

INLET PREP

The MiG-15 inlet system has been accurately assembled at BVM. The following steps are required by the modeler prior to installation in the model.

The inlet duct system is not glued into the fuselage. It is removable for access to components.

NOTE: The inlet duct system is symmetric top to bottom and left to right.

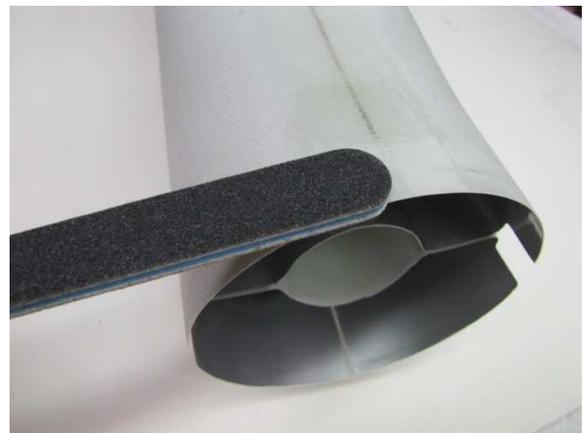
Use a scuff board to de-burr and bevel the edges of the vertical webs.



De-burr also the inside edge of the periphery to keep smooth air entrance into the fan shroud.



Sand the left and right F/G seam material to prepare it for the F/G wrap a few steps later.

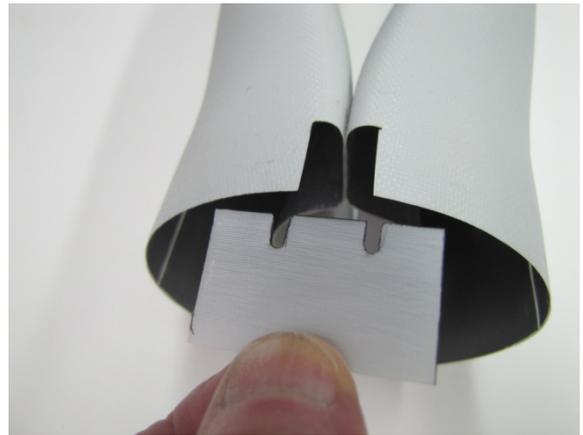


MiG-15 ARF
Assembly & Operation Manual

Use a drum sander to chamfer the forward edge of the inlet lip. Test fit to the nose cone and make final adjustments to the mating parts for the smoothest air flow path.



Use the (2) 1"x1-1/2" pieces from the .007" poly ply strip then notch to fit and span the gaps at top and bottom of inlet aft end.



C.A. these strips in place as shown on the inside of the duct.



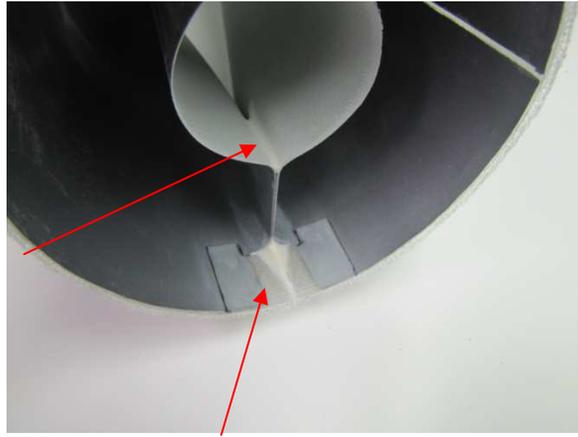
Sand the periphery of the inlet duct to prepare for the 4 oz. F/G wrap, and then apply the 1" F/G strip (1 wrap only) with finishing/laminating resin. Allow about $\frac{1}{16}$ " of the F/G strip to hang over the edge. It will be trimmed after the cure.



NOTE: Pacer Finishing Resin works well.

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Inject Aeropoxy into these joints top and bottom. Finger form a beak as shown for best airflow transition into the fan.



Full view of Aeropoxy fill.



Trim the excess F/G strip from the rear edge of the inlet duct with a razor and a #80 grit sanding block. Sand the periphery of the aft end of the duct until it is a slip fit into the EVF shroud relieved lip that is $\frac{5}{16}$ " deep.

