

## C4 Valve Cover Refurbishment

Well I finished my 85's valve covers. They were not in too bad a shape, but the finish was starting to peel off. I decided to strip them down to the bare magnesium castings and try and duplicate the sandy textured finish. Not to toot my own horn, but I think I came pretty close to the factory finish. I glass bead blasted both covers, primered with an etching primer, a couple coats of a texture spray, and topped it off with valve cover paint (just to get the right color). Here are a couple shots:



Originally Posted by [Joe C](#) 

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*I have a small bead blasting cabinet w/ glass blasting material. One cover I blasted straight up; the other I hit it with paint stripper first. The one that I used the stripper on took it down to a dark gray primer, and no further. I proceeded to blast the second cover. Both covers took about the same amount of time to get down to the bare castings. after a hot soapy-water wash and rinse, compressed air dry, final wipe with lacquer thinner.*

*Next, I sprayed a couple coats of Eastwood self-etching primer: `*

<http://www.eastwood.com/eastwood-s-self-etch-primer-gray-and-black.html>

*I followed the primer with a couple coats of Eastwood textured paint:*

<http://www.eastwood.com/light-argent-metallic-textured-coat-150zaerosol.html>

*my castings, and I am guessing most all magnesium castings have a lot of cosmetic imperfections in them - this product seemed to hide most of them.*

*Finally, a couple coats of standard c4 (magnesium) valve cover paint from [Mid-America Corvette](#), [ZIP](#), [Corvette Central](#), or [Ecklers](#) .*

*Anyway, I pretty much followed the instructions on all the cans...*

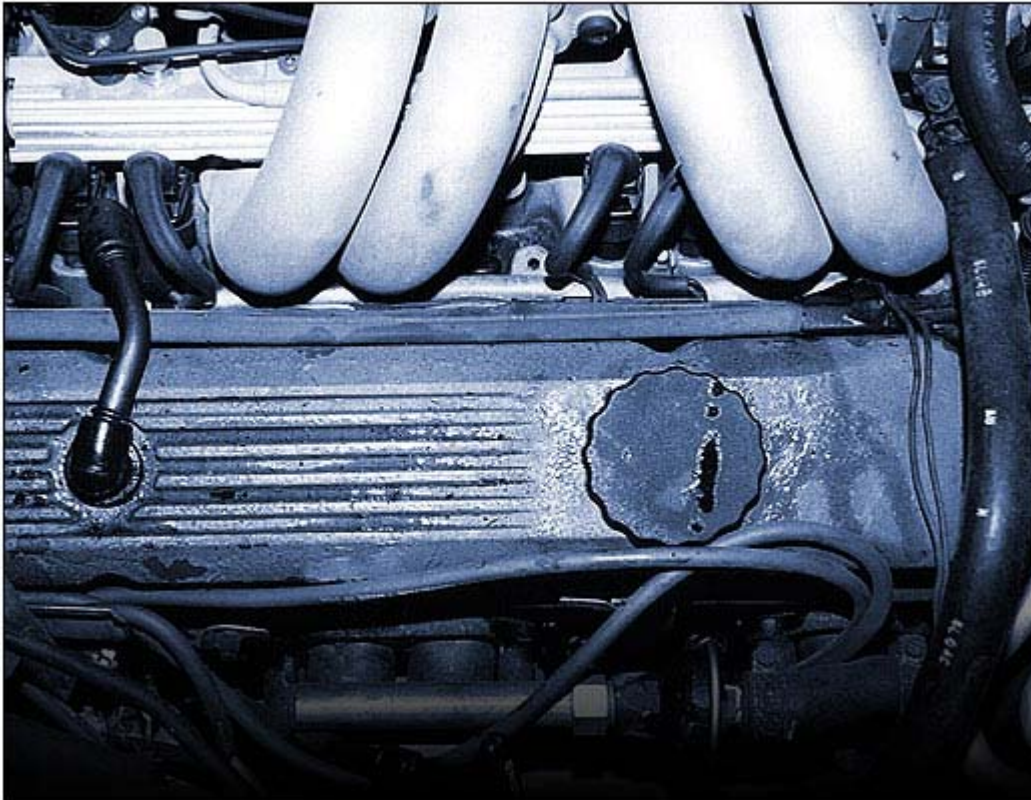
*hope this helps... 🍻🍻🍻*

## C4 Valve Cover Refurbishment

◀RETURN TO CONTENTS |

**Feature Article**

**Corvette Magazine**



### Paint and Cover up.

Here's a quick and easy way to refinish L98 valve covers. Are your L98's valve covers oil stained with the paint peeling or do the valve cover gaskets leak?

You can restore those valve covers and the answer is as close as your phone or computer. [Zip Products, Inc.](#) has everything you need to make those worn covers look new. It is an easy project to do and will not take more than one afternoon. Follow along as we feshen up the valve covers on our 1988 L98 the quick and easy way.

Here's a typical looking L98 valve cover. The factory finish has peeled off and there's oil leaking from the gaskets. No matter how well you detail the engine compartment, the valve covers look terrible.



**01:** Here's what Zip Products sent us to redo the valve covers: Valve cover paint, valve cover gaskets, EGR Tube Heat Shield, valve cover emblem, grommets, PCV valve and spark plug wire retainers. You will also need a few common hand tools, a quality paint stripper, wire brush, gasket scraper, scuff pad, spray silicone and RTV Red Silicone.



**02:** Mark each of your plug wires (so that you know where each plug goes) and remove them from the spark plugs and retainers. Lay them back out of the way. Now remove the PCV valve and hose from the valve cover.

