

Building a Vailly Aviation Hawker Hurricane.....Instalment 2:



We pretty well got all the bits together in instalment 1 so now to start the build. I like to start with building the fuselage as it is usually the hardest to make and I like things to get easier as we go along.

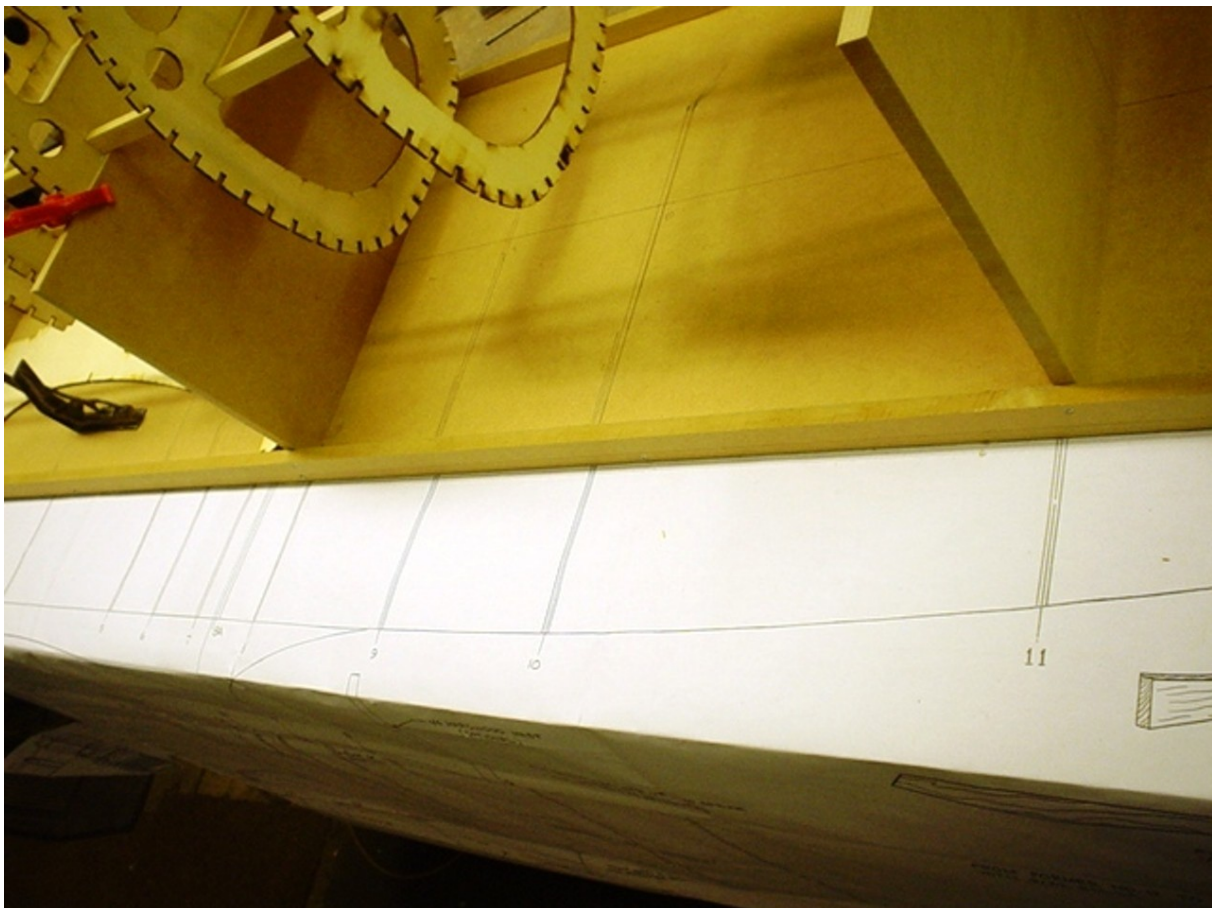
A lot of built up model fuselages, including the Vailly Hurricane, are built from the crutch method, i.e. There are usually two fairly substantial pieces of wood down the thrust line that all the fuze formers are glued to and either stringers or planking is done around the outside of the formers.

