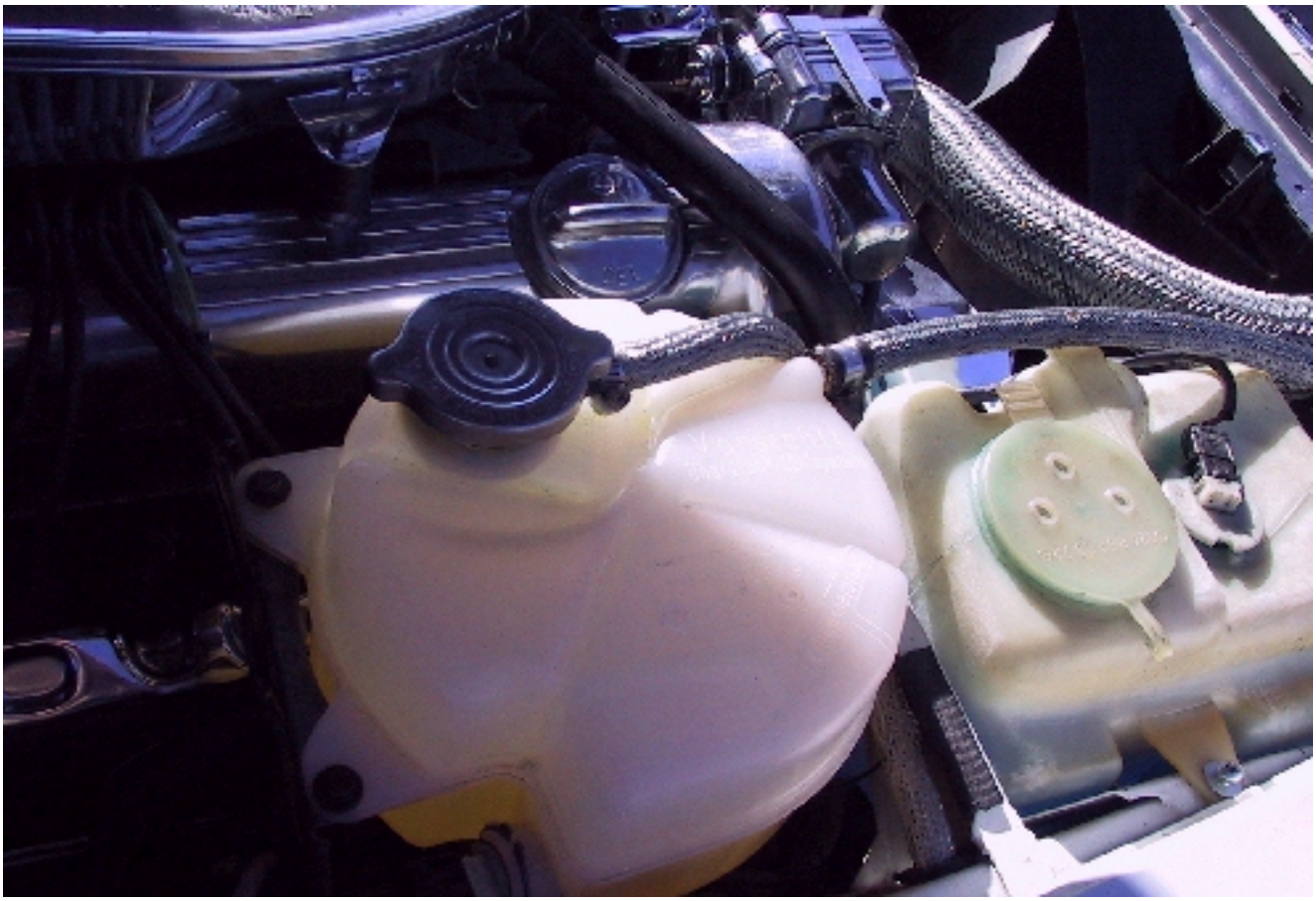
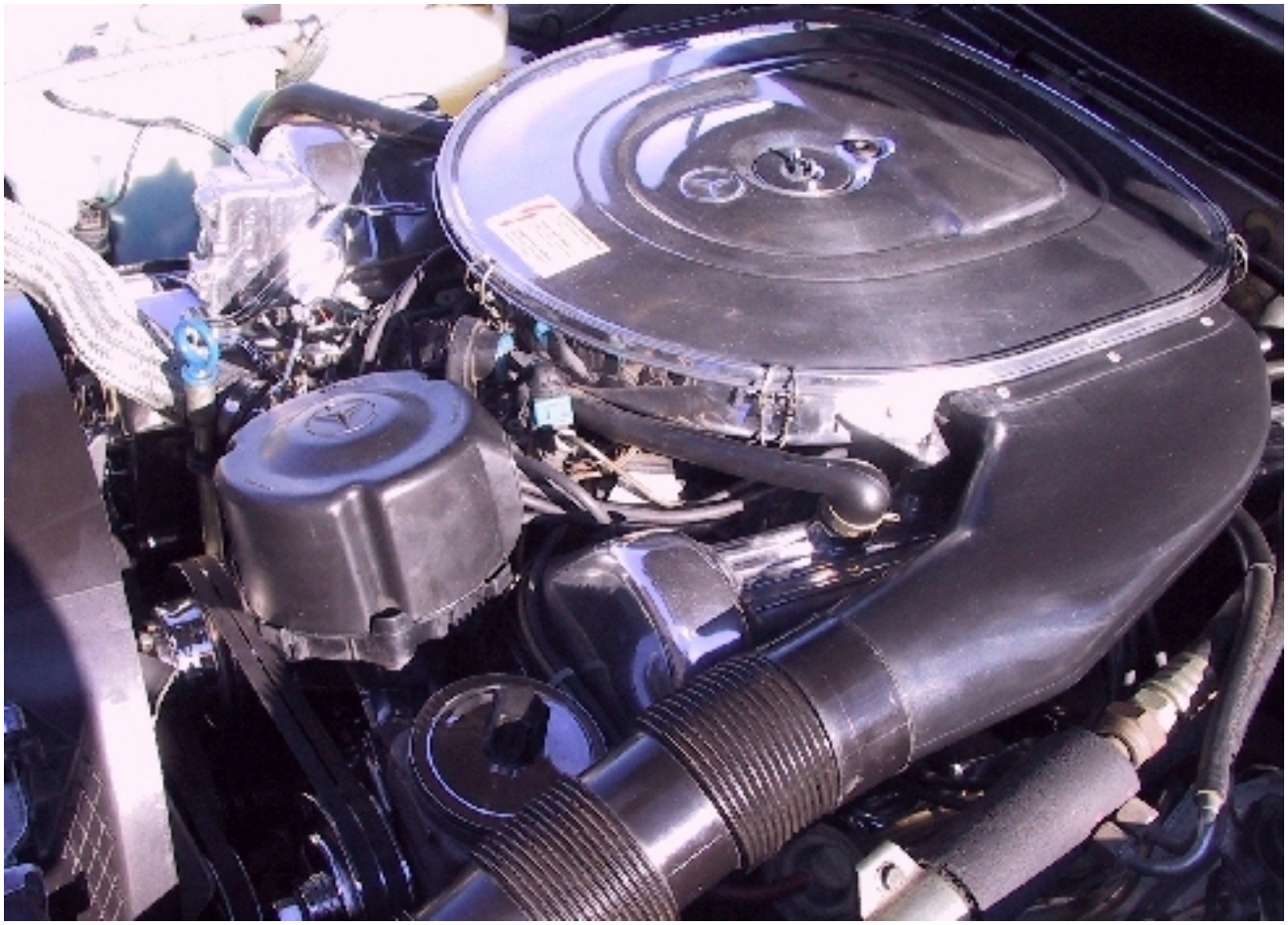
117 / 560SL Engine Dress-Up





