gary G. picked up the mowers and serviced them at my Gary's house. Pressure washed, new blades and oil changed both units.
4. Mowing has commenced, thanks to all who have volunteered to cut the

grass.

5.County will come out and reroll the field with large vibratory roller. This week.

6.County came out and dragged the driveway and installed gravel as needed in low spots and rolled drive and parking pad.

7.With Dales persuasion the county has come and installed a new pipe to keep the lake drained. YEA!!!

8.Chris and I installed new flags at the gate and lubed the locks.

9.Gary G. will start mower shopping this month.

10. Steve Snyder ordered the tarp for the heli guys.

11. Club open house next month. Will charge for food this year to at least break even. Hamburgers/ Cheeseburgers \$2.50 dogs, \$1.50 , sodas \$1.00

Reminder:

I would like to remind everyone that we will have our usual BBQ on the Saturday after the monthly meeting. Please come and enjoy some hot dogs and burgers while you burn some holes in the sky. You are free to bring anything else you would like to share with everyone.

Also, our Club Fly-In will be on June 6, 2015. Please remember we will have our first ever destruction plane derby. Go ahead and find the most ugly, dilapidated plane in your hangar that would like see in a million pieces of balsa wood. There are no rules on the construction of the plane, last flying plane wins the derby! A member in a previous meeting mentioned a swap meet at the Fly-In, if you would like to setup a table to sell some items, please feel free to do so.

Field Updates:

By: Chris Mounayer

Thanks to our member and dear friend Dale Davis, he was able to get the Harford County Highways Division to come by our field and grade the parking lot and road. They also rolled the field twice leaving a really nice and smooth runway for all of us. Steve and I were able to dig a ditch previously to drain the Swan Lake that formed by the entrance of the parking lot. This was a temporary fix until Dale and his friends at the county were able to find the drainpipe that runs under the road and clear it out of dirt and mud that wouldn't allow proper drainage. They also dug a drainage ditch to help the water drain out towards the back of the field. I want to personally thank Dale Davis and his friends at the county for all their help. Honestly, without Dale we would never have this connection with the county and be able to keep our field as nice as it is today. I believe I speak for everyone that I am truly grateful and happy Dale is a member in our club and for all he does for us even though he is still in recovery after a full

knee surgery. Also, I would like to thank all the people in the Harford County Highways Division that provide the help we need in keeping our field as pristine as it is. Below are some pictures Steve took of the work the Harford County Highways Division did for us, you can see all the hard work they performed in fixing our flooding problems.







News Article/Build:

Below is an assembly log that was sent in from Gary Gunter. You will see a very detailed assembly and some tips on putting this beautiful 50cc plane together. Enjoy the read and pictures.

Building of a Pilot Extra 330SC ***by Gary Gunter***

Some people have asked me to do this so thought I would put together a build thread on this airplane, more like an assembly thread because it's an ARF not really much to build. I chose a Pilot 330 SC because I like how Pilot airplanes are made, the quality of the hardware and the construction of the planes themselves. Pilot also has a pretty extensive list of available spare parts which is one of the decisions I make when choosing a plane to buy. Pilot also offers free replacement wood in the event of a crash. All you do is send a picture of the wreck and they will send you more than enough precut wood to repair the plane. Nothing I say here is gospel, it's just my building / assembly methods after building 45 or so airplanes in the five years I've been in this club and there are as many ways to build as there are people building.

The plane I choose is an Extra 330 SC in a 30% or 50cc size because I just finished the 330SC in the 35% 100cc size and liked it so much I bought the next size down. Extras are wonderful flying airplanes with no bad habits and pretty much just do what you ask them to do even if it's flying into a telephone pole. Haha. Ouch that hurt! (Anyone who was there that day knows what I'm talking about.)

It has an 88" wingspan and will be powered with a DLE 61. I purposely put this plane together with some less expensive items such as servos and no power board just to test these items to see if they can be an alternative to the name brand higher end servos I normally use. The test bed is a 30 % 50cc size plane, I wouldn't do this with a 35% until I know the quality and dependability of these servos, also a 50cc size plane really doesn't need a power board because there are no multiple servos on any surface. A good receiver will handle power to the required servos.... So onward and hopefully upward.

I will start with a picture of the finished plane and then flash back to the start.



I will spare you the unboxing nobody wants to see a bunch of cardboard. Pilot planes used to come encased in a molded Styrofoam cocoon surrounded with 1/4 " Masonite on all six sides and double boxed, you could literally stand on the box. Now they just come in a box that Chief Aircraft opens and adds packing peanuts and some air bags to help with the beating the freight companies will provide. Below are some pictures of the big pieces.





Of course everything comes wrapped neatly in plastic

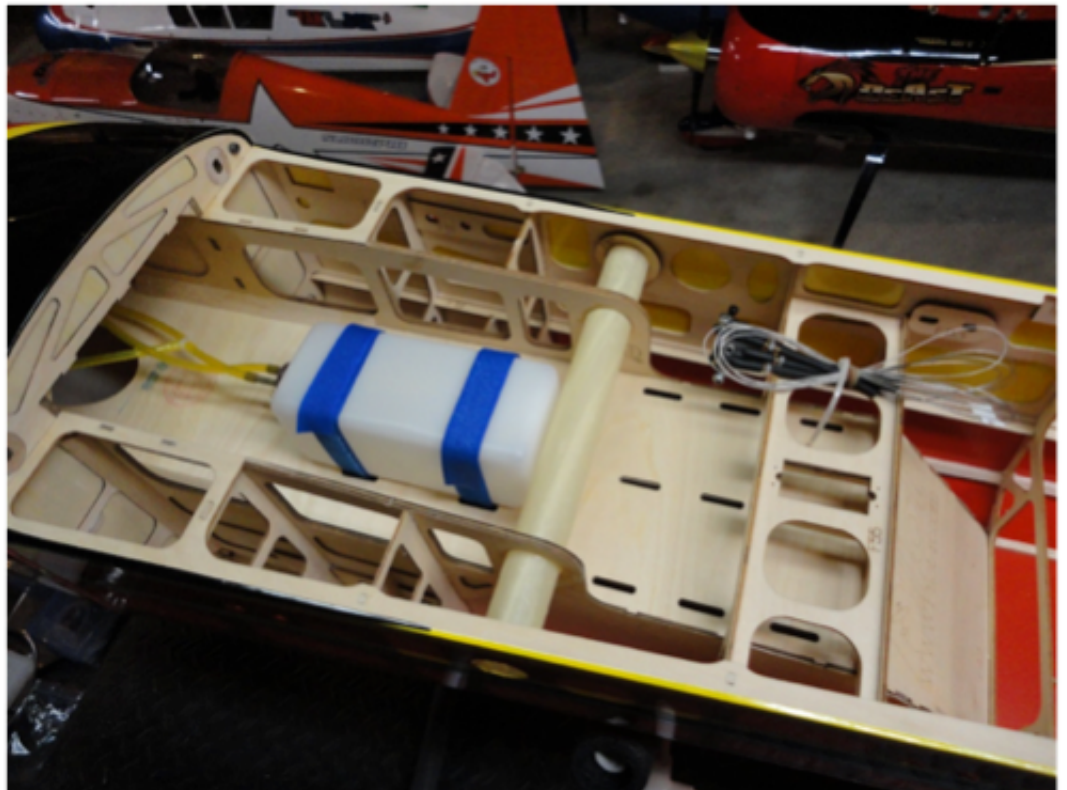
A pic of the bottom and top side of the wings



I really like the color scheme on this plane and Pilot does an excellent job of covering with only a tiny amount of ironing to do.



The fuselage has a long lean hot rod look with the cockpit set way back basically at the end of the wing.



An internal look at the structure, supplied fuel tank and supplied pull pull rudder cables with ball links. The plane comes with a full compliment of carbon fiber accessories, such as wing tube, stab tube, landing gear, and spinner. The cowl is fiberglass with a plywood stiffener ring which also acts as the mounting point with blind nuts.



The turtle deck is typical foam that is balsa sheeted. The underside of the fuse has a canister tunnel built in.



