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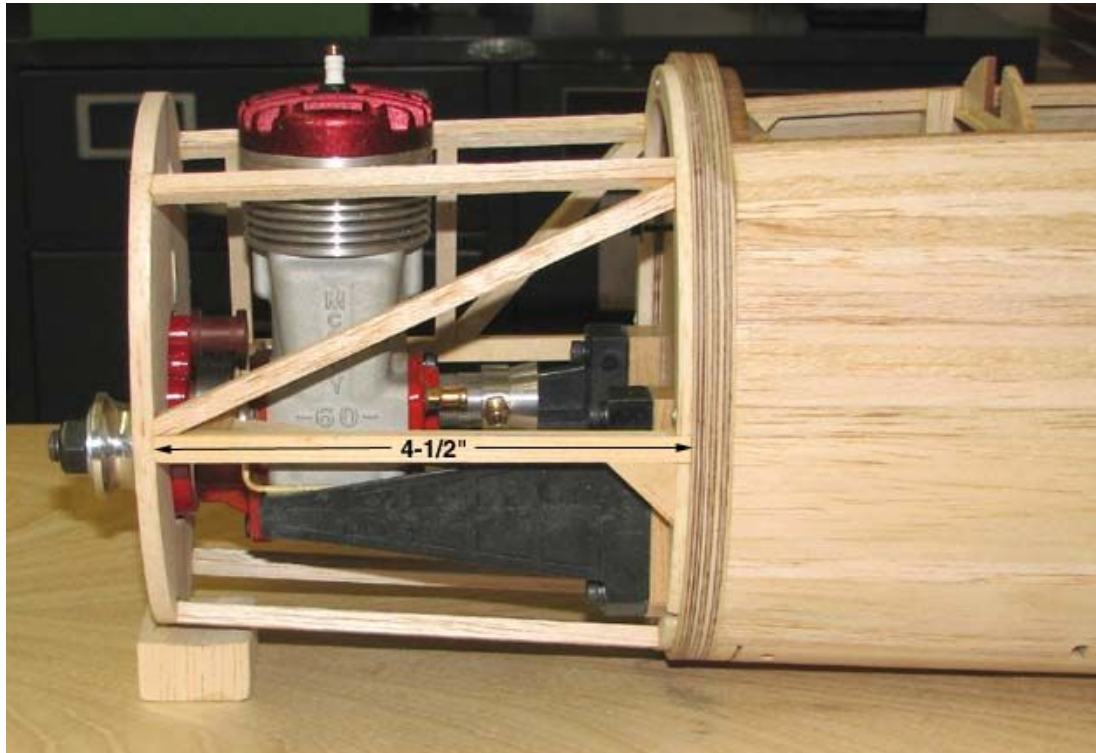
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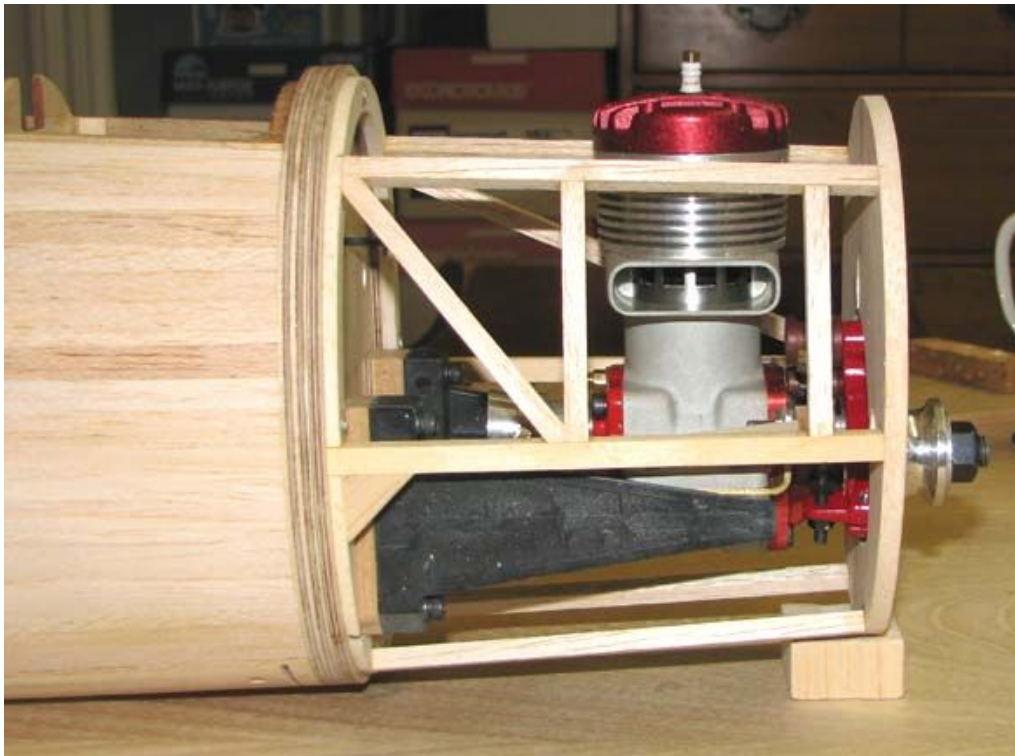
Subject: 63 Sailplane Internal Cowl Support Structure

