

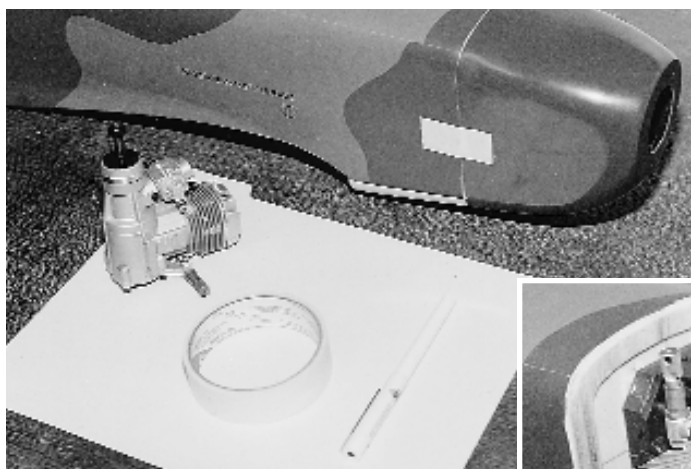
Custom-Fit Your Cowl

by Rick Bell | photos by Rick Bell

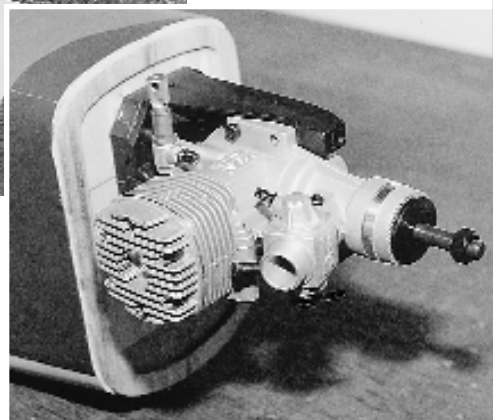


10 SIMPLE STEPS TO A PERFECT INSTALLATION

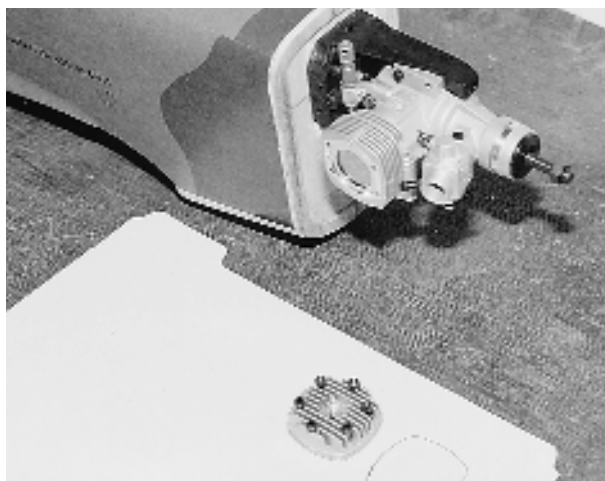
IN THE PAST, one of the most challenging tasks for me when building a model airplane kit was cutting the engine and needle-valve holes in a cowl. I often put the cowl into place, said, "This looks about right" and then cut away until I had a hole through which the engine would fit. Forget about making the needle-valve hole; that was a real shot in the dark, and my results were usually less than perfect; I even ruined a few cowls. Sound familiar? Following the technique shown in this article will all but eliminate the chance of making mistakes and will ensure great results every time. Interested? Read on!



