Some C6 Vette owners may have noticed their headlight lenses don't have the same clarity as they did when they were new. Many lenses have a slight cloudy fogging on the inside, (sometimes caused by blocked housing vents), some have a discoloration beginning on the outside and others have the dreaded "grazing" happening.

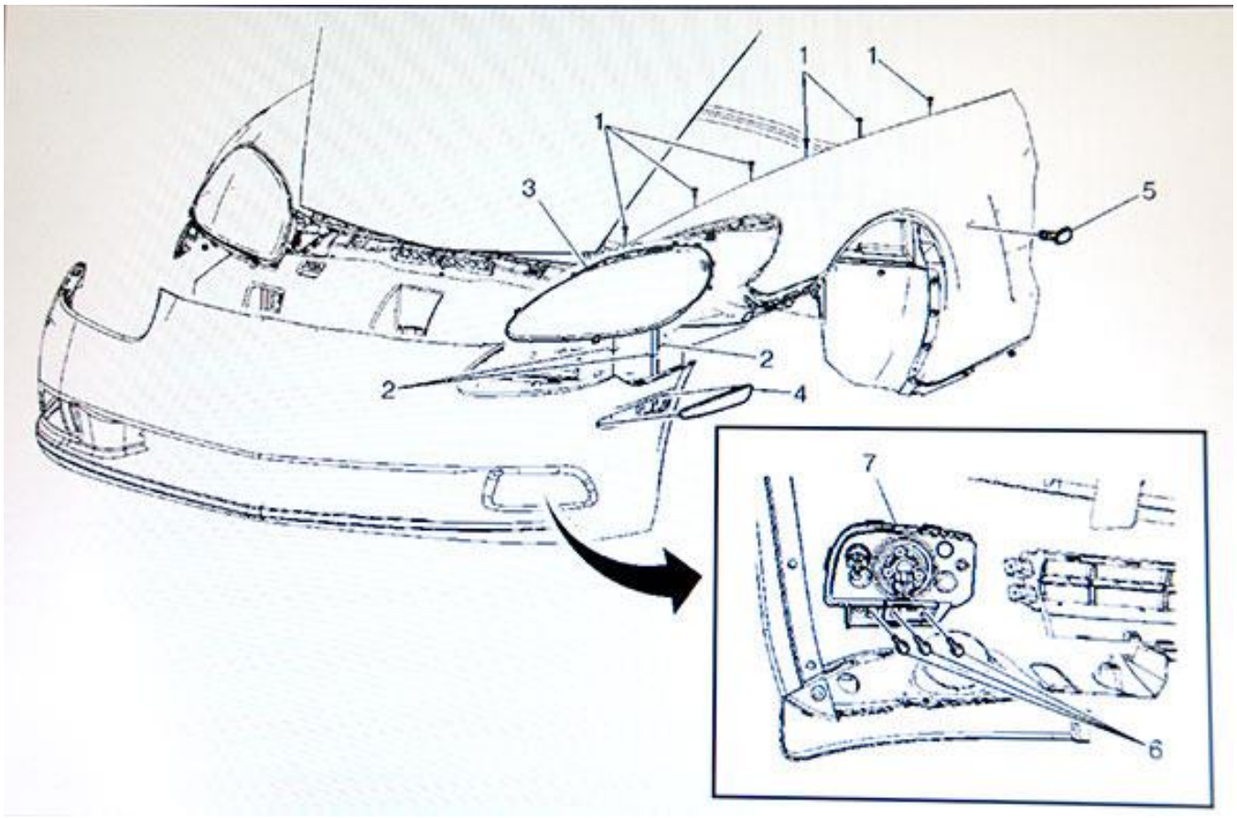
Grazing is where the lens appears to have a multitude of tiny cracks in the plastic lens. Polishing and lens restoration kits doing nothing. The lenses need to be replaced. Unfortunately this means one of two things: 1) buying a new headlight assembly from GM for around $1600 a piece or, 2) removing and disassembling the headlight assembly to replace the plastic lens.

The second option was chosen for one member's "graze-stricken" Vette and following is a guide to how this switch over was accomplished. This article is broken down into three areas - Gaining Access to the Headlight Assembly, Removing the Headlight Assembly and Replacing the Lens.

There are differing views as to what is necessary to access the headlight assemblies. A few Vette owners have tried turning their front wheels, loosening bolts on the fender and front fascia/bumper cover and prying body parts in a manner that the assembly can be snuck out of it's position on the car. The risks involved in this approach are damaging the body panels with excessive bending or scratching the paint. In addition access to the bolts which secure the headlight assembly in place and the wiring harness are very restricted, making the task more challenging.