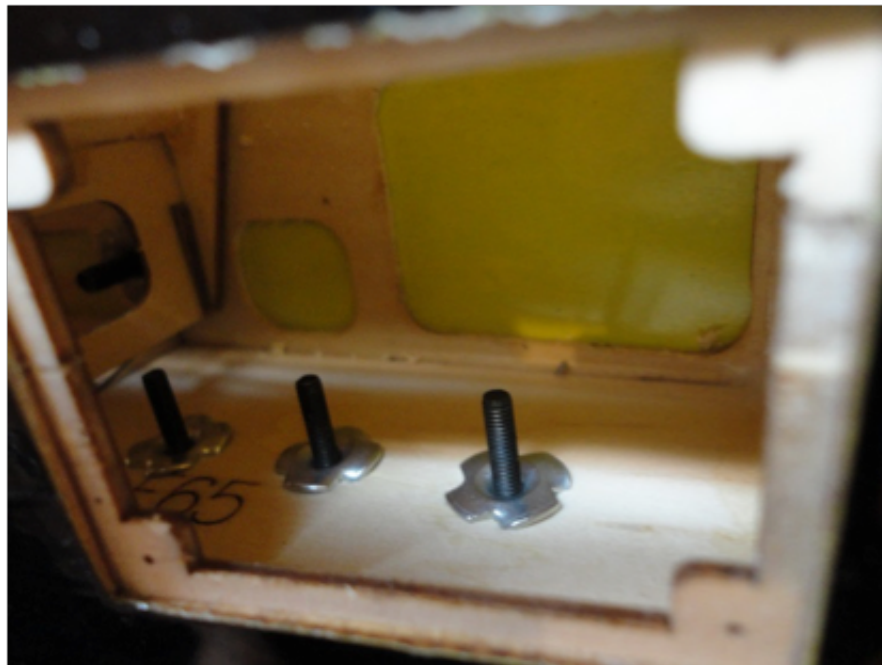


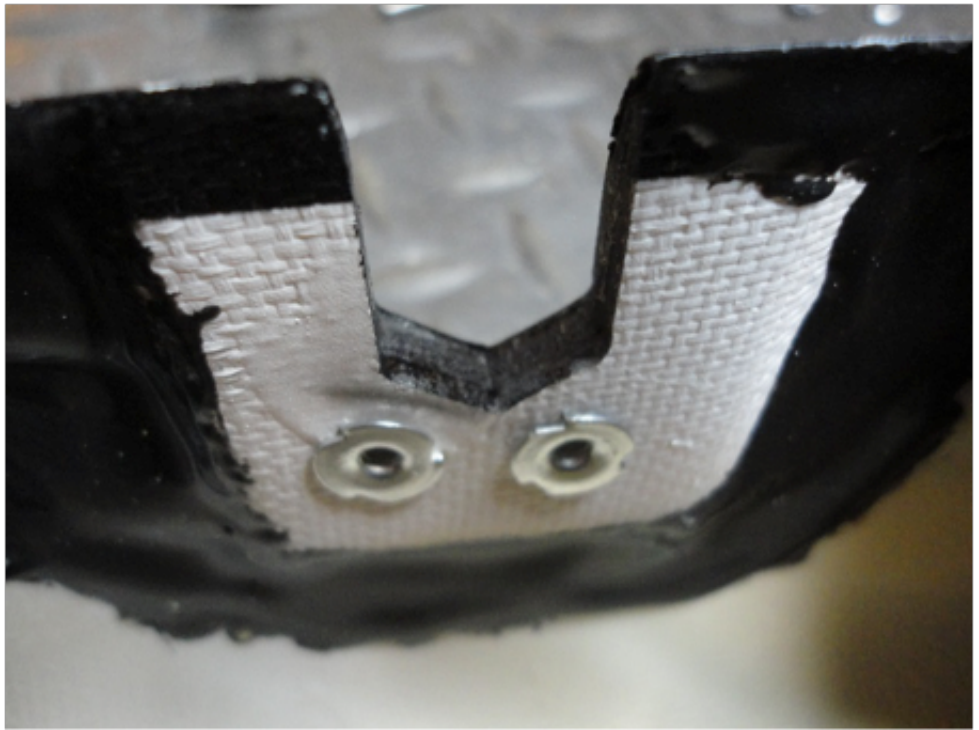
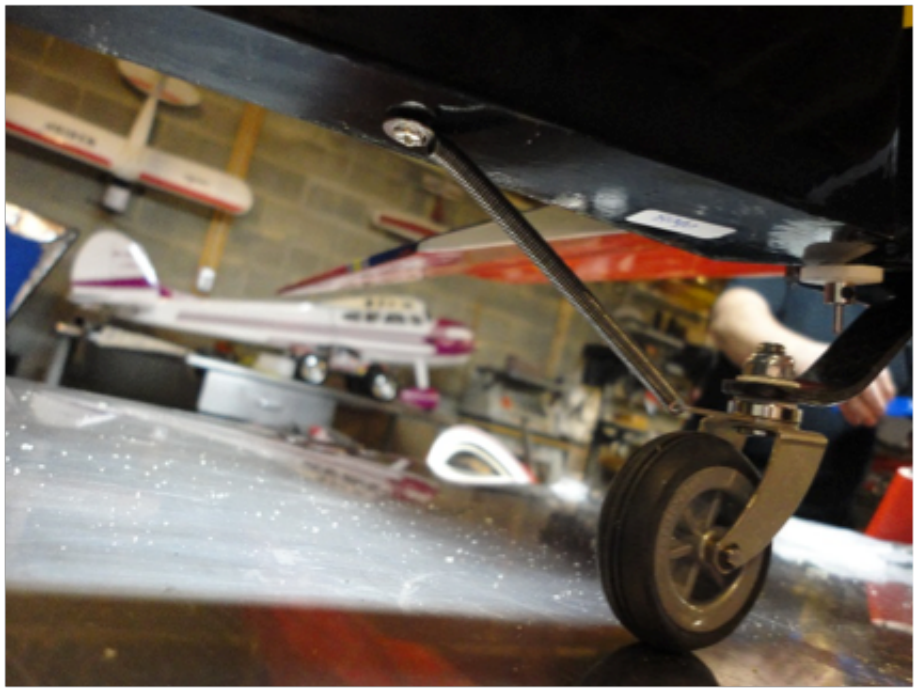
A look down the front of the empty fuse. Pilot planes do not come with the firewall installed. It is one of the few things you have to do that takes any skill. Just a matter of measuring several times and cutting once.



The first thing I like to do is get it up on its wheels, pretty straight forward, just bolt on the gear, drill three holes in the rear for the tail wheel install three blind nuts accessed through an access panel attach a spring to the tail wheel tiller and screw it to the rudder. I like to reinforce the wheel pants with JB Quick Weld because if you don't they will be cracked by the end of the first day of flying. They all do this so it's just a step that needs to be added. Screws are supplied to

attach the pants to the gear, but I like to use 4/40 blind nuts and bolts with rubber backed washers because they stay tight.