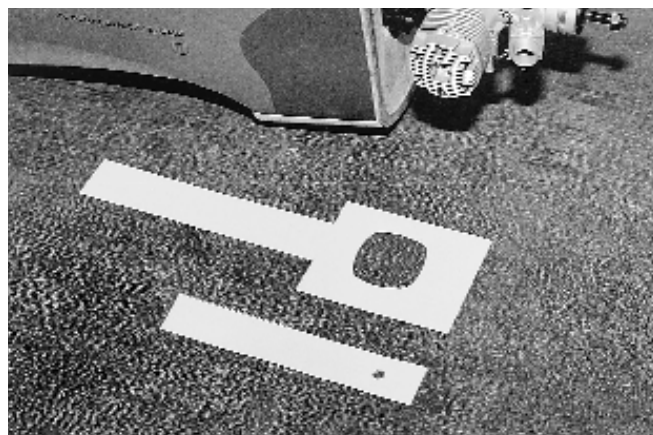
1 You'll need only a few items: a fuselage with a cowl ready to be added, your engine, some thin card stock (a manila folder works well), tape and a felt-tip pen.



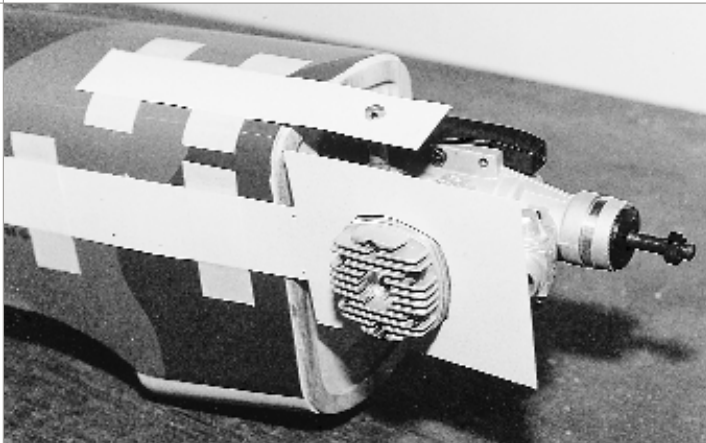
2 Before beginning, mount the engine as specified in the kit's instructions. Make sure that the thrust line is in the proper place so that the crankshaft exits from the center of the cowl. Then spinner alignment will be almost foolproof.



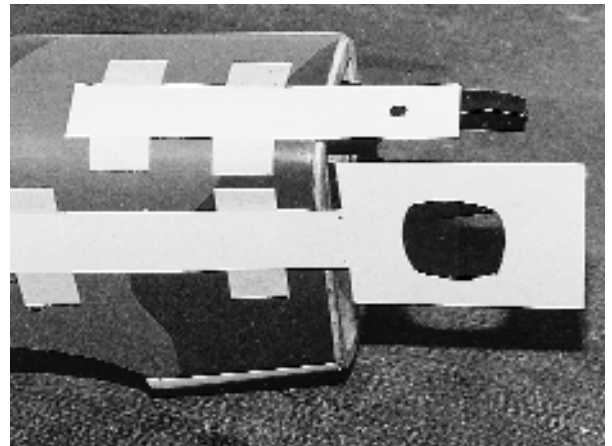
3 Remove the head from your engine, and trace around it on the card stock as shown. When you've done that, reinstall the head, being sure to properly torque down the bolts in a "crisscross pattern."



4 Next, cut out the opening for the engine in the card stock using the tracing you just made, and then cut your pattern out, adding a long "handle." Make a separate pattern for the needle valve using the same method as for the engine.