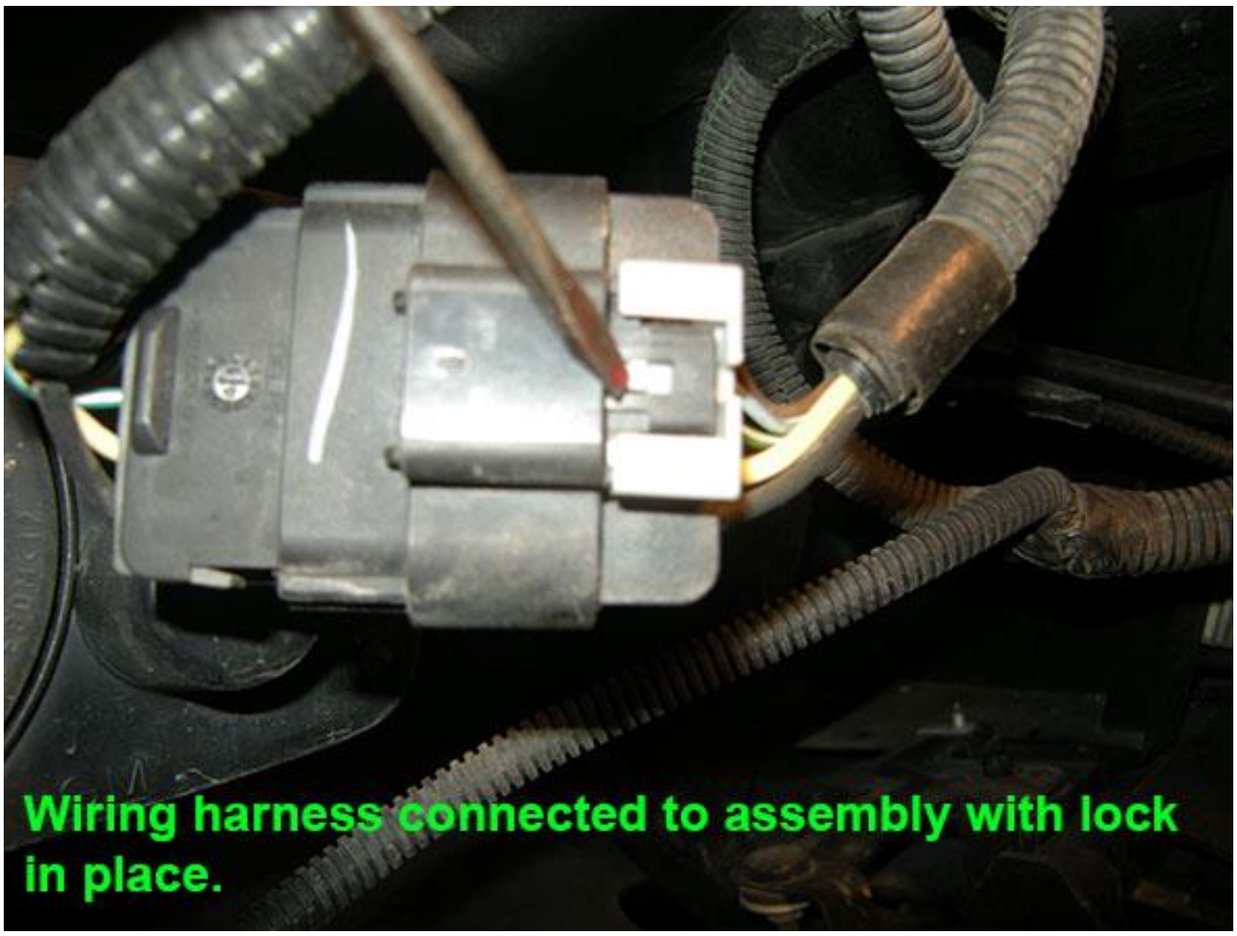
Gaining Access to the Headlight Assembly

I decided to take a more cautious approach and followed General Motors directions for accessing the headlight assemblies, which included removing the front fascia of the car.