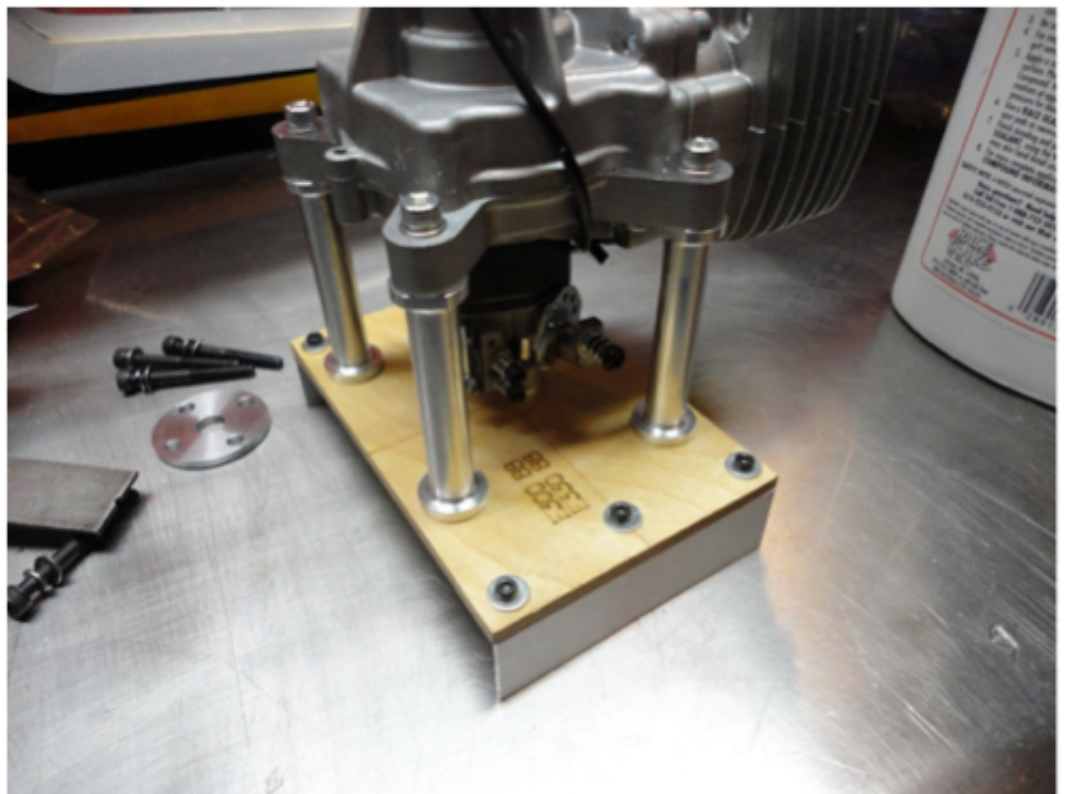
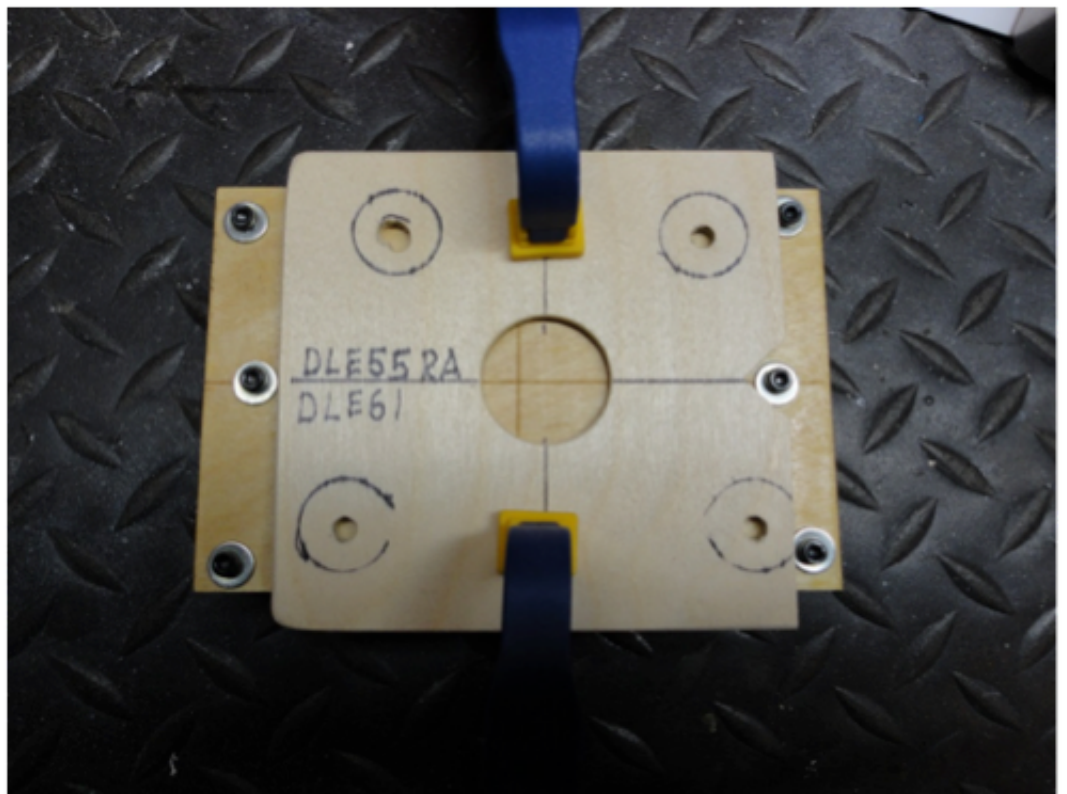


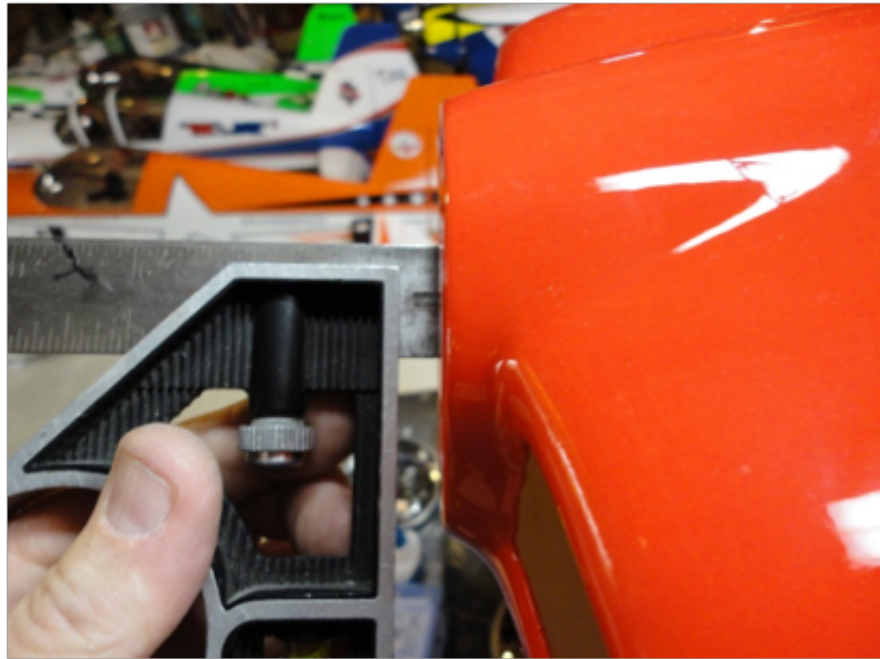
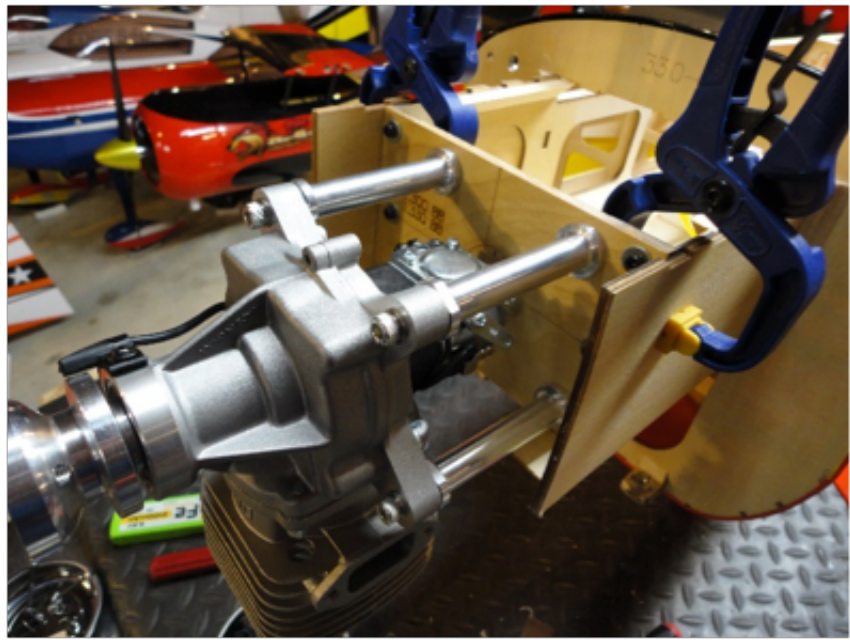