The crutch and formers have to be set up on a building jig. This is made from 12mm sheet MDF. I purchased a small sheet from Bunnings to do the job. The important thing here is that the vertical pieces be exactly the same height and be high enough so that the bottom of the formers don't touch the bottom of the jig and that the bottom of the jig is flat without a twist.



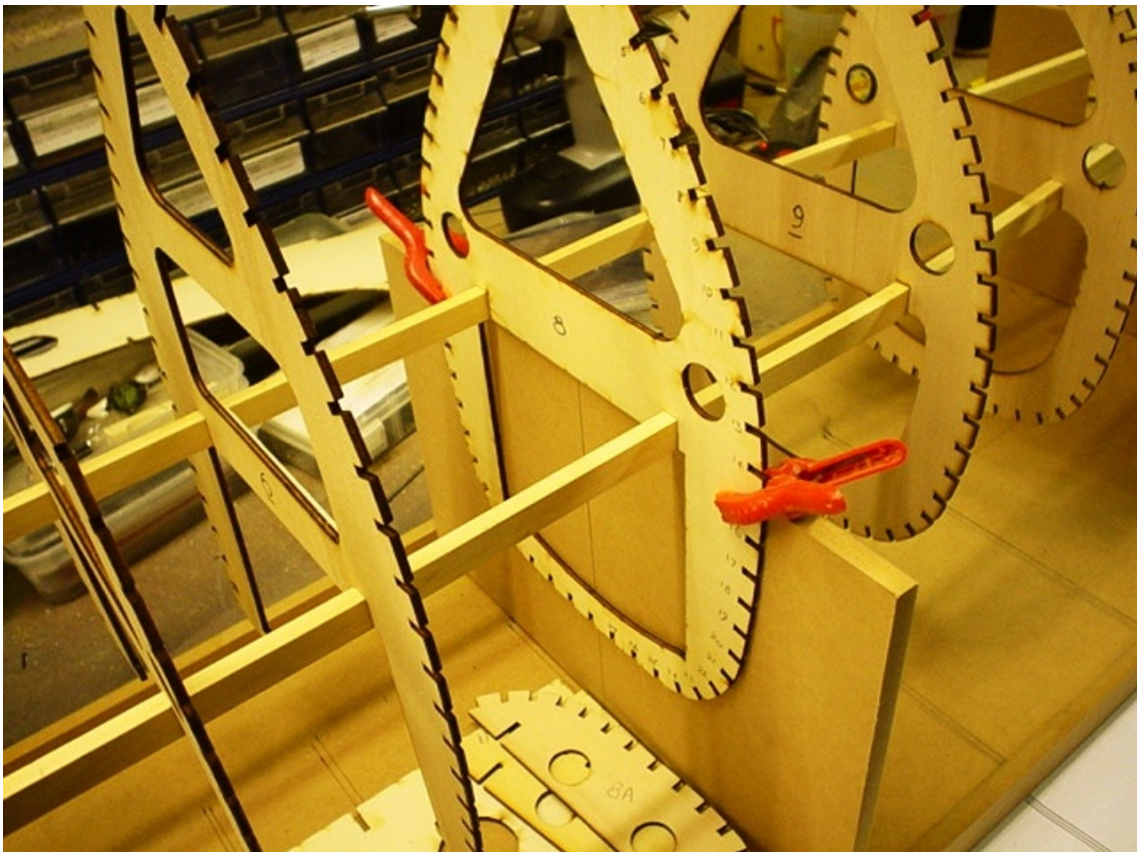


The next job is to transfer the position of the fuze formers from the plans onto the building jig. Lay the jig on the plans and project the plan former positions directly onto the bottom top face of the jig