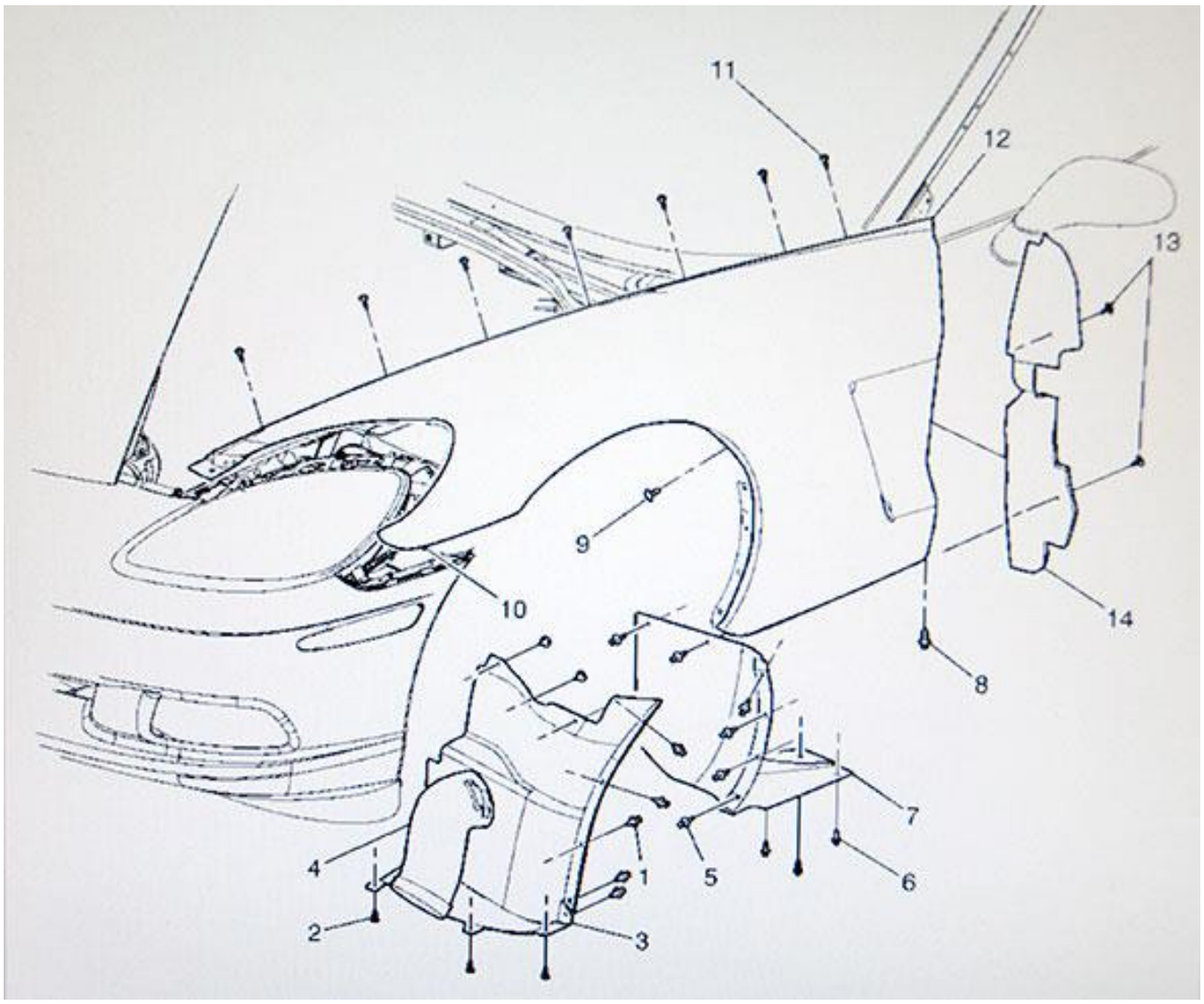


- Front wheels were removed allowing easier access to wheel openings.
- Four 9/32nd bolts were removed connecting the fascia to the sub-frame along the top edge of fascia in the engine compartment.
- Fog light wiring harnesses were disconnected
- T15 bolts were removed along the inner top edge of the fenders in the engine compartment. (#1 in above diagram)

Next, the wiring harness connecting the headlight assembly to the car's wiring system was disconnected.