I know that purists will not like this, but I finally finished my dress-up stuff as far as I'm going to go. I had earlier buffed out (with a buffing machine and industrial polishes, wheels, and bits) the valve covers and air cleaner. I don't drive my car in the winter, and never deliberately in rain; my experience has been that a thin coat of oil (just about any oil) once in a while will help keep aluminum looking nice.

The air cleaner was fairly easy (but with a few pits I didn't remove); the valve covers were not easy - the castings are pretty rough (it seems that later valve covers are less rough, as I did two sets). My results with valve covers aren't perfect, but you can see yourself in them. If you buy spares for yourself, look for cracks. Jumped timing chains are the usual COD on these cars, and that's why a lot of valve covers in the junkyard are cracked (particularly the left one).

I did the fan, which was very difficult (in fact, I did two) and seems to be made of an aluminum alloy that corrodes quickly. I sprayed wheel clear over it shortly after repolishing the second time. I did not go to extremes on them to remove pits because I was concerned about strength and balance. As far as I can tell, I did not significantly affect the balance of the fans (been using one for more than a year with no ill effects to the fan clutch or water pump).

With all my polishing, my goal was not "show only" quality, just very good quality. The amount of work to produce truly "Show quality, shave in it" aluminum polishing is exponentially greater than what I did here.

