



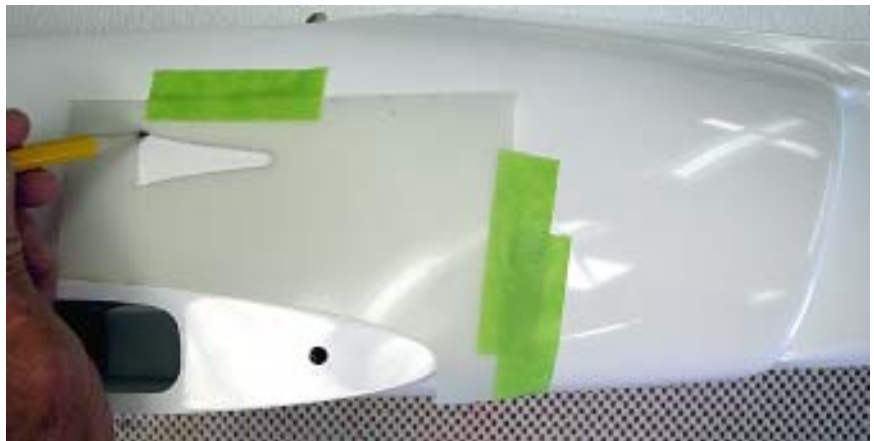
NACA Inlets For Battery Cooling

BVM #E2000-75

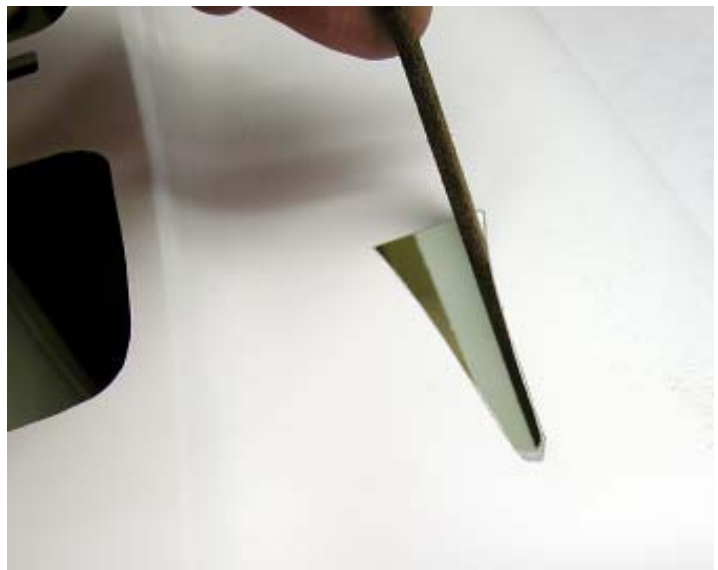
See page 3 for AUX cooling of Power Plug.

Adding these NACA flush cooling air inlets to an EVF powered jet will reduce the end-of-the-flight battery temperatures by 8-10 degrees F compared to a non-ventilated installation. The inlet design allows the cooling air to enter the fuselage with very little drag. The inlets can be added to a finished model. Mylar template is designed to locate the cutouts on a BVM Electra.

- Align the template on the fuse side using the wing root stub for reference. Use a fine tip marking pen to trace the inlet opening.



- Use a 1/16" carbide cutter at low speed to rough cut the opening. Stay well inside the marked line.