NOTE: any slight out of roundness of the aft end of the inlet duct is pushed into round when inserted into the fan shroud.

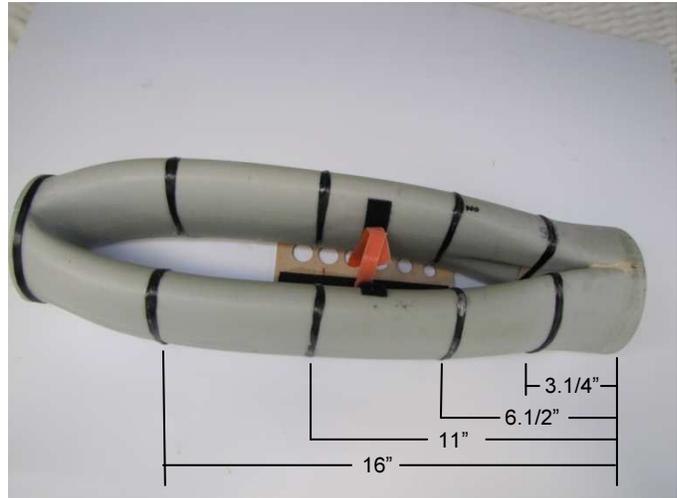


Put some magic marker ink on the spinner and hand rotate the rotor (with a $\frac{1}{8}$ " dowel stick) from the back to determine if the spinner is rubbing the F/G tunnel. Use a drum sander to trim as necessary for a "no rub" fit. See arrows in photo above.

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There are 4 stations of carbon fiber cord wraps that give the duct walls “hoop strength” reinforcement.

Pencil mark 3-1/4”, 6-1/2”, 11”, and 16” from the aft end of the inlet assembly, then apply 3 wraps of CF cord to each as described below.



Position the 1/4” balsa half disc as shown, then c.a. in place.



Scuff the outside surface of the duct with #180 grit.

Cut (8) 3 ft. lengths of CF cord. Use Zap-A-Gap and kicker to attach one end of the cord to the duct.

Wrap the CF cord around ducts 3 times and tack glue the strands close to the starting point. Cut off the excess cord and try to keep each wrap on top of the other for maximum “hoop” strength.



CAUTION: the following step should be done out of doors or use an exhaust fan to avoid fume exposure.

Apply thin C.A. to saturate the carbon fiber cord. Rotate the ducts to keep the CA flowing in the cord and not all over the fiberglass ducts.

Apply a very thin mist of kicker to complete the cure. Scuff any loose ends with #80 grit for best handling.

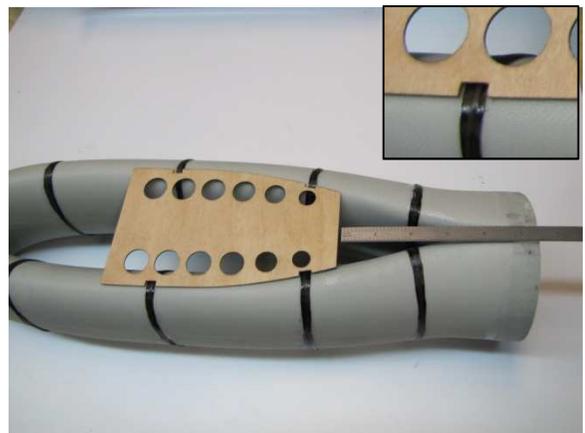
NOTE: Too much kicker will weaken the CF bond to the F/G duct.

FORWARD BATTERY SUPPORT TRAY

Sand the 1/16" ply Fwd Battery Mount with #180 grit paper, then apply a ZAP finish to allow the adhesive backed Velcro to stick better to the top side.



Locate this ply part 5-1/2" forward of the aft end of the duct.
Make notches in the edge to fit around the CF wraps.