## C4 Valve Cover Refurbishment



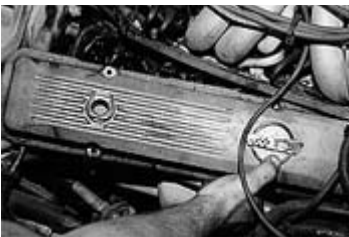
**03:** Remove the 2 bolts that hold the wiring looms in place at the top of each valve cover and carefully lift them up and out of the way. This will give you access to the top two valve cover bolts.



**04:** The valve cover bolts can be removed along with the lower spark plug wire retaining clips.



**05:** The passenger side air inlet tube and oil filler cap is now removed. Loosen and remove the 2 Torx screws that hold the EGR tube into place. Carefully lift the tube from the intake-mounting surface and rotate it slowly towards the firewall. With the EGR tube facing the firewall, you will be able to lift the valve cover up and off the head.



**06:** Lift the valve cover up and remove it from the head. Make sure that you have a large flat blade screwdriver handy. You may need it to pry the valve cover away from the alternator or A/C compressor. Be very careful when you pry against these valve covers; they are cast metal and can crack or break easily.



**07:** When the valve covers are off, check the oil return holes in each head. Make sure they are clean and open and there is no oil or sludge buildup. If these are plugged it will cause oil to build up in the valve cover and then drain down past the valve guides causing the motor to smoke. This can also cause severe valve cover gasket leaks.



**08:** A gasket scraper should be used to remove the valve cover gasket. lay paper towels or shop rags along the gasket rail to keep any debris out of the head while scraping off the old gasket.



## C4 Valve Cover Refurbishment



**09:** Thoroughly clean the inside and outside of each valve cover. If you do not have access to a parts washer, mineral spirits and a bucket will also do the trick.



**10:** Use a quality paint stripper to remove the old finish. After the paint stripper has sat according to its instructions, use a wire brush to remove all traces of the old finish. The cleaner the surface, the better the finish will be. After all of the old paint and stripper is removed, thoroughly wash the valve covers and let them dry. When they are dry, use a scuff pad to slightly roughen up the surface. This will make the new paint adhere better.



**11:** Clean and refinish all of the sparks plug wire retaining clips. Stainless Steel Paint available from Greg Donahue Collector Car Restorations will give them a natural steel finish.

You may notice some rough areas in the casting of the valve covers. This is because they are a poor casting. Air sometimes gets into the casting process, which causes bubbles. When these bubbles break they create pits in the cover. These can be smoothed out using different grits of sandpaper but they are very hard to totally remove.



**12:** Clean each valve cover surface with lacquer thinner as a paint prep. After they are cleaned, do not touch them with your bare hands. Oils from your skin can cause the paint not to adhere properly. Place the valve covers on a flat surface and spray them with the valve cover spray in light overlapping strokes. Spray 2 to 4 coats and allow at least 5 minutes drying time between each coat. Change directions on each coat that you spray. You will get a much better coverage by doing it this way. Let the valve covers dry for approximately one hour before starting your reassembly.



**13:** Start the re-assembly by spraying the PCV valve grommet and the air inlet tube grommet with spray silicone. This will help them slide into the valve cover openings. You can also install the new valve cover emblem now. Align the notch in the back of the emblem with the raised alignment guide on the valve cover. Remove the adhesive cover and place the emblem onto the valve cover. Press it down with the palm of your hand so it sets.



**14:** Put the new valve cover gaskets into place. The side of the gasket with the double holes goes to the top of the head.

## C4 Valve Cover Refurbishment



**15:** The EGR tube shield can be placed over the EGR tube. Slide the EGR temperature switch through the shield's hole then wrap the shield around the tube. It has a Velcro strip that will hold it in place on the tube.



**16:** Align the passenger side valve cover on the head. Do not bolt it into place yet because you now have to re-install the EGR tube. If you do not have a new gasket, you can use Red RTV Silicone. Thoroughly clean the mount area on the tube and intake. Spread a thin layer of RTV Red Silicone on the tube-mounting surface and let it sit for about five minutes. Carefully align the EGR tube with the mounting surface and install the 2 Torx bolts. Tighten them into place. Re-connect the EGR temperature switch to the wiring harness.



**17:** Install the valve cover nuts along with the spark plug retaining clips and retainers. Torque the nuts to 50lb in. Align both engine wiring looms and install and tighten the retaining nuts.



**18:** Install the air inlet tube into the passenger side grommet and the PCV valve and hose in the driver's side grommet. Screw the oil filler cap onto the passenger side valve cover.



**19:** Place the plug wire retainers onto each of the plug wire retainer clips. Route and install each plug wire to its corresponding spark plug. That why you marked them when you disconnected them, right?



**20:** Make sure all of the nuts and bolts are tight and the plug wires are in place. The project is finished and the valve covers look great. No more leaks and best of all, you did it yourself.

**Paint and Cover Up :**  
**Refinish Your L98 Corvette's Valve Covers**

**SOURCE:**  
[Zip Products, Inc.](http://ZipProducts.com)

## C4 Valve Cover Refurbishment

8067 Fast Lane  
Mechanicsville, VA 23111  
(800) 962-9632

### **PARTS LIST:**

- [ZM-162A](#) • 59-86E Valve Cover Gaskets
- [VC-305](#) • 86L-92 Valve Cover Gaskets
  - [PCV valves](#)
- [EH-481](#) • EGR Pipe Shield
  - [Spark Plug Wires & Retainers](#)
- [M-3221](#) • Valve Cover Emblem
- [ZMG-92](#) • Valve Cover Paint
  - [Various Valve Cover Grommets](#)

Also needed:

- Paint Stripper
- Scuff Pad and Lacquer Thinner

Text and photography by Greg Donahue Collector Car Restorations.