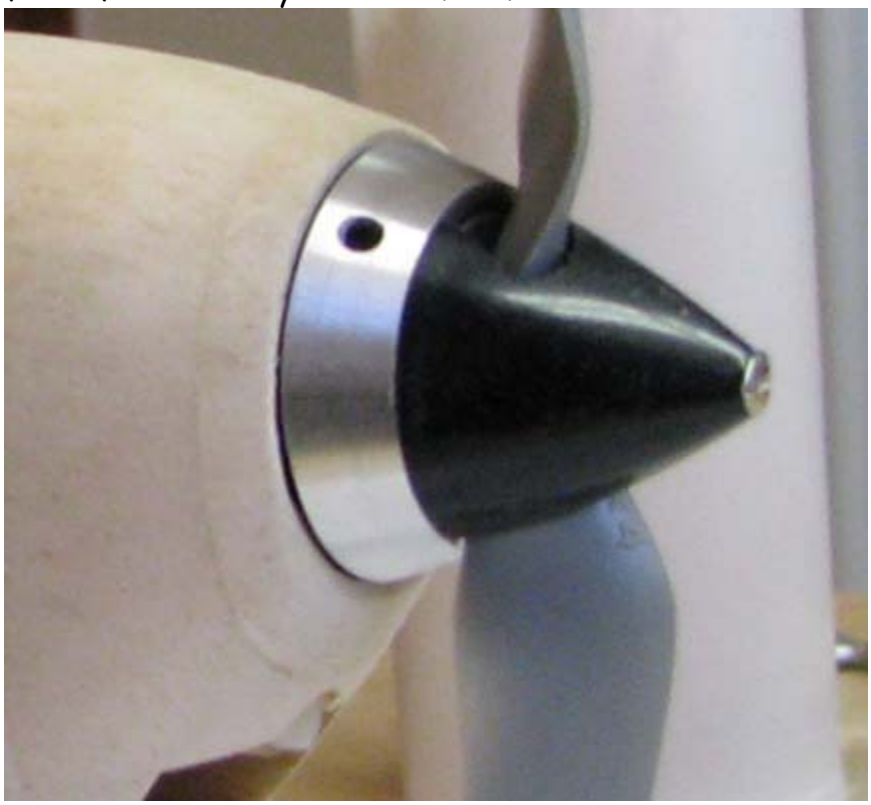
David Harding

From: Tandy C. Walker [tandyw@flash.net]
Sent: Tuesday, February 16, 2010 9:33 PM
To: Undisclosed-Recipient: ;@smtp101.sbc.mail.mud.yahoo.com
Subject: 62 Speed 400 Cloudster - Cowl-Spinner Interface Refinement

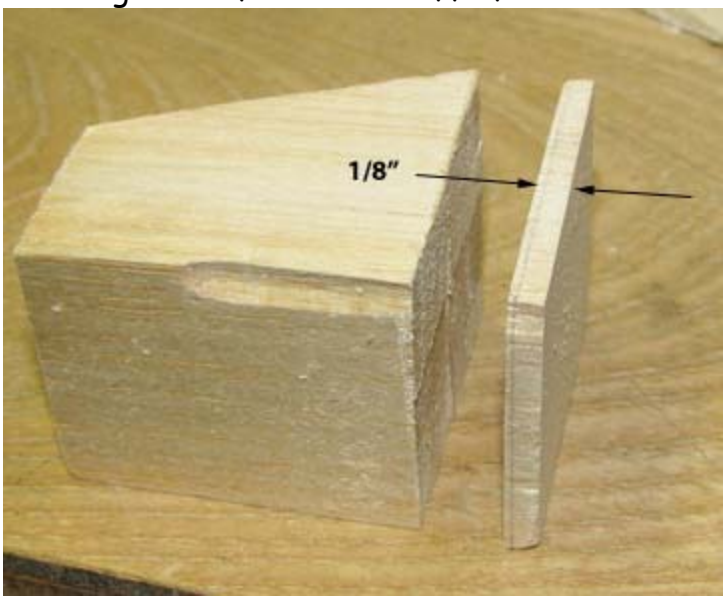
Speed 400 Cloudster Project

I was not happy with the cowl-spinner interface fit. In the picture below, you can see that the base radius of the aluminum spinner flange is smaller than the radius of the front face of the cowl by at least 1/16".