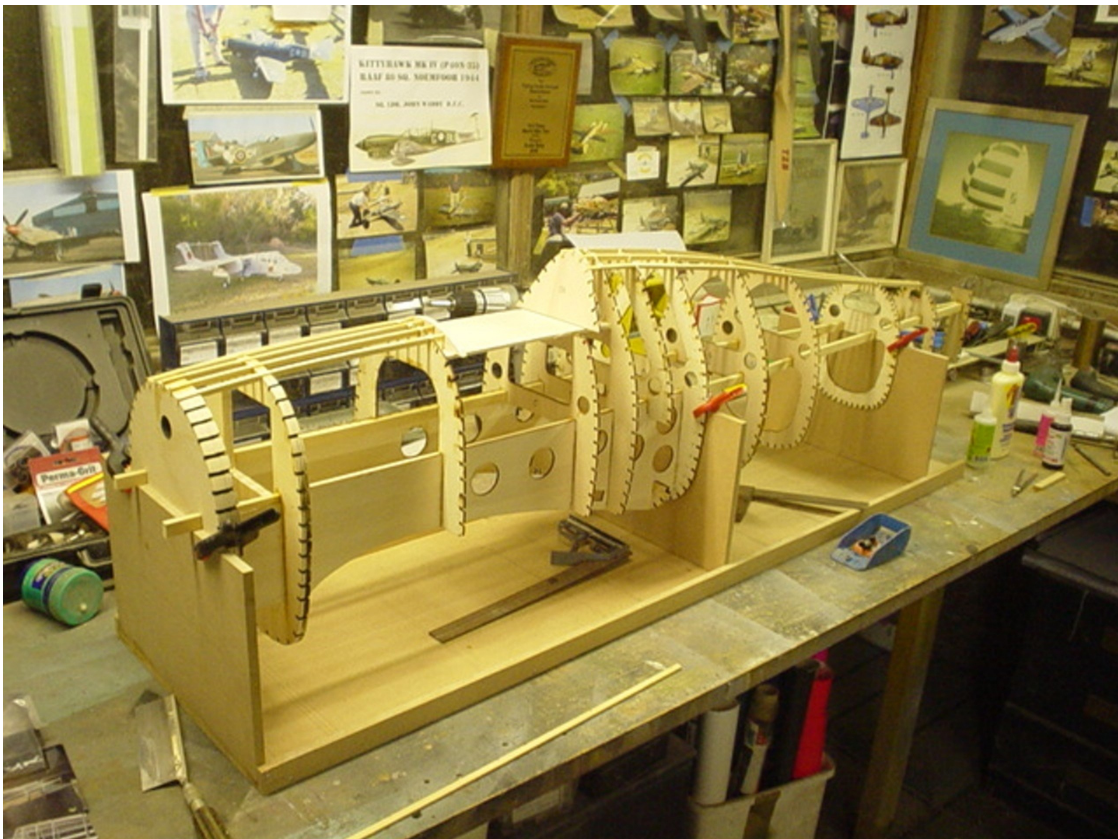
Fit formers over crutch, set up with set square to reference lines drawn on jig and glue in position.



Laser cutting can't handle the thick plywood we need for fire wall and wing mounting formers so we have to laminate multiple 4mm thick versions of these formers to make up the required thicknesses. Use a couple of pieces of stringers in the stringer notches to ensure accurate alignment.



We can now complete the positioning of the formers on the jig and commence to bend stringers around the frames.



The stringers and wing main spars for this model were specified as strip 1/8" x 1/4" and 1/4" x 1/2" spruce. The main spars needed to be 48" long and the stringers needed to be 60" long (old units of measure, the plan is from USA). 60" lengths of 1/8" x 1/4" are not available from retail outlets and I didn't fancy splicing 2 x 36" lengths to make one stringer x 60 times. With the aid of my trusty computer I was able to find a guy up on the Gold Coast that would cut 60" lengths of both sizes for me from Qld Hoop Pine. Hoop Pine is about 10% heavier than spruce but it also stronger and has a fine grain structure so I went with it. The stringers Steve supplied were unbelievably accurate in thickness and width.