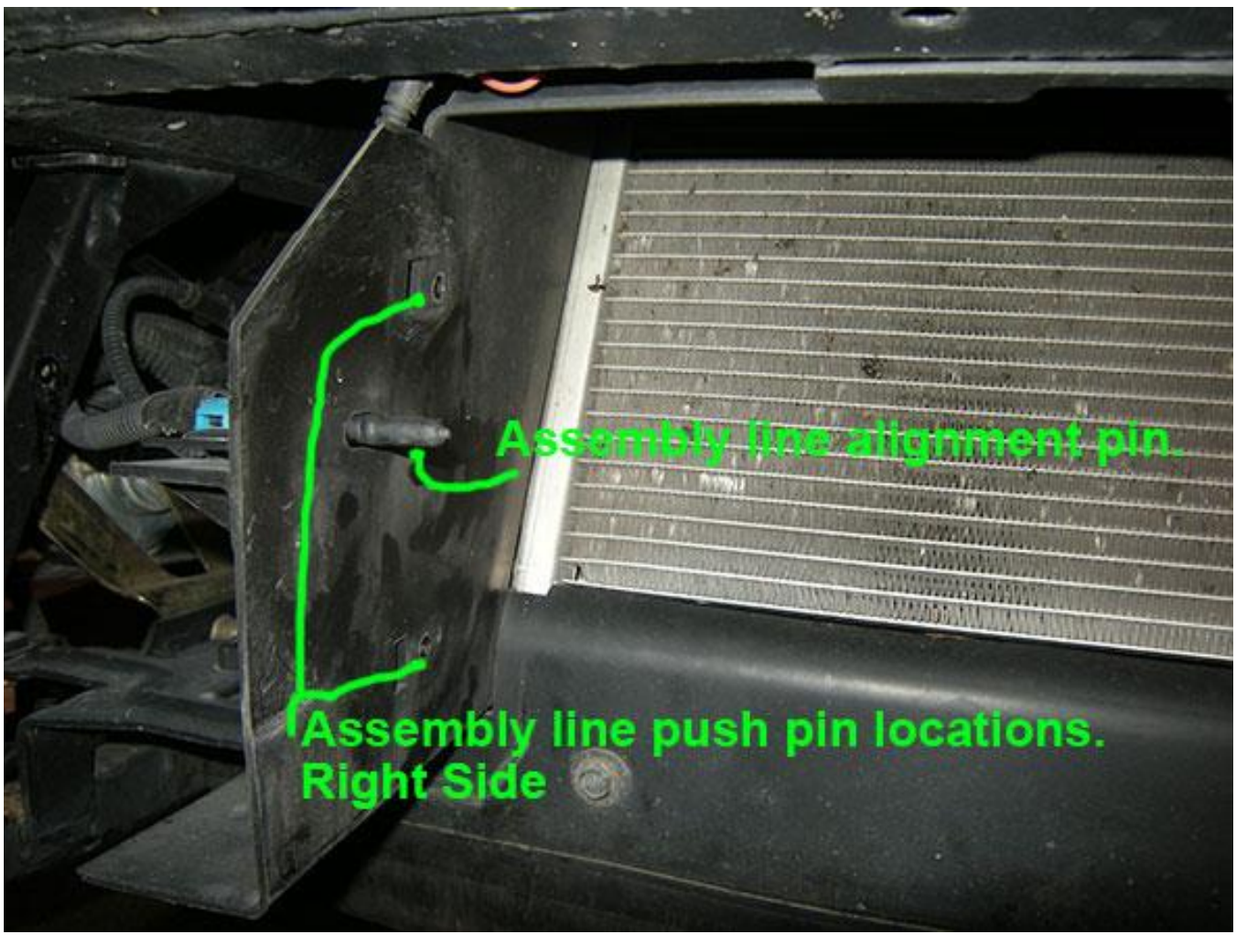


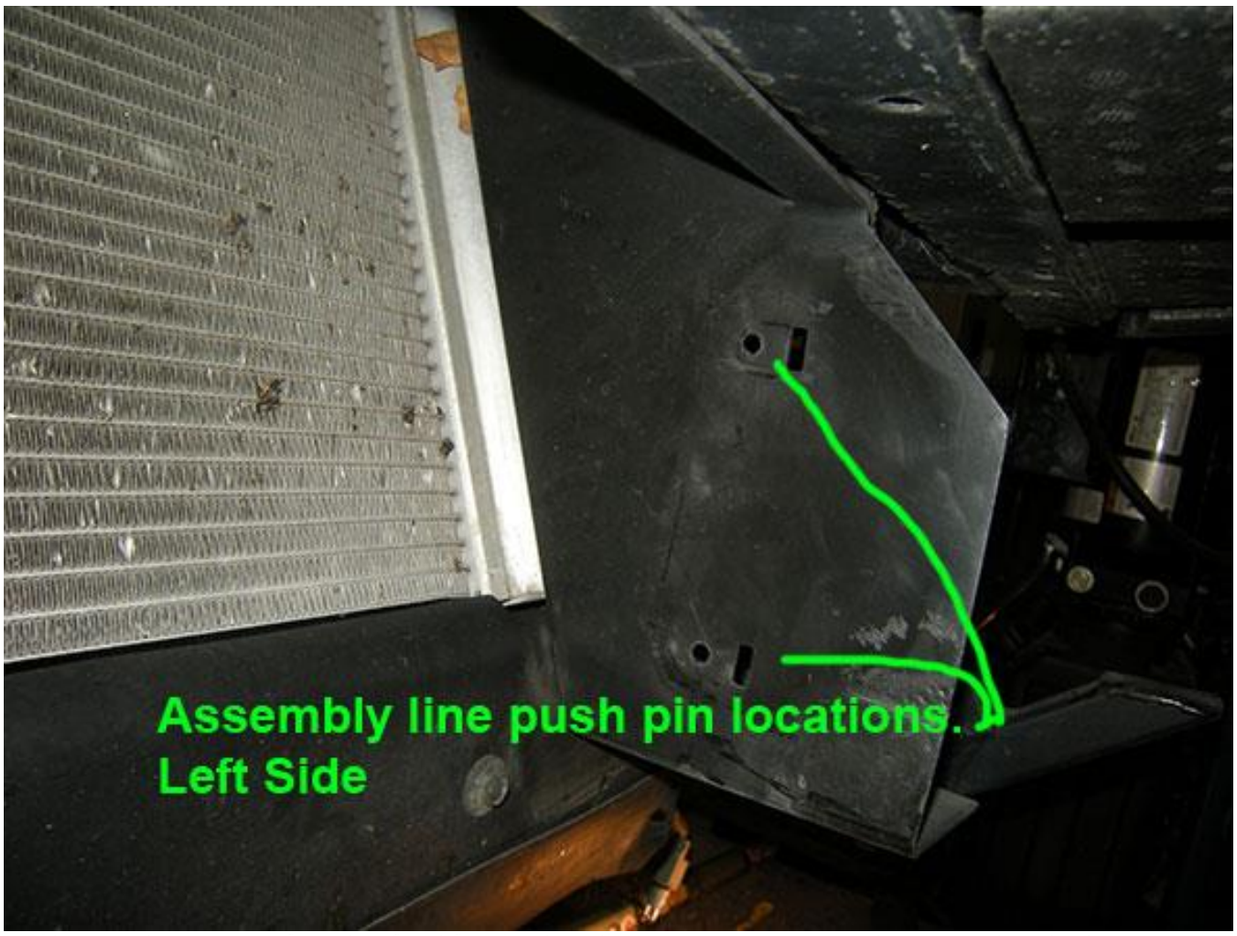
It was necessary to remove a white locking clip to separate the connector.



