

Mounting the fins

The fins are glued to the tail cone using the jigs to guarantee alignment. But before the fins can be glued in the centering ring just aft of the fins must be glued in. After this the fins are attached. Next the fin tabs are reinforced with fiber glass through the fin can opening. Since reinforcement is done inside there is no messy reinforcement done outside the airframe – keeping it clean and easy to finish. After all the inside work is done the top centering ring is put in place.

On to the pictorial...



Before the fins are attached the centering ring just aft of the fin tab needs to be adjusted and glued into place. Before pushing in for test fitting I attached 3 strings in a triangular pattern that can be used to pull the rind out if the test fit isn't good. Otherwise once the ring is inside the tail cone you can imagine how hard it would be to remove. After several rounds of test fitting I glued it in using Aeropoxy.



Next using the alignment jig I glued in the top fin only with Aeropoxy. The other two fins are inserted to keep alignment. Note my daughter Jayne thinks it's pretty cool.



The airframe is also used to help keep the engine mount exactly centered. Jayne thinks she might be able to ride the rocket ala Slim Pickens in Dr Strangelove. But I think Slim sat backwards...



After the first fin is glued the other two are as well using the jig for alignment.



Here is another view with all three fins in place.



After 8 hours - perfect!

Now the fin attachments need to be reinforced. To do that I make a few little tools that let me apply fiberglass to the fin tab through the tail cone opening.



I lay some parchment paper on the airframe in case I drip glue. I used a long slick to place pre-wetted glass on the tab root and inside the tail cone. All reinforcements are done inside the tail cone leaving the outside clean.



Here you can see the glass reinforcement on the fin tab to motor mount connection. Similar reinforcement is done from the fin tab to the boat tail.



Once the reinforcements are in place for the fins the upper centering ring can be positioned and adjusted. Again note the strings so it can be pulled out if the fit is not correct.



Once the fit is perfect I glue it in. After this sets I cut off the string. Then I add some glass roving to the Aeropoxy to make the joint stronger.

Next up – attaching the aft airframe...