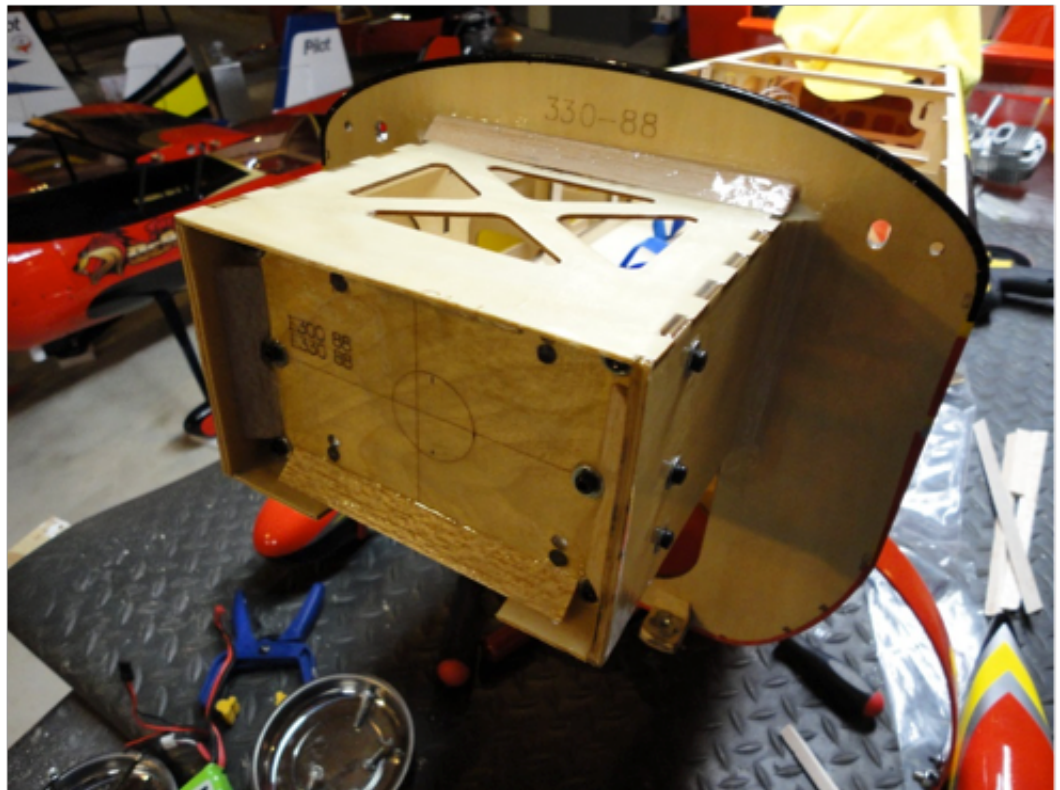
Gear installed and done. Next I'll install the firewall and engine. The firewall comes with aluminum angles bolted to it which are slid inside the fuse and bolted the side rail plates. There are a couple of critical measurements that must be taken and closely watched. The first is the depth of the firewall so proper clearance from the cowl to the engine spinner back plate is correct. The second is the amount of side thrust built in to the firewall. First the engine needs to be mounted to the supplied standoffs that come with the engine. Then take a measurement from the thrust hub to the table. This will be the setback measurement that the firewall needs to be set back into the fuse to keep proper clearance from the cowl to the spinner back plate. Next the firewall minus the engine is temporarily set into the fuse and the cowl is installed. A measurement is taken from the cowl to the firewall and the firewall is adjusted to that measurement. I like to install the firewall at this measurement which leaves no space between the cowl and the spinner back plate with the engine installed, reason being you can adjust the engine forward to the spinner gap you desire with washers and also if you have a tail heavy plane it's easy to move the engine forward with washers. The second measurement that must be maintained is the side thrust. The side rails of the engine box are different lengths. The left is longer by about a 1/4". As long as the depth distance of the firewall on each side rail is maintained the thrust angle will be there. Once all this is done the engine can be mounted to the firewall using a template to locate the holes. I made mine by setting the engine with the standoffs installed, on a piece of plywood and traced around the legs and centered the holes, then drilled them to 6mm.



You can see the offset on the template. There is a circle on the firewall that lines up with the template.

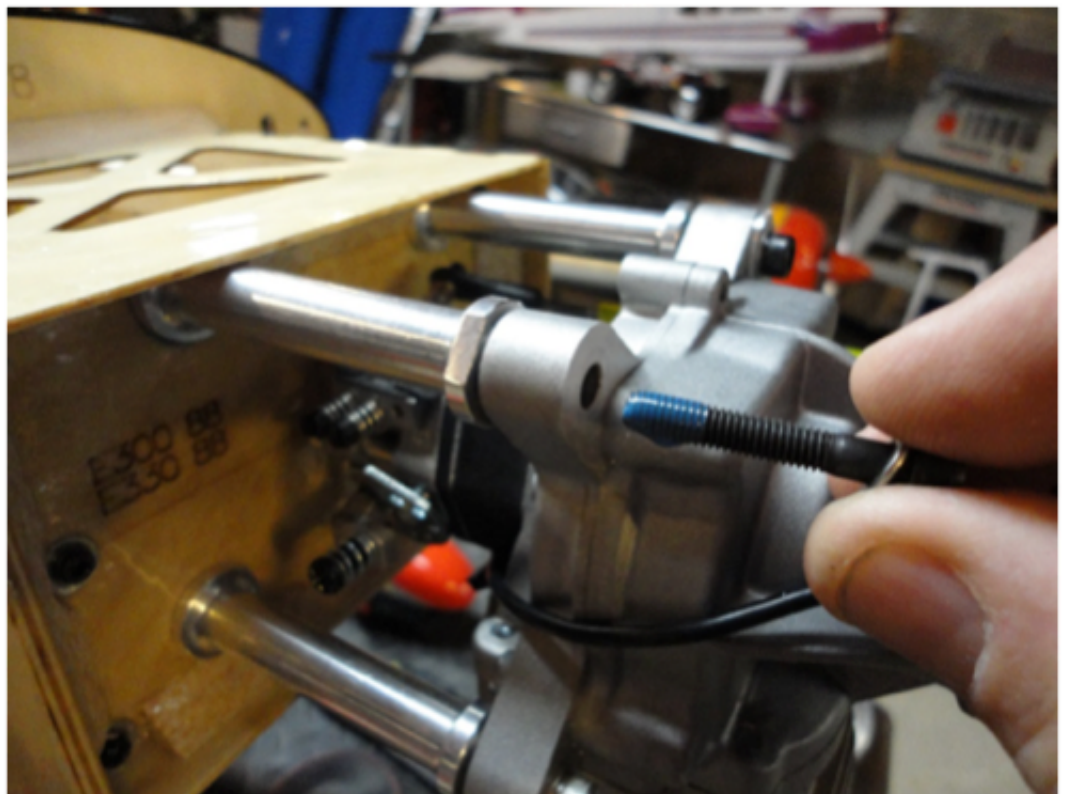
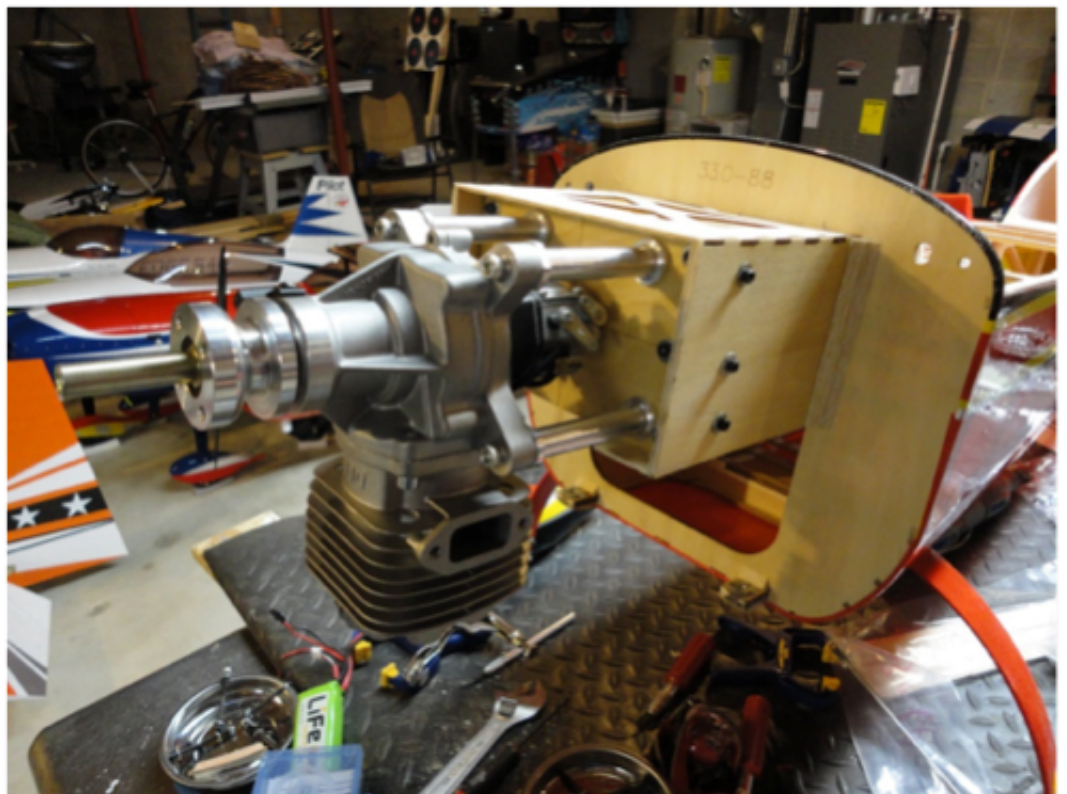