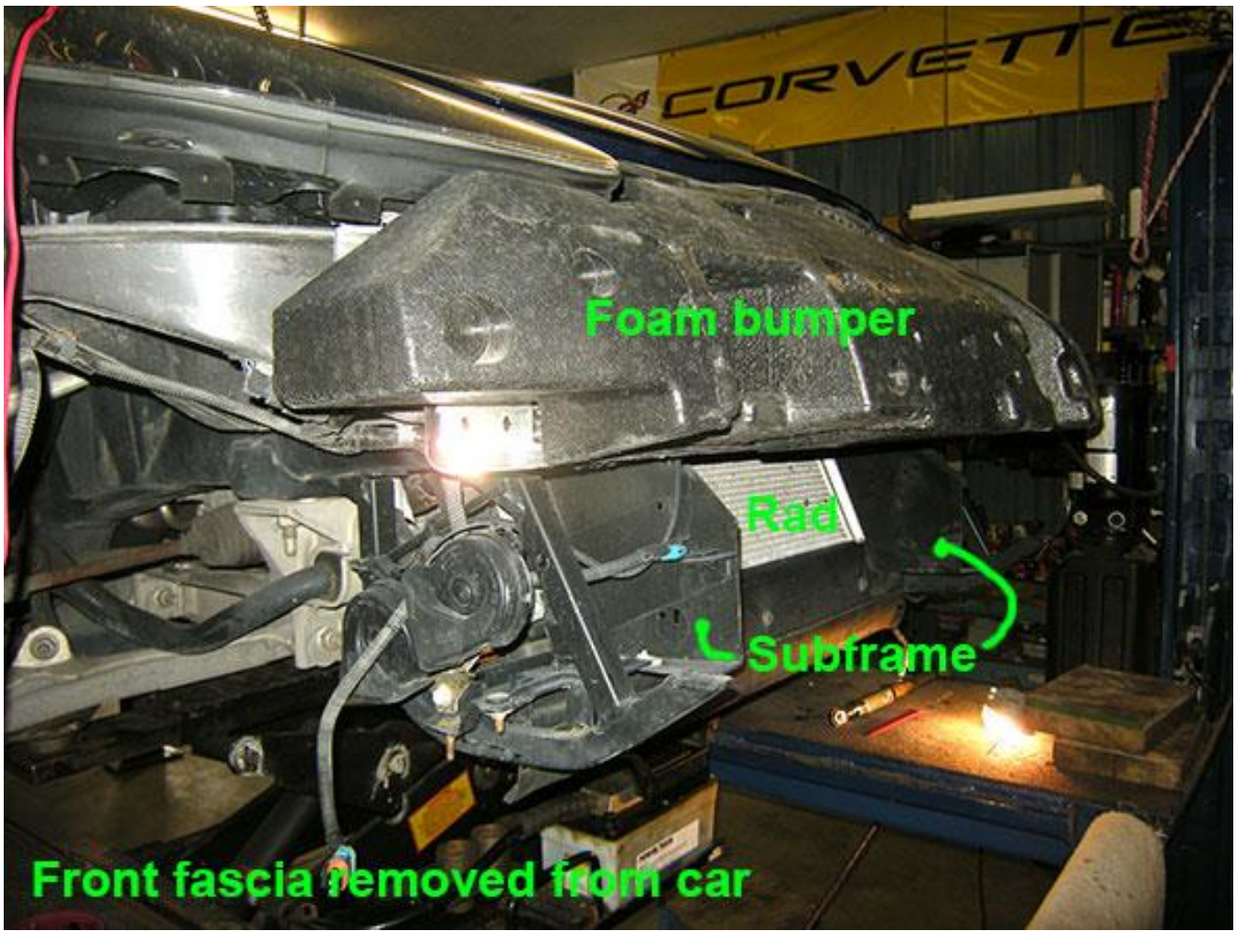
- Hardware was removed that holds the front wheel opening liners in place and the liners were removed (# 1 - 9 above)

- With the liners removed and the light assemblies disconnected, the front fascia can be disconnected where it is joined to the front fenders by removing the 10mm nuts on each side. (# 10 in diagram above and photo directly above)





- With all nuts removed from the front fascia, it is still held in place by plastic connectors that were installed on the assembly line. (See above). Remove the four connectors and the front fascia should lift up and away from the sub-frame it was attached to.