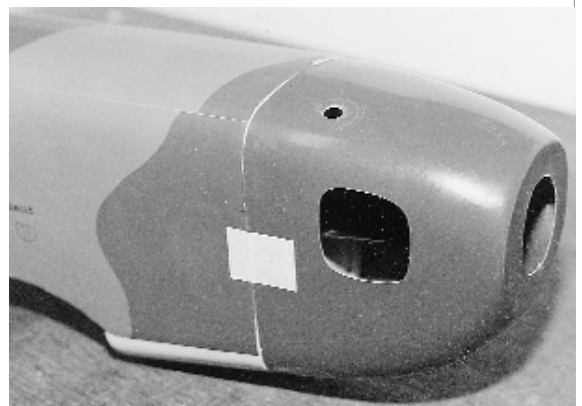
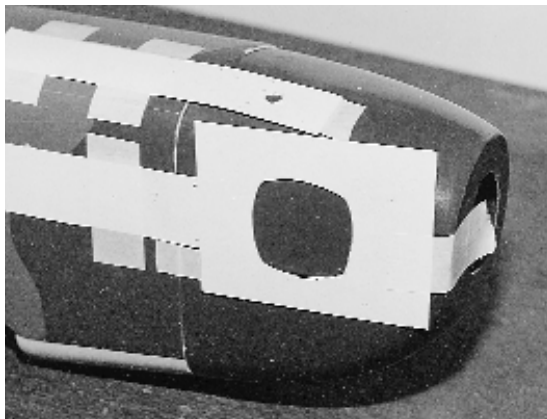


5 Tape the patterns onto the fuselage, making sure they fit over the engine and needle valve as shown. Place the tape back far enough to allow you to lift and bend the patterns away from the engine and cowl.

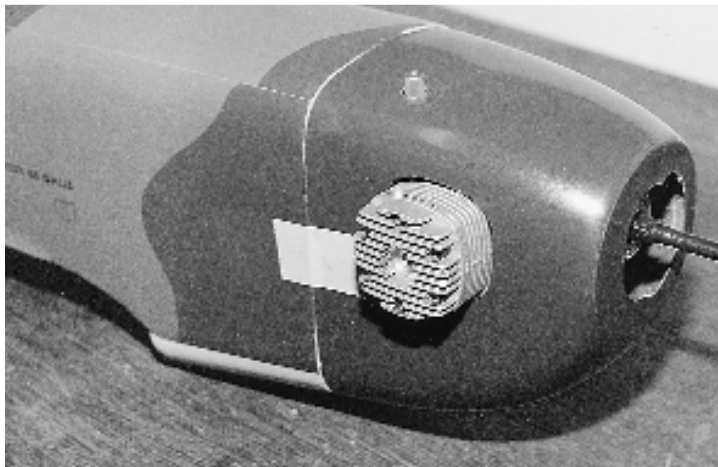


6 Remove the engine from the mounts, but leave the patterns taped in place.

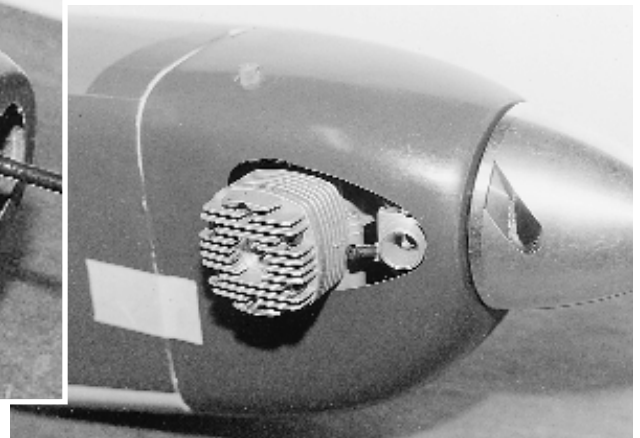
7 Tape the cowl into place and tape the patterns to the cowl. Now you know exactly where to trace the openings for the engine and the needle valve; simply trace their positions onto the cowl with a felt-tip pen.



8 Remove the cowl and cut out the openings using your favorite method. If you cut fiberglass using a Dremel tool, be sure to wear the proper protection. The photo shows how your cowl should look after you've finished cutting.



9 Remove the cowl, reinstall the engine, and check its fit. Make any necessary adjustments. As you can see in the photo, the fit that you'll get using this method is almost perfect.



10 Finally, you have to enlarge the opening to ensure proper clearance around the cylinder; also make adjustments for the carburetor if necessary. In this installation, I had to trim the cowl more to provide the proper clearance for the carburetor.

This technique is simple, quick and easy, and it consistently produces great results. Happy flying!