

Early Ghibli Oval Air Filter Replacement

By Claus Groth

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Those of you considering taking out a home equity credit line to purchase your next Ghibli air filter may be interested in this replacement.

K&N manufactures washable filters constructed of cotton supported by wire mesh. To use, air filter oil is sprayed onto the cotton to hold dirt particles. To clean, the filter is soaked in cleaning solution for a few minutes, rinsed in water and air dried. Although cleaning filters with air flow from the inside outward is even more difficult than those with normal flow because dirt must not contact the outside surface, the K&N catalog states:

'With the benefits of a less restricted air flow, coupled with a high capacity surface area, cleaning may be prolonged as much as 150,000 miles on street driven vehicles.'

This seems excessive. I recommend cleaning your Maserati filter at least every 100,000 miles or so. By the way, their \$3.00 catalog contains interesting air flow information and formulas for the technically inquisitive.

I purchased two round K&N filters #E3230 (List \$36.59, Net \$18.95 at PAW, see below). Each is 5-5/8" outside diameter, 4-1/2" inside diameter and 4-3/8" high.

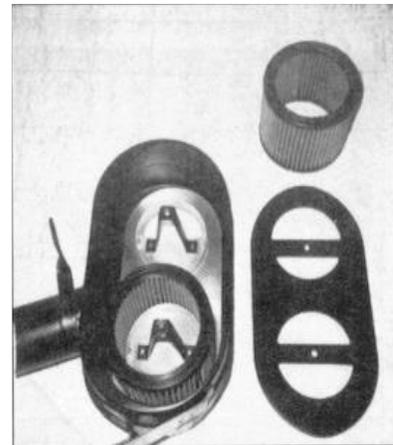
Two plates are required, one to provide a flat surface on the bottom of the housing (toward front of car when in place) and the other is a flat lid. Two rings are required to support the filters. I used 6061-T6 aluminum which is hardened and readily available,

Use 1/8" x 6-3/8" x 13-1/2" material to cut the bottom plate with full radius ends. Remove the two internal brackets, center the plate over the oval racetrack, mark the haft circle cutout and the four bracket holes and finish the plate.

I rolled and welded two rings from 1/16" x 3/4" material into 4-5/8" circles. The top ring is tack welded so that the half-circle cutout is inside the ring. The bottom ring is centered around the bracket.

Place gasket sealer or silicone sealer around the cutout and rivet the plate and brackets inside the housing using 3/16" x 1/2" long pop rivets. To use the original cover screws, place 1/4" spacers under the bracket, otherwise use M8 x 1.25 x 30 hex head screws.

Fabricate the cover from 3/16" x 7-1/8" x 14" material. Place the cover over the opening and mark the top thumbscrew hole through the rear opening and bracket threads. Measure distance



between holes and mark the second hole. Drill 11/32" holes. Cut a full radius on each end.

I cut 4-3/8" openings, leaving a 1" wide strip. This provides much more air flow than the outlet tube allows and is not necessary. Inlet opening volume must exceed outlet volume. The 3" dia. outlet equals 7.1 square inches and the half circle inlet through the rear equals 5.5 sq. in. Two 1" diameter holes at each filter are quite satisfactory and easy to cut with a hole saw. Remember that the top fitter is not centered on the screw hole.

The 1/8" thick bottom plate results in a 1/16" gap between opening and cover. Glue a suitable foam gasket onto the cover to seal around the edge.

For those concerned about originality, note that the conversion may be reversed with only the original rivets having been destroyed. Don't discard the original cover.

K&N Engineering, Inc.
PO. Box 1329
Riverside, CA 92502
714-684-9762,
800-858-3333 Outside CA

Performance Auto Wholesale, Inc.
8966 Mason Street
Chatsworth, CA 91311
818-998-6000