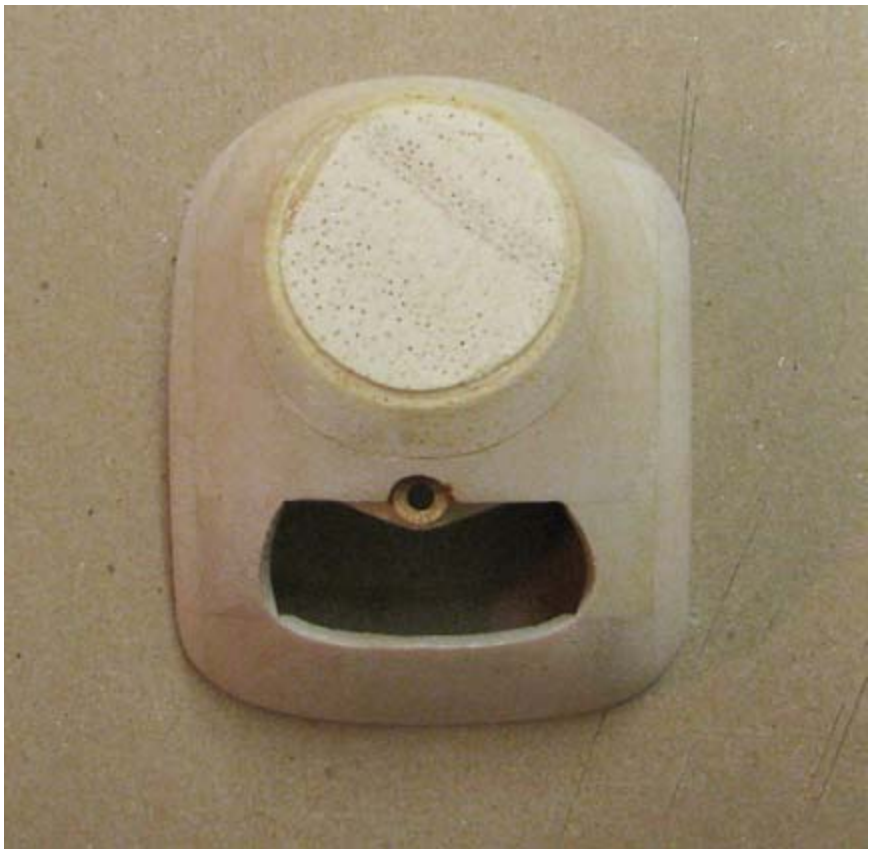


In order to correct this mismatch in the cowl-spinner interface, the radius of the front face of the cowl has to be reduced by 1/16". However, as you can see in the picture below, this is not possible because there is only a 1/16" left on the front face of the cowl opening. Notice that the motor mount stops an 1/8" short of the front face.

So another 1/8" cross grain wafer was cut off of the 2" block as shown below.



This wafer was then cut and trimmed into a circular plug to fit inside of the front face of the cowl opening an 1/8" and glued in place as shown below.



Next, the inner partion of the plug was cut out so as to leave a 3/16" toroidal ring inside the cowl opening as shown below.