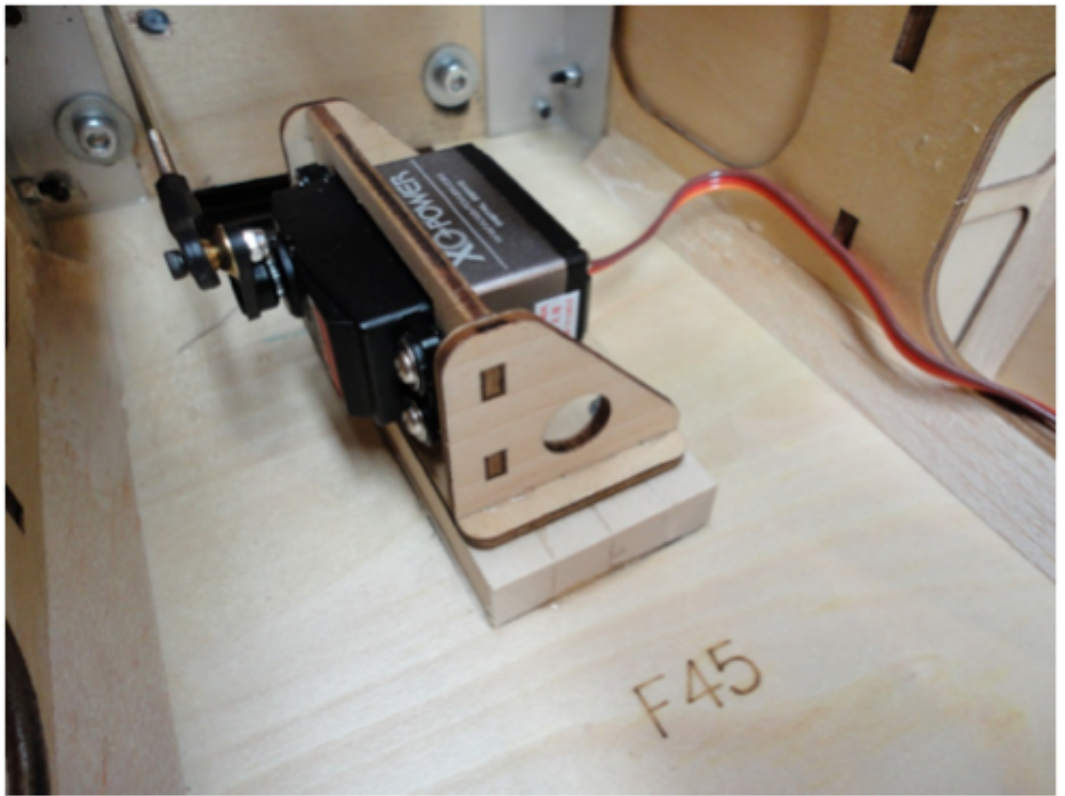
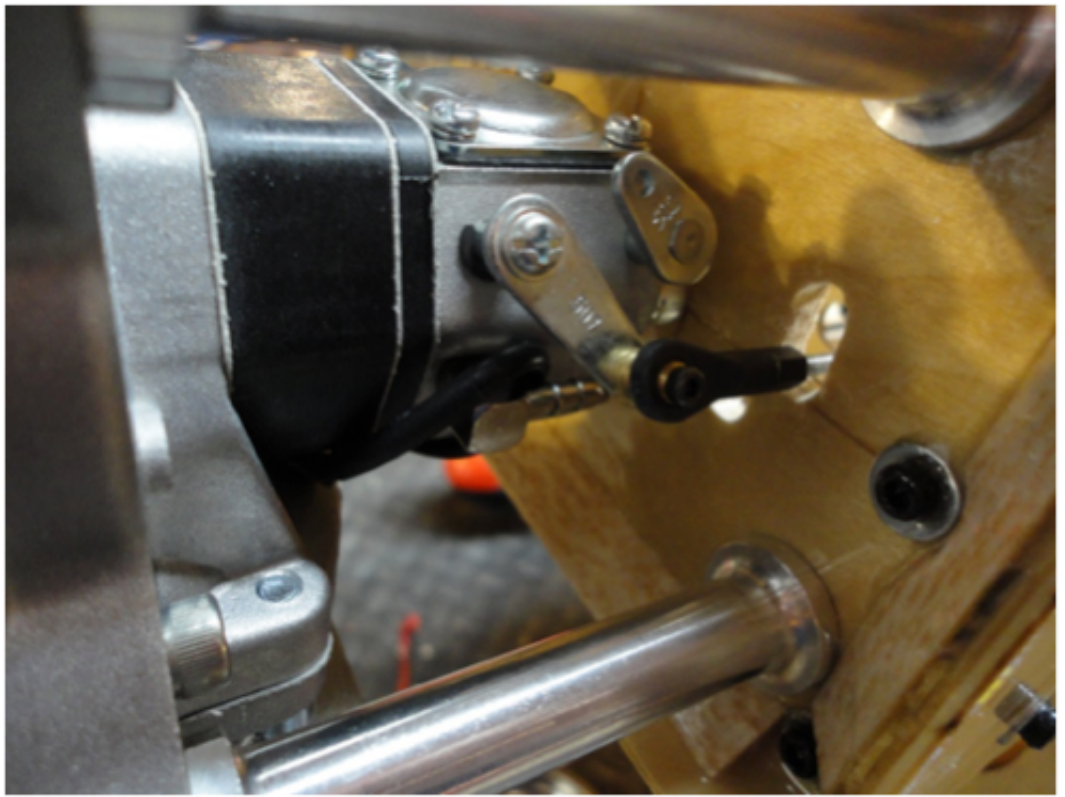