Woodworld, Steve Jones, 1 John Lund Dve Hope Island, Gold Coast 4212.

Ph : 55 308000

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aminteriors1@bigpond.com.

There were 70 x stringers and spars in all and they cost \$250, about a third of the cost of SIG spruce.



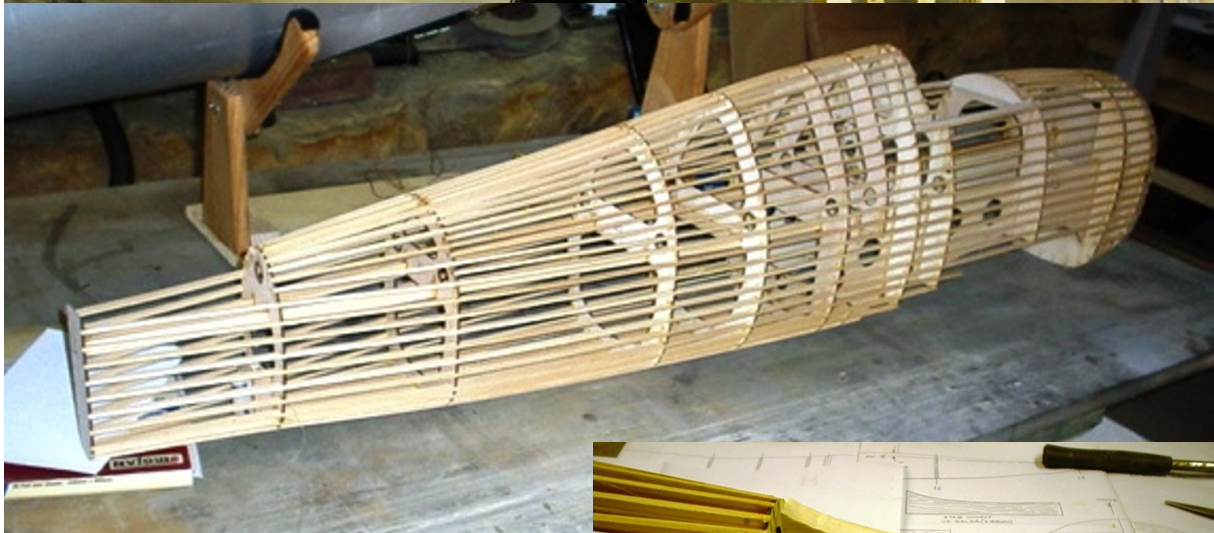
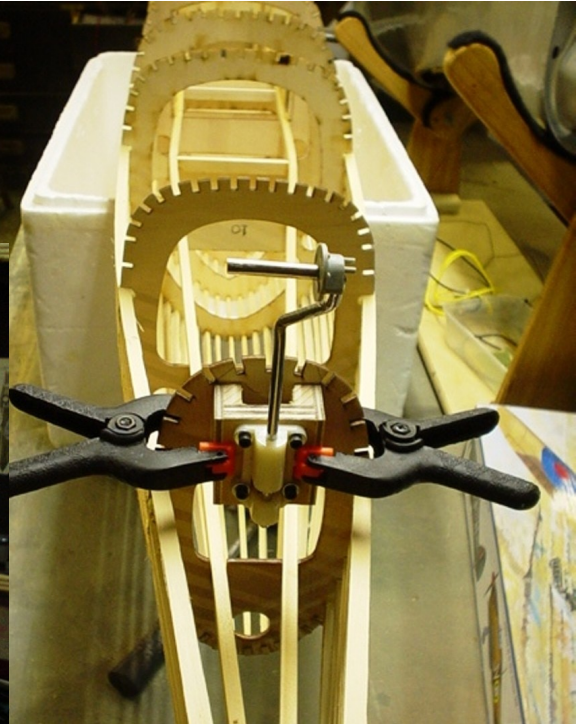
I use ordinary wood glue when gluing plywood and wood, any good PVA or aliphatic works fine but needs a bit of time to go off. I usually tack in place with cyano to hold pieces in position while the wood glue dries.