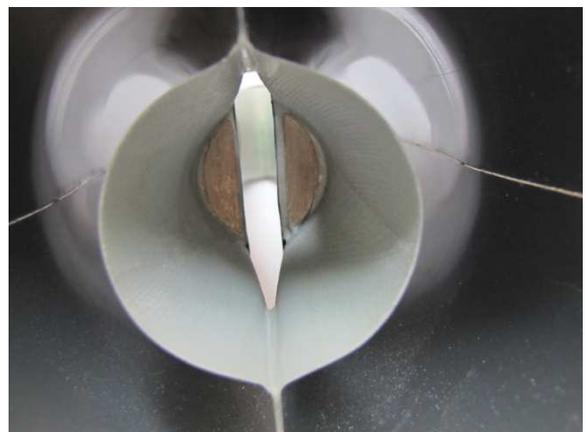
Use Aeropoxy to securely glue the 1/16" ply plate to the bottom side of the duct.



NOTE: Up to this point, the inlet duct was identical top and bottom.

Apply Aeropoxy to the 1/4" balsa 1/2 discs and CF wrap inside the Tummel.

BVM Syringes (BVM# PA-SR-0072) are used to apply the glue.



NOSE CONE

Check the fit of the inlet duct to the nose cone lip.

NOTE: The proper orientation of the nose cone is achieved if the panel lines on the left side of the fuse and the panel line on the nose cone are lined up.

This properly places the gun camera just to the right side of the fuse centerline (view from cockpit).



Make the notch in the nose cone to accept the tabs on the front end of the nose gear doors.

Scuff the mating surfaces then use BVM Vpoxxy (or 30 min. epoxy) to glue the nose cone on. You can apply a few drops of ZAP-A-GAP on the joint through front access to hold while epoxy cures.

Wipe off any excess glue with Isopropyl Alcohol.



After final assembly, pen mark the inlet and nose cone for proper vertical alignment. Site the model from the front.

Apply a small dab of Zap-Goo to the inlet duct and EVF shroud at the 11 and 1 o'clock positions to keep the duct from twisting.



FAN MOUNTS

NOTE: nose cone should be glued onto the fuse and the inlet test fit into position.

Use the (2) 1/4"x 3/8"x 2" maple sticks supplied. Glue them flush with top edge of the 1/8" ply parts and allow 1/8" set back from front edge.



Bevel the top inside edge of the ply part, then test fit into the former bracket. Test fit the EVF shroud with 1/8" rubber mounts and blue tubing pieces in place.



Note also the clearance holes for the bolt heads on the EVF shroud.

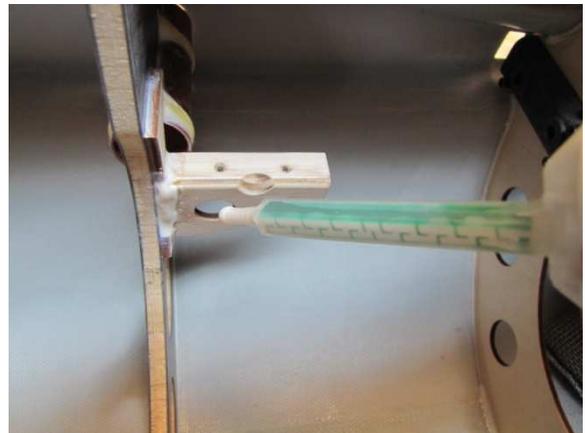


Tack glue the fan mounts in position then install the inlet ducts.

Place the fan shroud with its 1/8" rubber pads and silicone tubing on each side of the fan mount lugs.

With the fan mounts as a guide, use a 1/8"x 6" drill to start the 2 holes in each maple rail.

Remove the fan mount rails and 1/8" ply parts, and then finish holes with a #43 drill and 4-40 tap. Countersink the top side of holes with a Perma Grit counter sink then apply thin C.A. to the threaded holes and tap again to clear the threads.



Re-install the fan mounts as before. With the inlet installed, permanently glue the mounts in place to the bulkhead. Use Zap-A-Gap first then remove EVF and apply Aeropoxy to secure the fan mounts.

After the Aeropoxy cures, use a Dremel Drum Sander to clear away excess glue. Test fit the EVF unit, and adjust the opening in the former and mounts as necessary for a slide through fit.