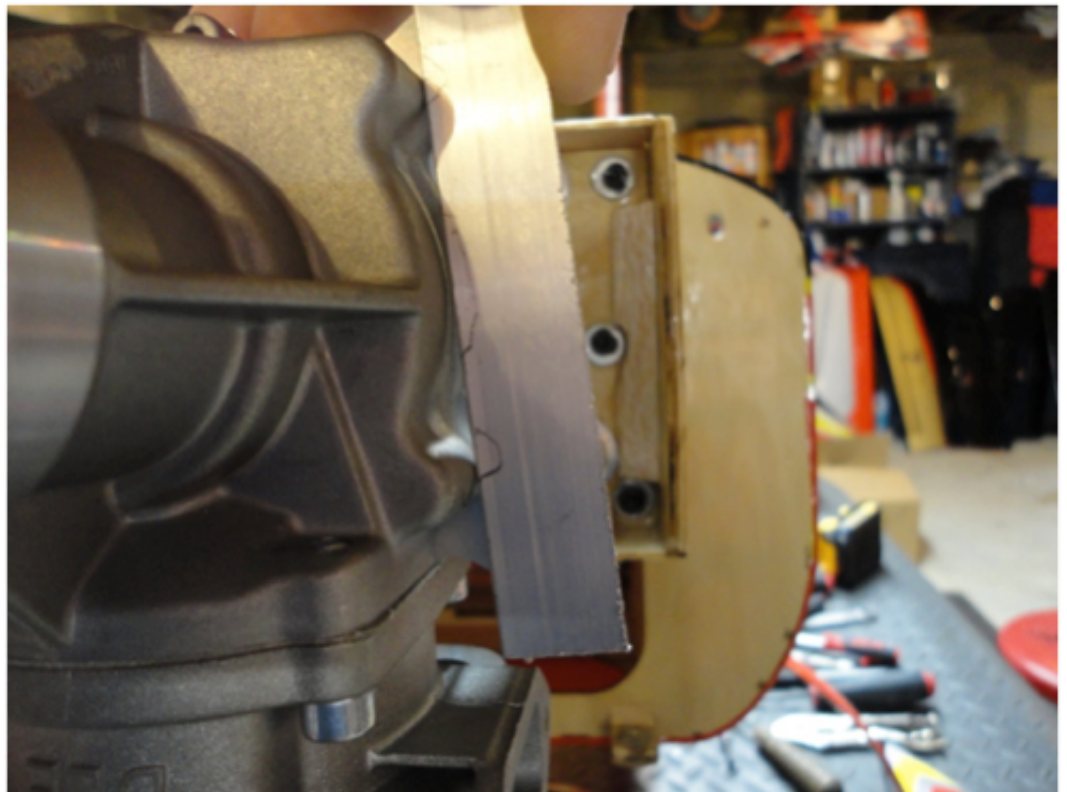


Firewall installed with tri stock added in all the corners. Plywood top installed and an epoxy coating of the entire motor box to prevent fuel infiltration.

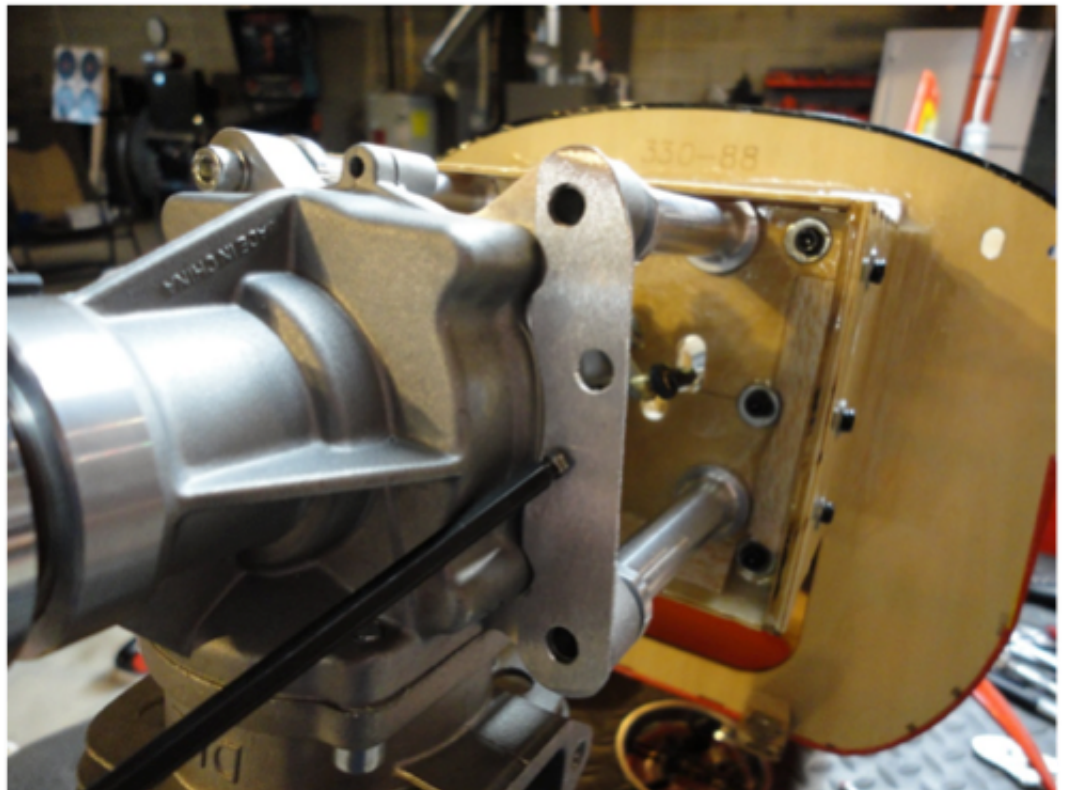
The engine is now installed and all bolts are installed with Blue Locktite. Never use red unless you never want to take it apart ever again. Red Locktite requires heat to release it. Next thing to do is drill the holes for the throttle linkage and fuel line, then make the choke linkage and bracket.