Removing the Headlight Assembly

Three nuts with washers that connect the assembly to the sub-frame are removed from the underside. With these nuts removed, the headlight assembly can be persuaded out of it's position and taken from the car.

Headlight assembly removed.

Headlight assembly removed from the car - note the body gasket that keeps the lens away from the body, when the headlight is installed in the car. This is removed at this stage of the game.

Tools used removing the bumper fascia and head light assembly.

Replacing the Lens

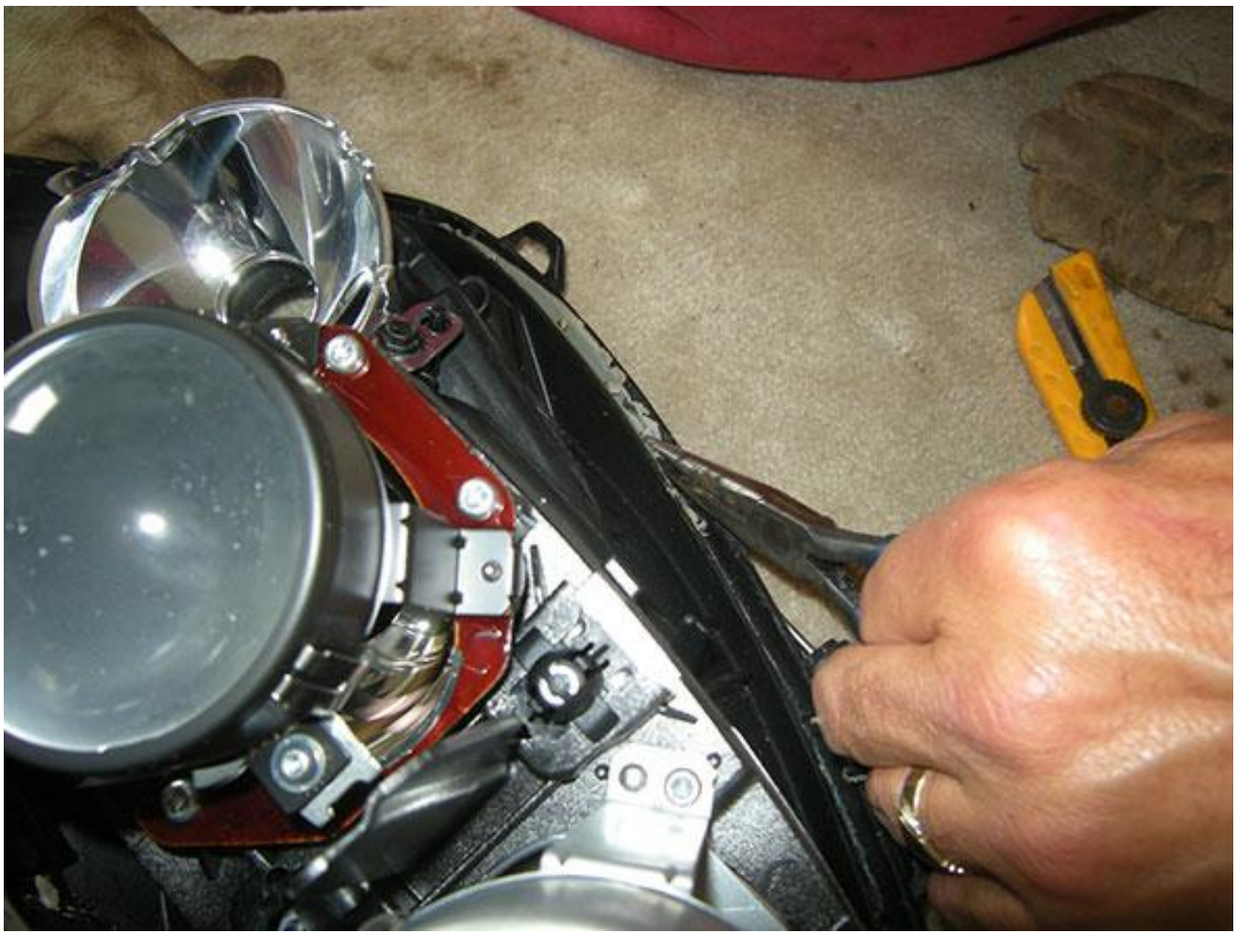
With the assembly removed, the next challenge was separating the old lens from the main body of the headlight assembly. It was glued in place at the factory and in order to remove it, it was necessary to heat and soften the factory glue to pry the old lens out.

Headlight assembly with old lens and tools used to remove lens from assembly.

That ain't no turkey that's going in the oven. (An oven recently cleaned by Kim!) Preheat the oven to 350 degrees and when it reaches that temperature, turn it off and stick the headlight assembly in for about 20 minutes. When it comes out, wear gloves to handle it - it will be hot!