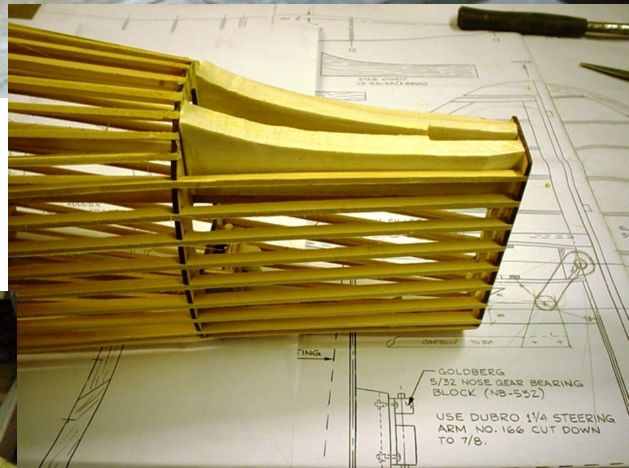
It is important that you fit stringers in pairs, same position on the left side and then on the right side to avoid any distortion



Once you have stringered the top half of the fuze you can remove it from the jig and fit wing formers and tail wheel mount before completing lower stringers.

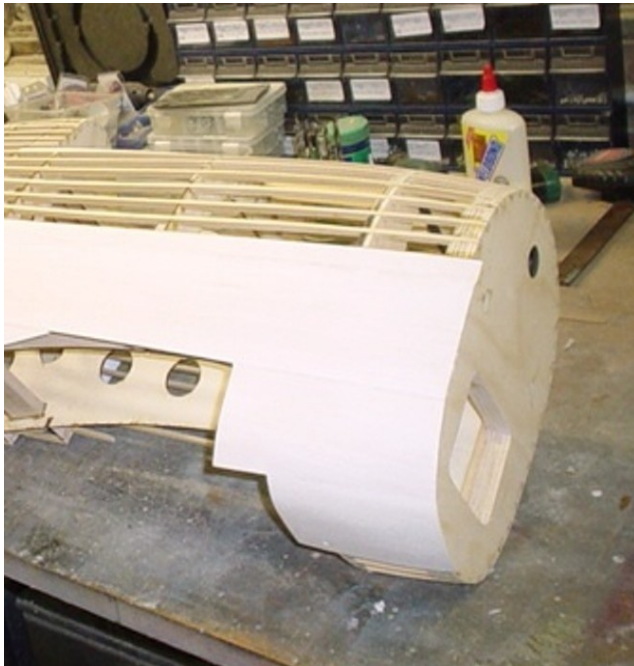
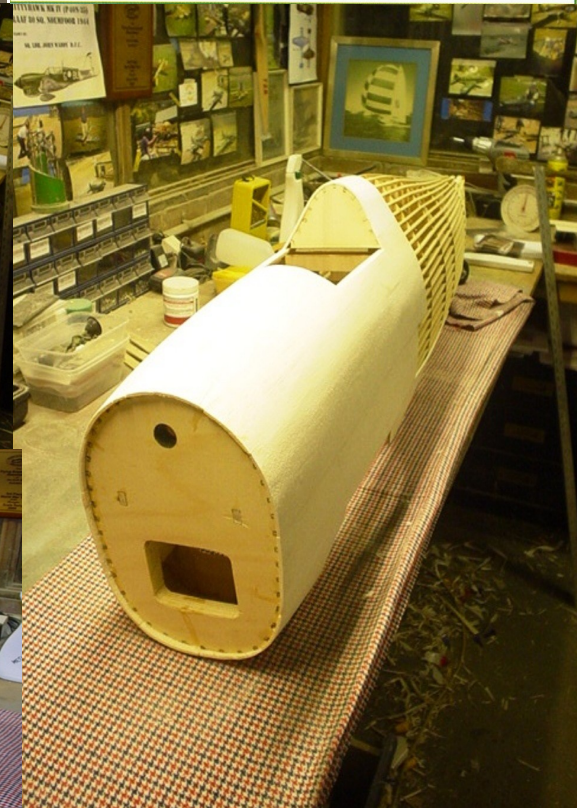
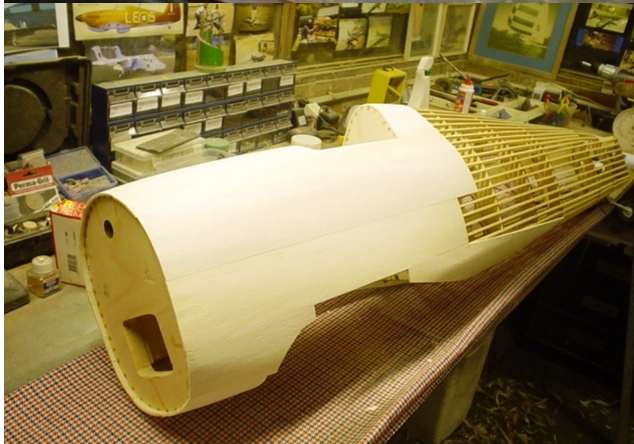