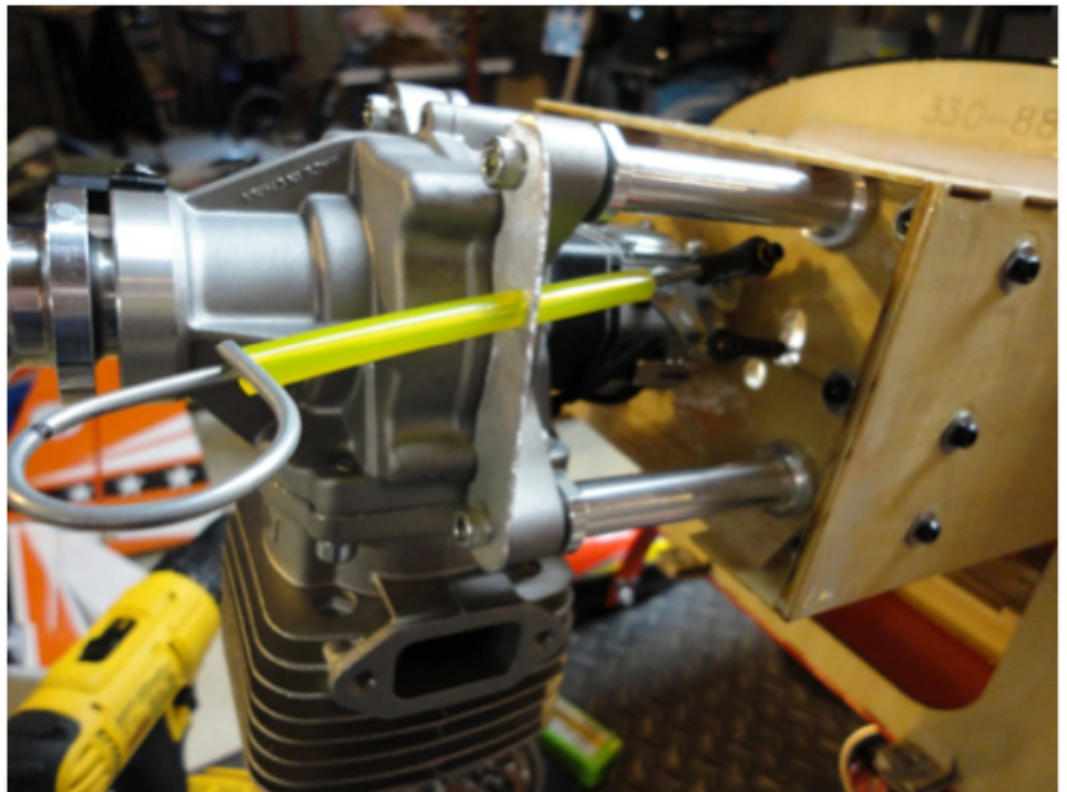




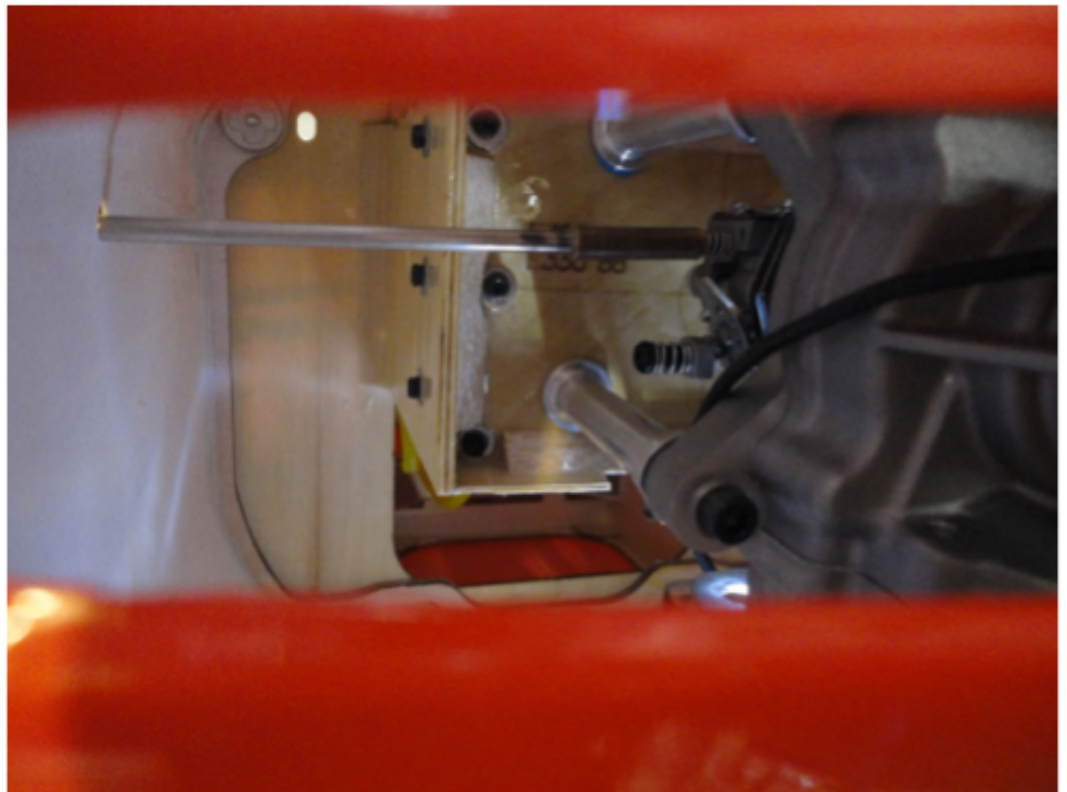


I see all kinds of rigging for choke rods, tie wraps, plastic pieces and so forth. I take a piece of 1/16 aluminum and half assed scribe the engine contour on it then rat tail file the shape. Drill the appropriate holes and it turns out to be a pretty decent choke rod. Add the linkage and its done and wont fall off.