I used two flat blade screwdrivers and worked them into the seam between the clear lens and body and started prying the two apart. When the gap is large enough, I put my fingers in and pried the two pieces apart. I also used a sharp cutter to cut the adhesive. The rule here is "Don't Manhandle the Part!". If it doesn't come apart, then it will be necessary to reheat the assembly in the oven. I heated the assembly 3 times before I could get it apart.

After the lens is removed, the challenge is getting the residual glue out of the groove that the lens was seated in. I used a screwdriver and pliers and worked my way around the edge of the assembly. A heat gun was used as well to soften the glue and it proved quicker than waiting for the oven heating. This is without doubt, the most difficult part of the process and resulted in some rather strong cussing!



Removal of the glue was a long and tedious process - but necessary to give a clean surface for the new lens to fit into.

Back of assembly with clear lens removed. That odd bar sticking out with the rubber cup on the end is for adjusting the aim of the headlight.

The last step of disassembly is removing the bezel from the lens. The old grazed lens now belongs in the trash. Thank goodness!

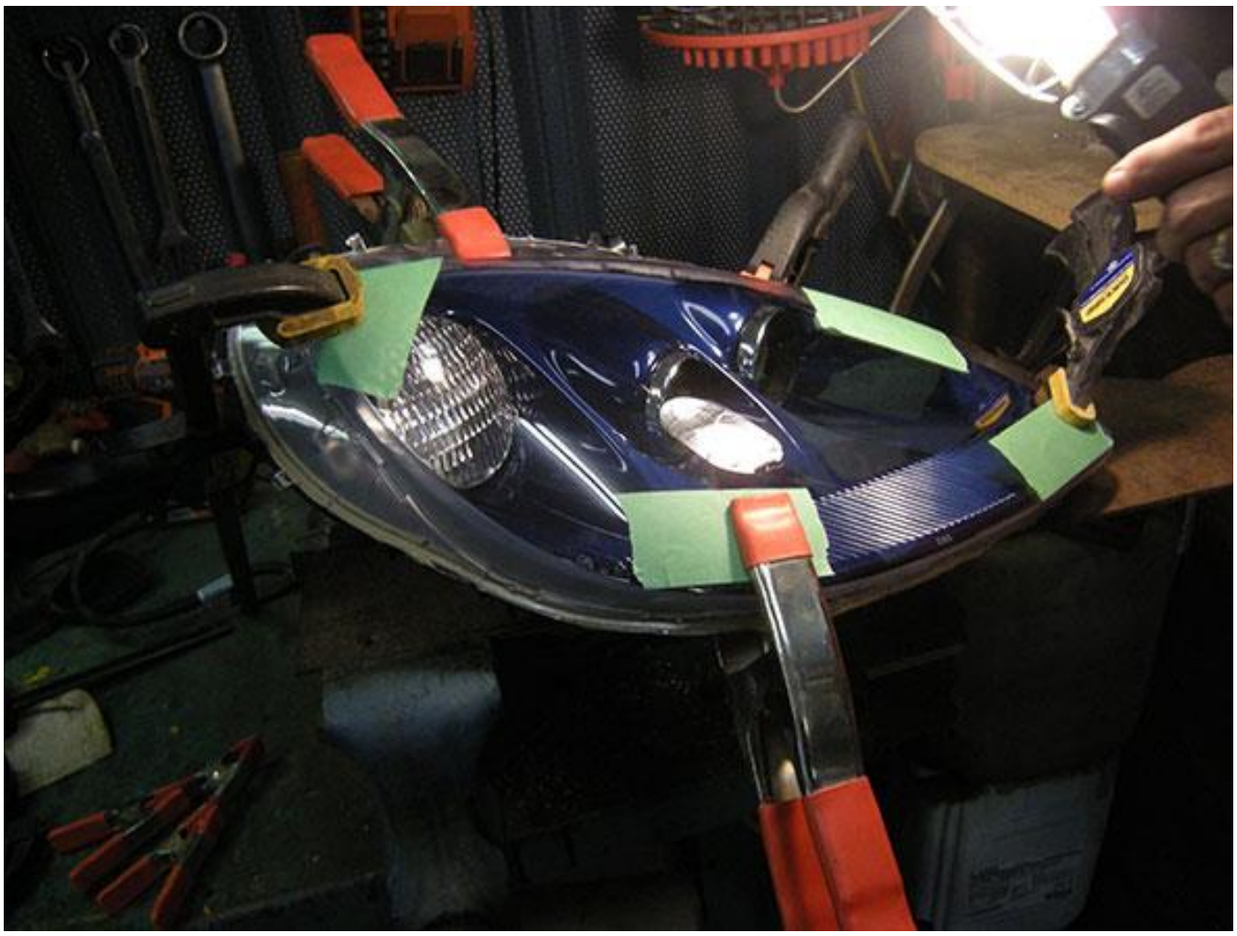

I made a temporary jig to mount the headlight assembly onto so it would be easier to work with.