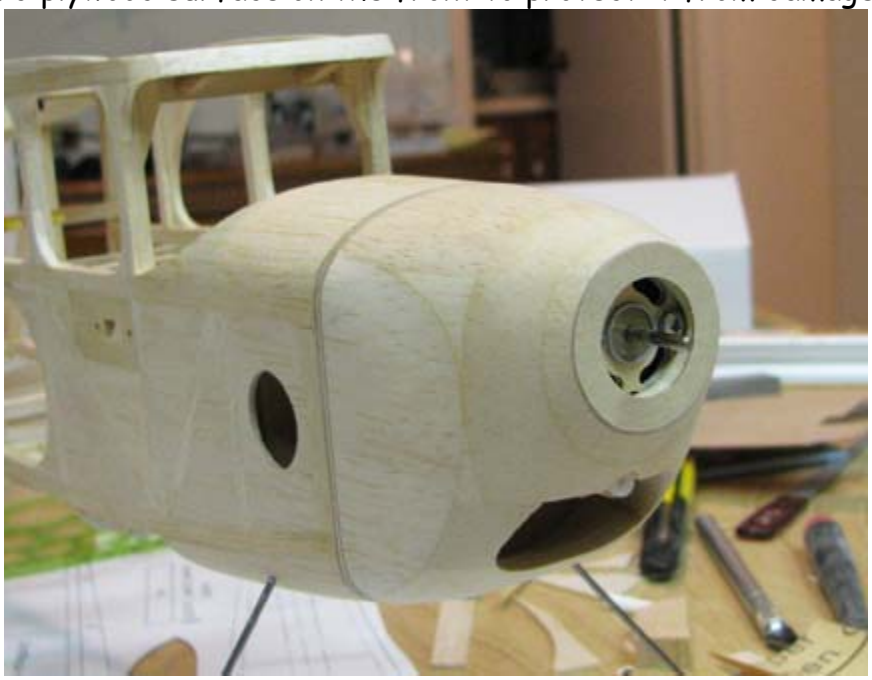
The ring was carefully sanded flush with the front face of the cowl and a piece of 1/64" plywood was glued onto the front surface. The picture below shows the large steel square block used as a weight to press the 1/64" plywood onto the front face of the cowl while the glue dried.

A hole was cut out of the plywood to match the hole in the toroidal ring as shown below.

The aluminum spinner flange was slipped onto the motor shaft and used to mark the outer trim diameter on the 1/64" plywood as shown below.

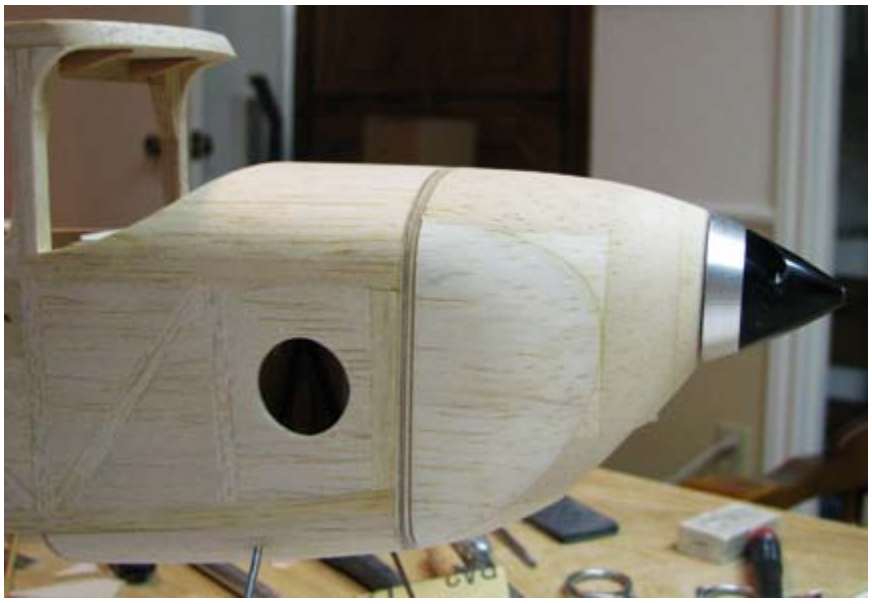
This picture just shows the outer circle that was marked in the plywood.

The cowl and 1/64" plywood was then trimmed and sanded down to the marked circle as shown below. Now the cowl has a hard plywood surface on the front to protect it from damage.