The horizontal stabiliser mounts are next and are attached to the upper surface of the building crutch

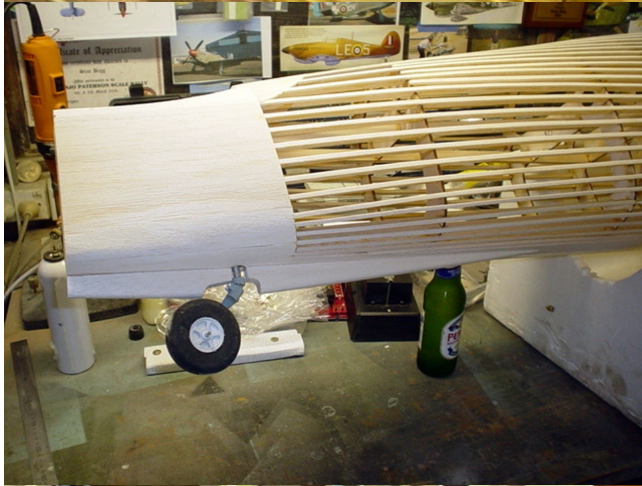


The finished framed and stringered fuselage weighed 1.7Kg or 3lbs 10 oz.

The front of the full size Hurricane was covered with sheet aluminium. Behind the cockpit is an open frame covered with a doped fabric. The next job is to balsa sheet the front of the fuze to the outlines of the aluminium panels shown on the plan. I get all my balsa from an online supplier balsacentral.com, good pricing and very consistent grade. All the planking was glued with PVA, tacked in place with pins and cyano. I use as little cyano as possible when planking as it sets harder than the balsa and makes sanding and fairing the planks very difficult

An advertisement for balsacentral.com. It features a stylized tree logo with roots. The text reads: "QLD Balsa is now **balsacentral.com**". Below this, it says "we only grow Balsa, we only cut Balsa, now we can sell it to you." and provides the website "www.balsacentral.com". The AUSZAC ECObalsa logo is also present, with the tagline "better, cleaner, greener". At the bottom, it lists contact information: "For limited time only one FREE balsacentral.com cap with each purchase - *until sold out", "p: (08) 8276 4122 f: (08)8276 4133", and "e: sales@balsacentral.com".

The balsa sheeting is applied over the stringers so capping strips of 1/8" x 1/8" balsa have to be glued over every stringer between the front and tail sheeting.



The anti spin tailwheel fairing is fitted to the bottom sheeting and the tail wheel wire strut is covered with a much cut and bogged Robert plastic oleo fairing



I have then lightly sanded the fuze all over and put aside for the moment. We will proceed with the finishing and fitting of the cowl and fitting the engine in the next instalment.

Cheers
Stan