The light assembly's three mounting bolts were attached to the jig. The light projectors were cleaned and the entire inside of the housing was blown free of dust and debris with an air hose.

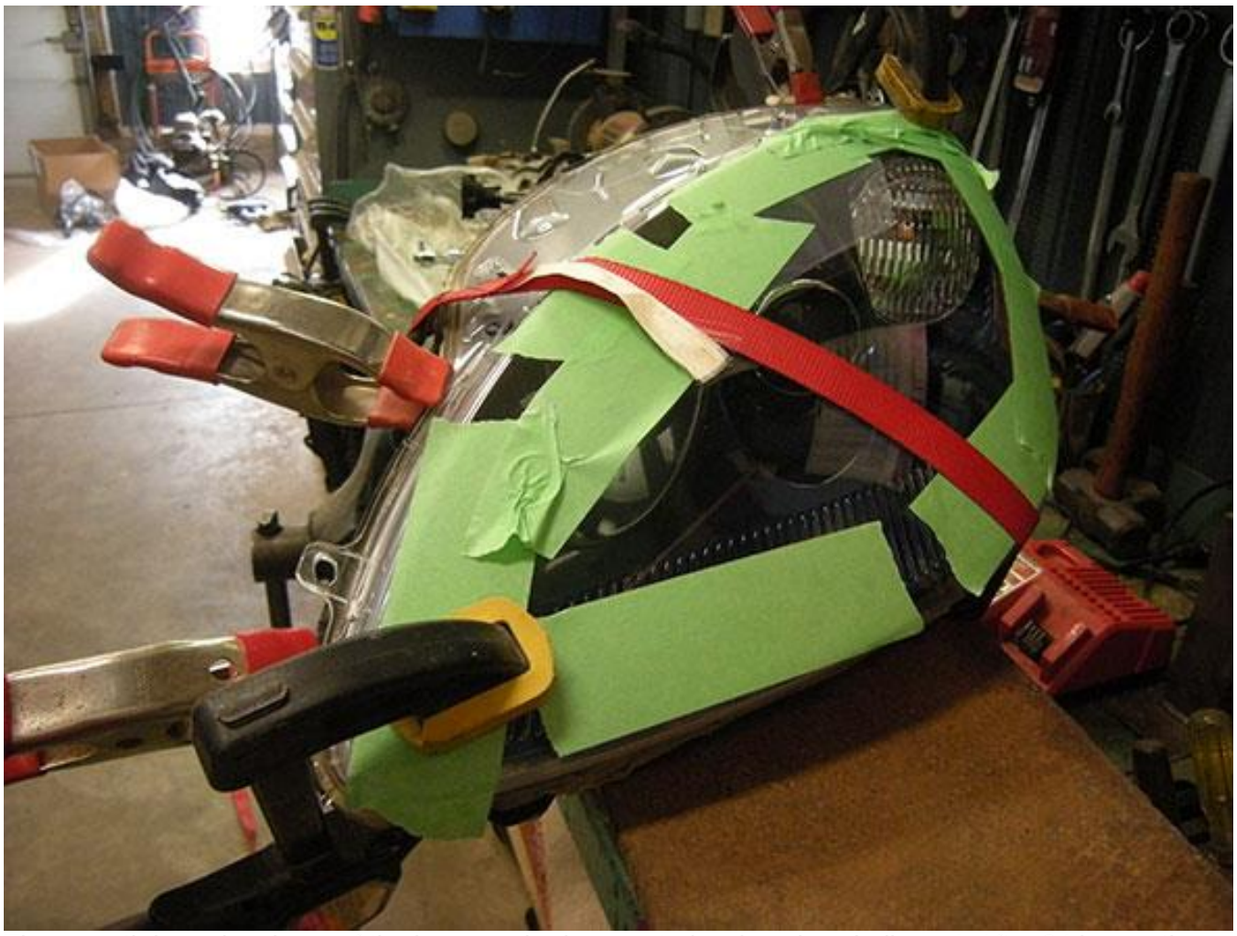
My "young" apprentice was responsible for filling the gap with glue again. We used Loctite PL polyurethane adhesive. Lepage's construction glue would also work. One tube is more than enough for two lenses.

The goal was to get an even, continuous bead of the bonding glue all the way around the groove in the housing.

The new bezel is installed in the lens and protective tape is placed on the lens in preparation for clamping. With the glue in the housing, the new lens was put in place.



Clamps were placed around the lens to hold it while the glue set.



The smooth irregular shape of the lens required presented a clamping challenge! After 24 hours, the glue was set and the assembly was ready to be re-installed in the car.

The rest of the car was put back together in the reverse order of how it was taken apart.

All parts were purchased through eBay. Each lens cost $155 USD. The rubber body gasket that surrounds each light was replaced with new ones. They cost $49.98 USD each. It was recommended that the wiring harness for each headlight be replaced due to known issues with original harnesses. Each harness cost $36.95 USD.