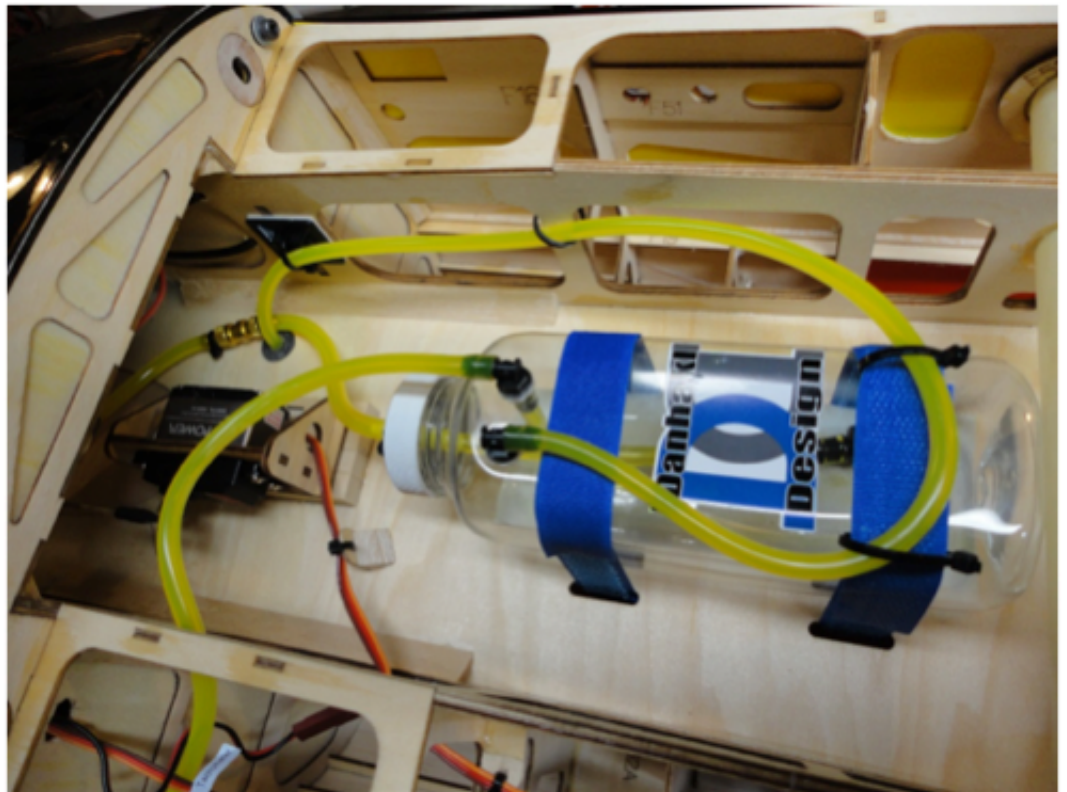




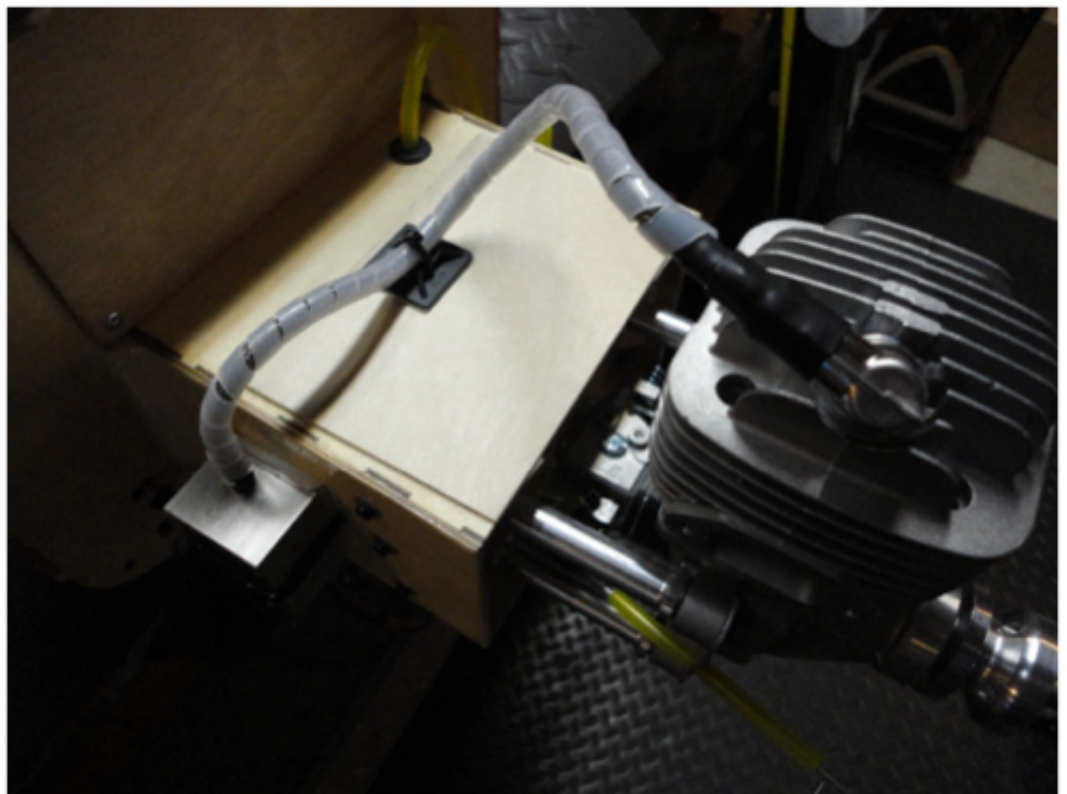
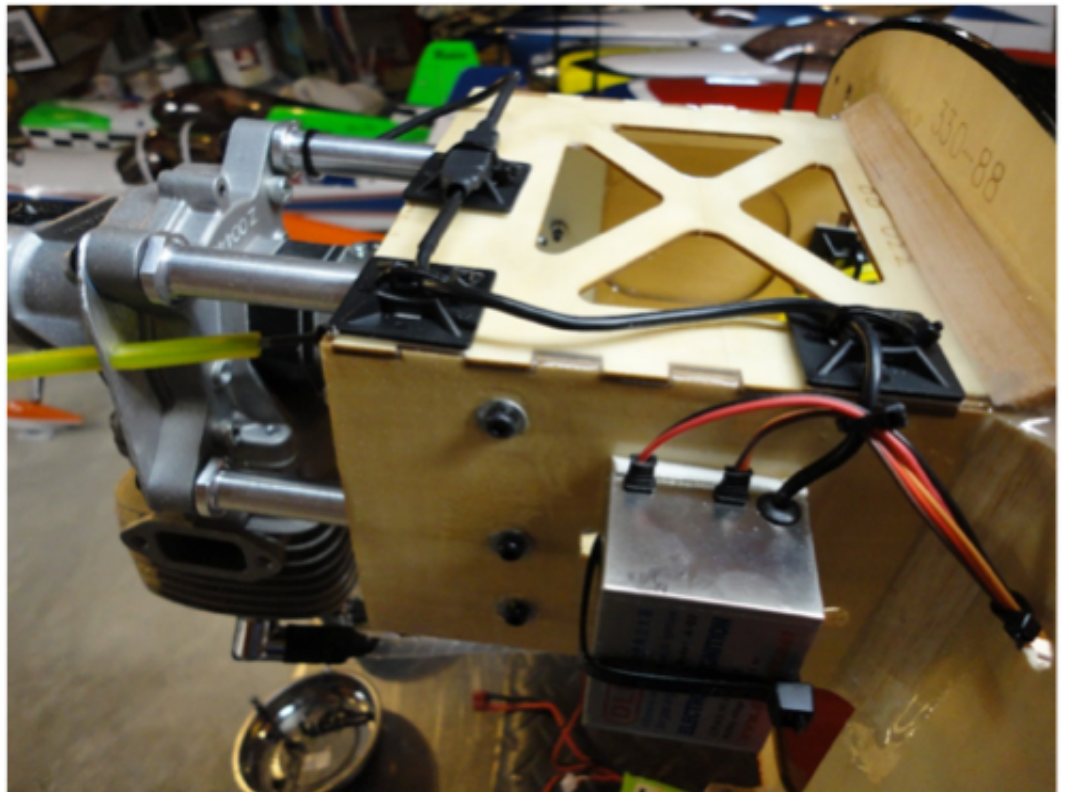
The cowl is installed and centering of the engine is checked as well as access to the choke rod. I had to add one washer behind the engine to get the spacing I wanted between the cowl and spinner back plate. While the cowl is on I drill the hole in the cowl to adjust the carb. Only problem with Extra cowls is they taper back on the underside very quickly so the hole for the engine has to be cut before you can install the cowl. This is done with a paper template laid over the bottom of the engine then the engine removed and the cowl installed, then cut where the template was traced out.



Next on to the fuel system. I pitch the supplied tank in favor of the Fortitude Brand see through tanks. They are easier to hook up and I like to see the pickup inside the tank. Always use an inline filter to the carb and zip tie all suction line fittings. After some trial and error over time, I ended up using a fuel dot made by RC accessories, it looks good and is easy to grasp the fuel dot for filling.

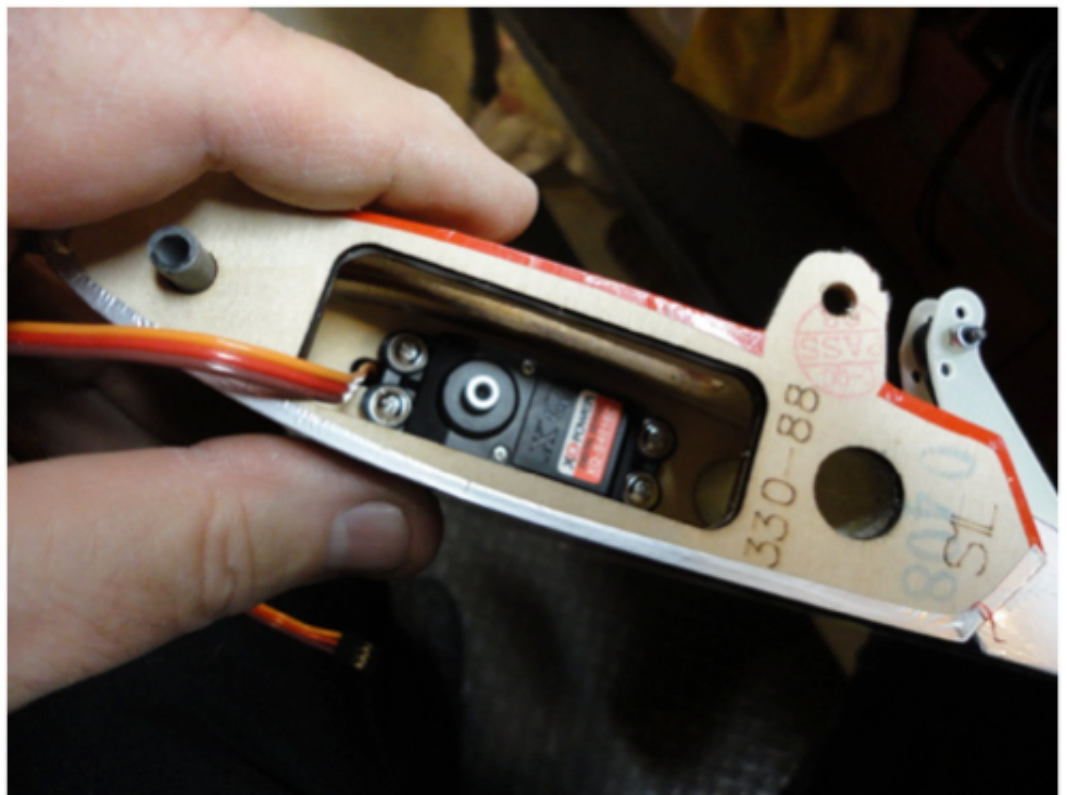


Next on to the ignition system. DLE provide a capacitive discharge ignition system powered by a 4.8-8.0 volt battery. I like to set mine up with a 6.0 volt NIMH battery, a heavy duty switch and an optic kill switch. Some people use a battery eliminator to do away with the ignition battery. Make sure all wiring is tied and secure. I usually use over a hundred tie wraps putting a plane together. You just don't want anything to come unplugged when that plane is flipping all over the sky.



That completes everything on the front of the plane. I ordered a Pitts style muffler but it hasn't come in yet so that will have to be installed later. Next the control surfaces and receiver. Pilot supplies very good ball links with left and right hand thread turnbuckles so adjusting control surfaces is a snap. They also supply fiberglass control horns and servo horns. Find the covered hole in the wing and cut the covering open and install the servo with the appropriate extension. Then find the corresponding slots in the control surface and cut them open. Clean out the slots with an Exacto knife and epoxy the control horns into the slots. I have found the control horns to hit the wing or stab limiting the amount of

deflection so a trip to the grinder to relieve the horn is necessary. The elevator servo are inside the stab with the holes predrilled which makes install a snap.





The stab finished. Note the amount of deflection. You can easily get 65 degrees of deflection with these planes without getting too wild on the linkages. The rudder pull pull set up is next. The cable system has some good and bad aspects. The good is the rudder servo is mounted in the front of the plane for weight. The bad is the cable stretch on a hot day and get sloppy but most of the industry uses the pull pull system. Stringing the cable and swedging it are very easy to do.

First slide the heat shrink and brass tubes onto the cable. Then insert the cable into the turn buckle and back through the brass barrel.