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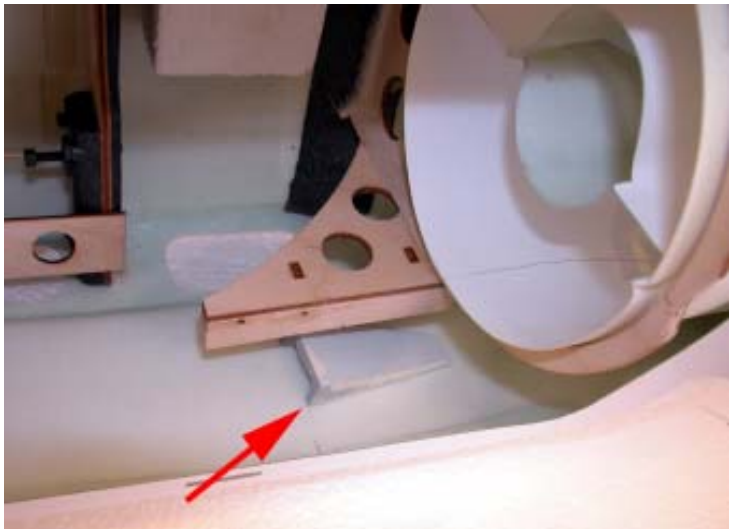
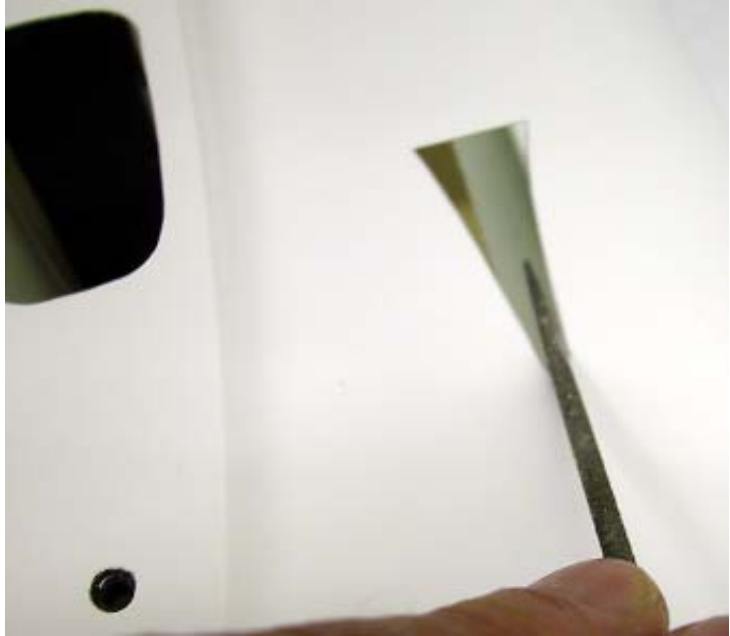
□ Use the flat side of a Perma-Grit half round file to finish the opening on the sides and back edge. Use the full round Perma-Grit file to bevel the leading edge opening.

□ Scuff the inside surface in this area.

□ Clean the NACA inlet duct with detergent and Acetone to remove mold release.

□ Test fit the part into the fuse and check alignment with the inlet opening. The fore/aft location is established by a good transition of the filed L.E. opening in the fuse and the entry ramp of the plastic molded part.

□ Hold the molded duct in position and tack glue with Zap-A-Gap, then apply an epoxy fillet around periphery to secure to the fuse skin.



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□ Cut a cooling air exhaust opening in the bottom of the fuse. Use the template provided and align the wide end of the bottom vent template with the stab leading edges. Center the template on the fuselage and use the same techniques to make this opening.



Power Plug AUX Cooling

Discussion: Operation of the BVM EVF 14S and experimental 16S units naturally creates more heat in the Power Plug connectors. This is a concern only when operating at ambient temperatures above 85°F. Installation of a single NACA Cooling Duct as shown below alleviates this concern. Multiple flight tests in a BVM eBandit confirm the desired results.

□ Use the mylar template and these tools to make the correct opening in the fuse top hatch. Shown here is the eBandit top hatch. Reference photo for best location that will allow auxiliary air to flow over the Power Plug.



□ Use a sanding block with #80 grit to shape the edges of the resin molded NACA inlet duct to fit the inside curvature of the top hatch. You can then fine sand the internal duct surface and paint it as desired.



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□ View of NACA duct after it is glued to the inside surface. We used Slo-Zap, then applied Kicker while holding it in place.



□ The AUX cooling air must have an exit. Use the 2nd mylar template to mark the bottom of the fuse as shown. Note location relative to the Stab L.E. Use the same cutting and trimming tools and techniques as shown above.