In the second and final phase, I polished:

The water pump - a very difficult and nasty job due to the odd shapes and nooks and crannies. After replacing my original water pump, I polished up my old, non-leaking (yet) pump for practice, and I liked it; then I bought another one, polished it, and put it back on. Then I polished up the one with about 3K miles on it. The upper and side fittings (the top neck and thermostat housing) were also polished. The side one was easy, the upper one was very difficult. BTW, the temperature sensors on top polish up brass very nicely!

The power steering pump lid - I think that this is made out of cast zinc, and not very well turned. I don't have a lathe, so I took a screw and nut, "bolted" it to the chuck of my $40 drill press, and let it rip, sanding it with various sandpapers, finishing with wetordri and polishing. Once this was done, it really polished up nicely - at first, it was the worst looking thing I had polished; now, it's the best.

The alternator mount - a VERY rough casting, took a lot of work. I polished the one on my car and a spare.

The distributor-a nice casting, very easy, except for the nooks and crannies. Actually, I did two of them.

The alternator - This is surprisingly easy once you remove the pulley and get the case apart (which took an impact screwdriver). The castings are actually very smooth. I also replaced the regulator/brush assembly. I had purchased an upgraded 80A alternator which is a little bigger and and is tight, but it does fit; the newer alternator uses lugs and studs/nuts for connection, not a plug; I had to rewire this connection (not difficult, but a PITA to route the wiring through the insulation jacketing). After doing this, I polished, re-regulated, and had chromed the pulley/fan of the original alternator. Naturally, I used the handy European mm cross section to English AWG converter at the beginning of the 107 manual's electrical section when sizing the wiring.

The accellerator servo - not too difficult with the small polishers and dremel; the domed part is steel, contains the magnets for the servo motor, and I don't think it could be chromed; I polished it. We will see if I can keep rust off of it (See below). I wanted to see how these worked, so I acquired two spares, which I also polished and tested.

The very last thing I did (not pictured) was polish the power steering pump itself (later 107's had aluminum pump housings). This, of course, was insane; it took about a day of work with the tools that I have available, but I did it! The casting was actually much worse than it initially appeared to be. Removing the pulley was extremely difficult; I destroyed a cheap $40 tool before buying the proper $80 tool to remove it with. I removed the nameplate carefully by lifting it with a thin stainless steel blade and wiggling the pins out. I managed to lose the pins, so I screwed the nameplate back in in a "self-tapping" manner with screws.

I haven't seen this done elsewhere.

CAUTION:
When messing with the accelerator servo area, go through the manual and reverify the adjustment of the linkage and the dressing of your plug wires. I know this because my throttle STUCK!!

I had chromed:

The front engine lift hook

The alternator adjusting arm

The water pump and power steering pump pulleys, nuts

The alternator fan and pulley (actually, the "pulley" is two pieces), and nut

The accellerator servo mount. I also replaced the rubber isolation doughnuts and the rubber mount underneath; getting those doughnuts in took near-boiling water and a lot of swearing.

The heat shields - one is very easy to remove/install, the other requires lifting out the EGR; I bought another gasket for this purpose. They look nice, but now the exhaust manifolds look comparitively worse. Well, maybe next year I'll have then jet-hot coated.

I had the plater attempt to plate the lower pulley. Apparently, it's at least partially stamped, and contains hollows and voids that make it nearly impossible to drain. So, I just repainted it. Maybe someday I'll boneyard one and see if I can solve this by carefully drilling in a few strategic places.

I polished all the bolts and hose clamps (pretty sure the clamps are stainless) to a shine. Now, as far as I know, these bolts and nuts are steel, but they polished up to something beyond what you would expect. I've kept a few that I waxed in water for a few days as an experiment, and they didn't rust. I have reason to beleive that these MB bolts (at least of this era) were high-strength steel and might not be easily prone to rust due to the alloys used. Polishing them to a chromelike shine may also make the surface somewhat non-porous, which probably helps. My engine doesn't leak oil anymore, but certainly there's usually some oil vapor going on in most 20 year old engine compartments. At least, I hope that this is true - I polished up the distributor gear access cover and the AC idler pulley, and they are made of this steel as far as I can tell.

Was this worth it? Frankly, no, although (even including tools and supplies) I spent a lot more time than money. You can't see all that much of it, and the windshield washer bottle gets in the way of the best parts! In the future, I MAY relocate/replace the bottle to where the battery would be mounted in the

engine compartment. This would also allow me to put in the right hand cold-air inlet (I have the parts to do this with, a "right-handed" inlet to the air cleaner body from a 560 SEC, a hose, etc, but no room). This might be worth a few HP.