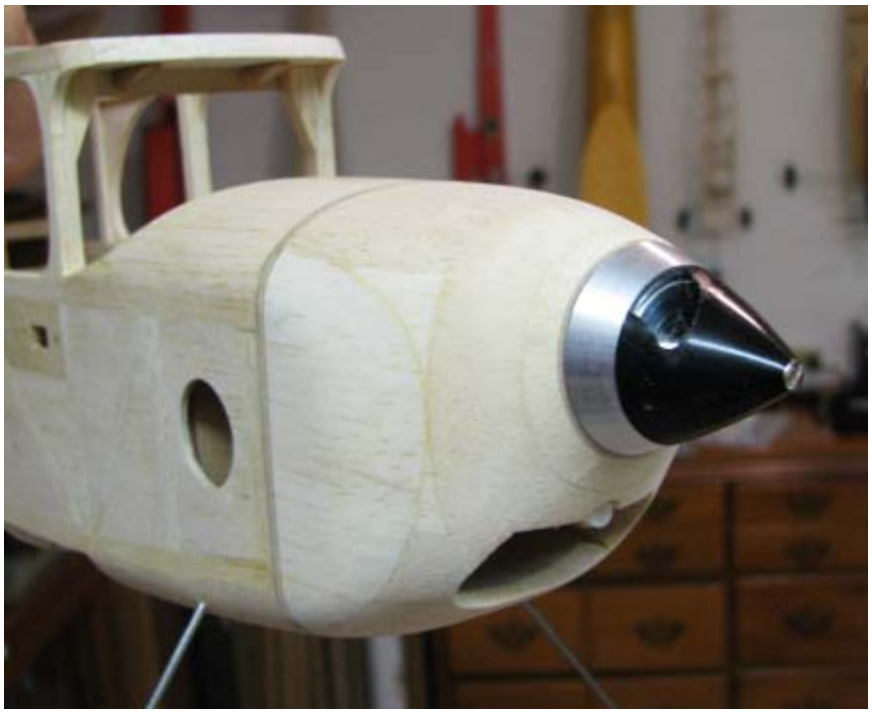


In the four pictures below, you will see the close fit that the aluminum spinner flange makes with the front face of the cowl.

Side View

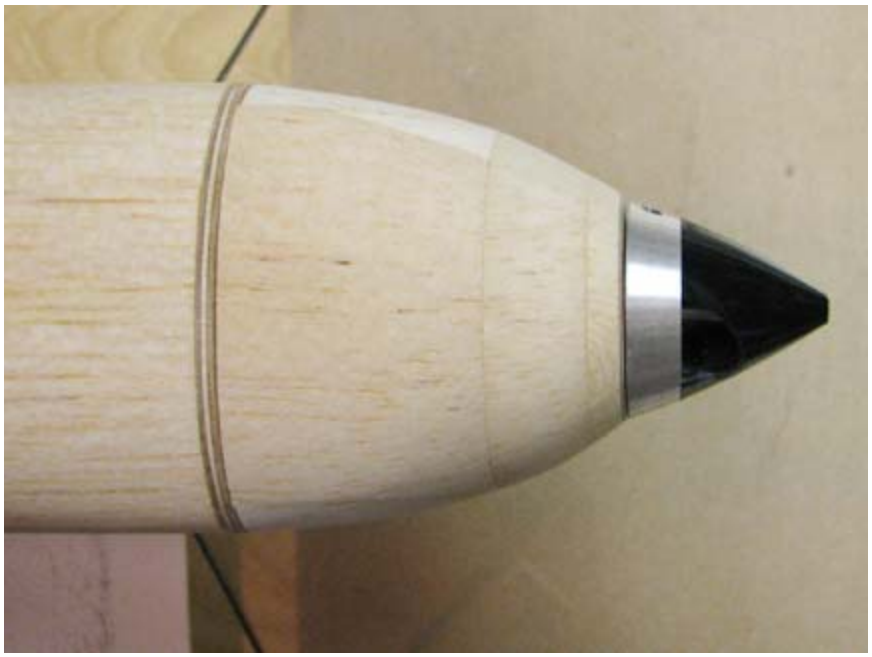


Right Side Quarter View



Right Bottom Quarter View
(Notice the enlarged inlet opening)

Top View



I am now pleased with the fit and functionality of the cowl and I will move on to wiring up the electrical power train using connectors.....Tandy