### *Comet Sailplane Project*

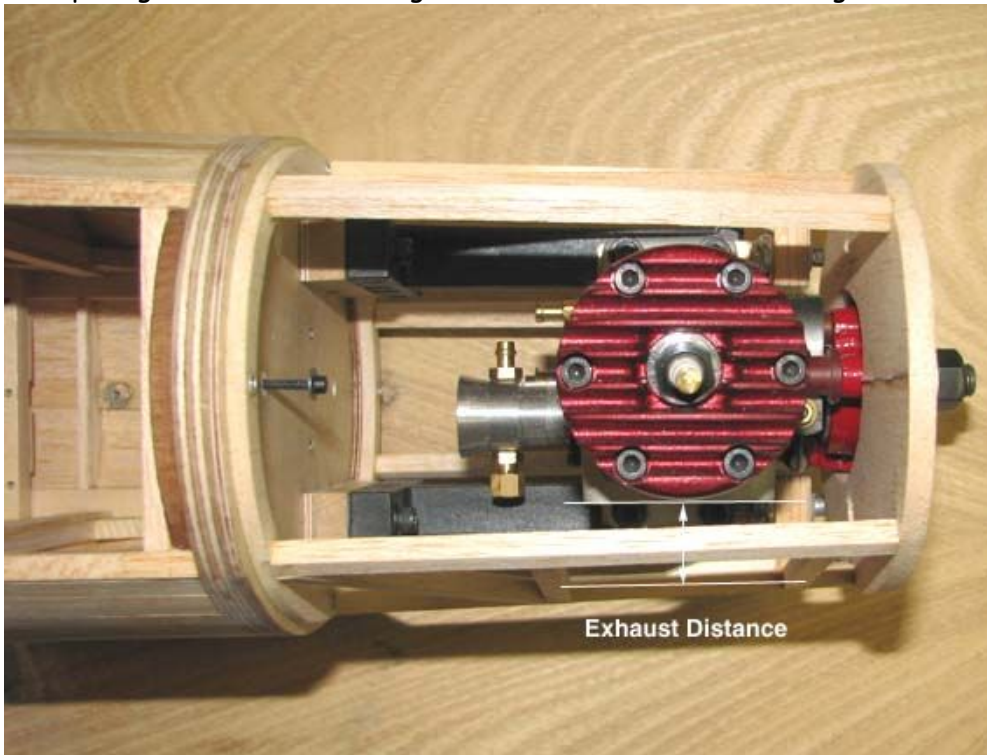
The Sailplane cowl is quite long and open as evidenced by the 4-1/2" distance between the front and rear cowl bulkheads as shown from the left side below. Therefore, it was felt that some internal support structure was needed to (1) to provide both torsional as well as bending rigidity, and (2) to keep the external "barrel" planking from trying to bow or draw in over the long distance with no other intermediate bulkheads. It should be noted that contour balsa will be added along the diagonal so as to also support the external planking.



This view of the structure shows the vertical location of the McCoy's exhaust on the right side. An exhaust extension will not work in this application because of interfering with the attachment and removal of the cowl. Therefore, a clear opening on the right side of the cowl must be provided to permit the hot exhaust gasses to exit out the cowl into the free stream air.



This view of the structure shows the location of the McCoy's exhaust from the top. The distance from the engine's exhaust exit plane out to the outside of the cowl is approximately 3/4". The real question here is how big to make the opening so the hot exhaust gasses won't char or burn the edges of the cowl opening.



If you have any experience with cowl exhaust openings, I sure could use some advice right about now before I start planking the cowl..... Tandy