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To: [Undisclosed-Recipient:](#)
Date: 6/23/2009 10:17:12 PM
Subject: 120 Sailplane Fabrication of Exhaust Extension for the McCoy 60

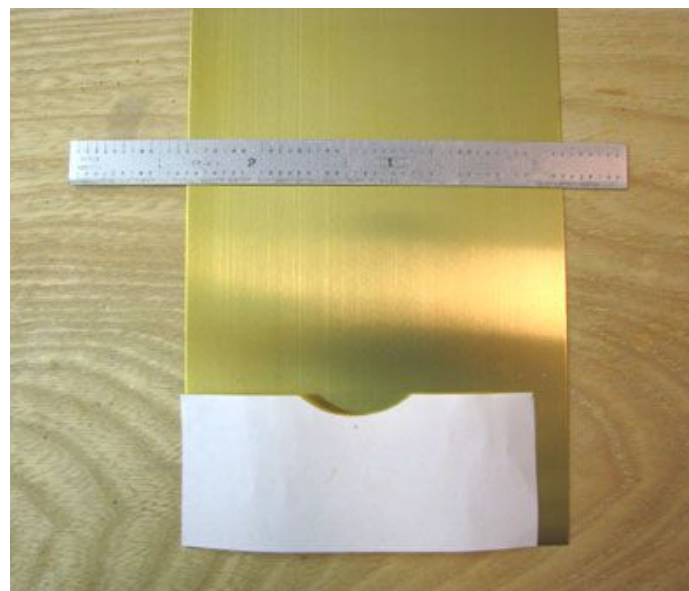
Comet Sailplane Project

The task for the day today was to fabricate an exhaust extension that will direct the engine's hot exhaust gases out of the opening in the cowl without burning the edges. Before I start the discussion however, I want to give Bill Taylor from Tulsa, Oklahoma, full credit for having previously developed the procedure for making the extension and devising the way to attach it to the engine with the cowl installed. In addition, Bill was kind enough to counsel and walk me through the steps of his approach.

I picked up a sheet of .010" thick K&S brass shown below at Roy's Hobby Shop.



Next I made a paper template for the exhaust extension, laid it out on the brass sheet as shown below, and cut it out.



Then with a lot of pressing, bending, shaping, and clamping, I formed the cut out brass sheet around the engine's exhaust stack as shown below.



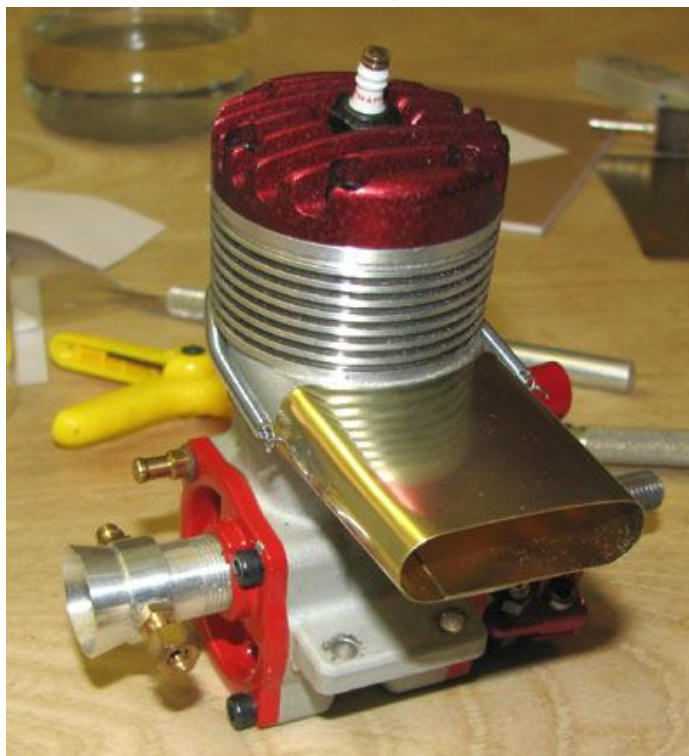
After soldering the brass's overlap seam on the bottom, I made two retention hooks out of .031 piano wire and soldered them to each edge of the extension. Each hook has a small right angle bend on the end that fits through a hole in the side of the brass extension before it was soldered in place as shown below.



