



Dragster Air Scoop and Mount/Arrestor For Dominator 4500 Series Carburetor

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Summary

Complete Dragster Scoop with Plug, Mount, Screen/Arrestor. Mounting Plate was CNC'd, the rest is printed.

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This is a dragster style carburetor scoop I designed for my boat. It requires quite a bit of post-processing to make it look finished. The Mounting Plate was cut from 1/4 inch polycarbonate on a CNC router. The rest of the parts are printed. You will need various 1/4-20 screws, taps and washers to assemble.

Printed Parts:

ABS or PETG- Scoop Assembly, Mount Upper and Lower, Screen/Arrestor, Flange Riser, Plug

TPU- All Gaskets

Nylon CF- Mounting Brackets

Mount upper and lower require support. Scoop assembly parts required brims. Scoop alone is roughly 40 hours of printing and uses about 1500g of filament. I printed everything at default generic settings 0.20mm layer height. Screen/arrestor was printed at 50% hex infill with 0 top and bottom layers and 5 walls.

Scoop assembly was printed on 7 plates with BambuLab X1C (256x256x256mm).

Assembly of scoop:

Fine sanding and glue parts together, using CA glue and activator spray. Use masking tape to clamp parts together while gluing. Sand glue joints.

Post-Processing/Painting:

Once assembled, sand and coat with resin/hardener mixed to the correct ratio inside and out. Allow excess to drip off. I did this process twice and sanded between coats. Then, apply drywallers fiberglass tape to inside and re-coat with resin. Use bodyfiller to fix exterior surface deviations and sand. Re-coat exterior with resin and sand. Apply 2- coats of automotive filler primer and sand up to 800 grit sandpaper. Spray inside with black paint, mask and spray exterior with desired final color. Re-coat interior and exterior with a carefully applied coat of resin. Use a torch to carefully extract bubbles from the resin. This step provides the final gloss over the paint. I used West System epoxy resin. Once mounting plate is assembled, holes will need to be drilled for 1/4-20 screws in the scoop to mount it to the base. Mounting bracket screws will need to be tapped to accept the 1/4-20 screws, along with the corresponding holes in the CNC'd Mounting Plate.

Model files

arrestor-screen-petg-x1.stl



dominator-flange-gasket-x2.stl





dominator-flange-riser-1-3-4-in-x1.stl



scoop-mount-gasket-tpu-x2.stl



scoop-mount-upper-x1.stl



scoop-mount-lower-x1.stl



scoop-mounting-plate-cnCd-x1.stl



scoop-plug-abs-x1.stl



scoop-assembly-11-parts-x1-each.3mf



taller-support-bracket-x6.stl

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