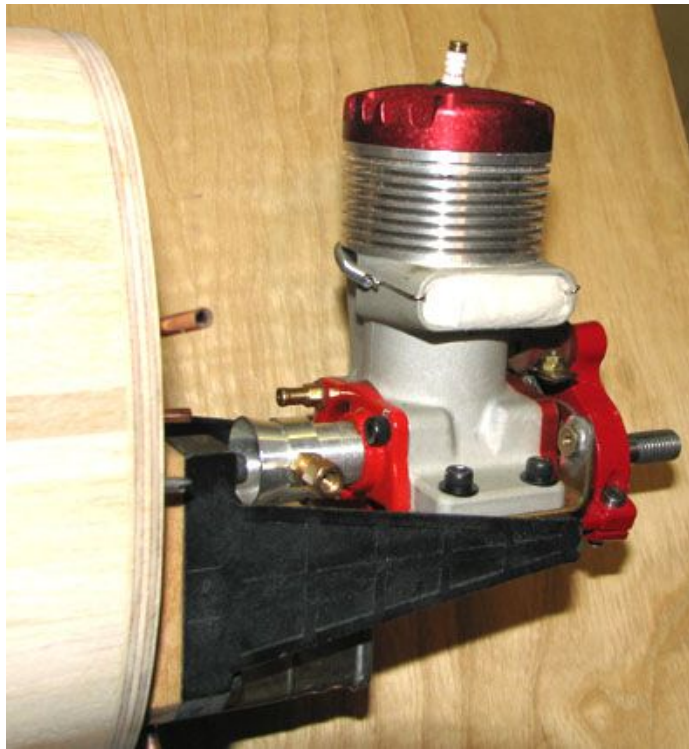
Two springs were linked together to get the proper length and wrapped around the engine's case to retain the extension on the exhaust stack as shown below. The exit end of the extension was trimmed off on a bias as you can see in the picture below.



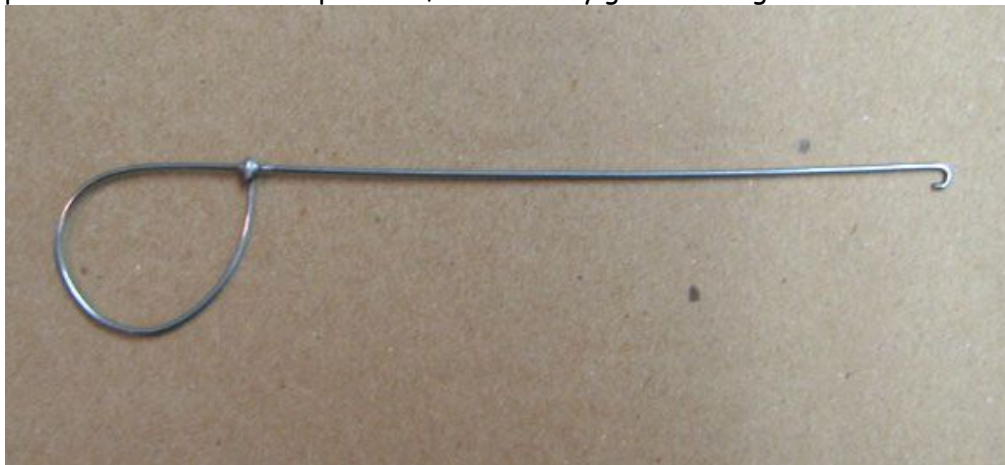
This is another view of the extension.



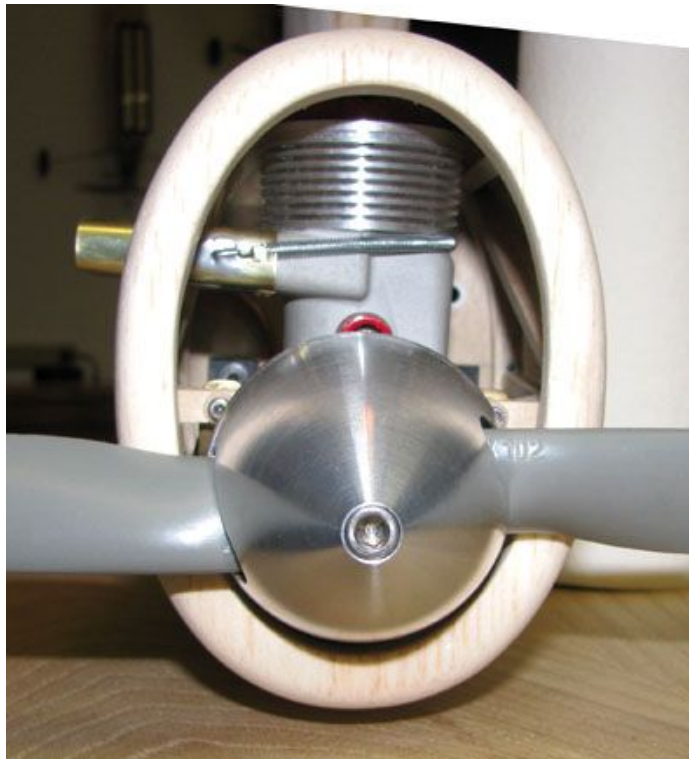
The springs must be wrapped around the engine's case and retained during the time the cowl is put on. As shown below, two small hooks were made that slip over the edges of the engine's exhaust stack on either side as per Bill Taylor's instruction.



The "wire hook" shown below was made out of .031" piano wire for reaching inside the cowl, hooking the spring and removing the side hook on the edge of the exhaust stack, and attaching the springs to the hooks on the sides of the exhaust extension. The spring tension then pulls the extension onto the exhaust stack and holds it in place. This procedure takes a little practice, but I finally got the hang of it.



This picture is a view looking into the front of the cowl showing the exhaust extension spring retention.



This shows the completed installation of the brass exhaust extension.....Tandy

