As I posted this weekend, I rebuilt both my front headlights. We had noticed that the light output was nominal at best, and scary at worst. I had only driven the CSi once at night since purchasing it over a year ago. After checking the lenses, both units exhibited a side to side movement within the buckets. After researching the archives, I decided to rebuild the buckets with new adjusters, Jon Nelson's brass modifications, new shock absorbers, and place protective film on the face of the lenses. Tom Wuffer suggested completely removing the assemblies from the car to make it easier, and I followed this suggestion – I'm glad I did.

Prior to starting, I turned the lights on in the garage and placed black tape on their pattern line which was projected on the wall. As I knew that I wanted to aim them slightly higher, this would give me a reference point when I replaced the assemblies.

Next came the headlight assembly removal.

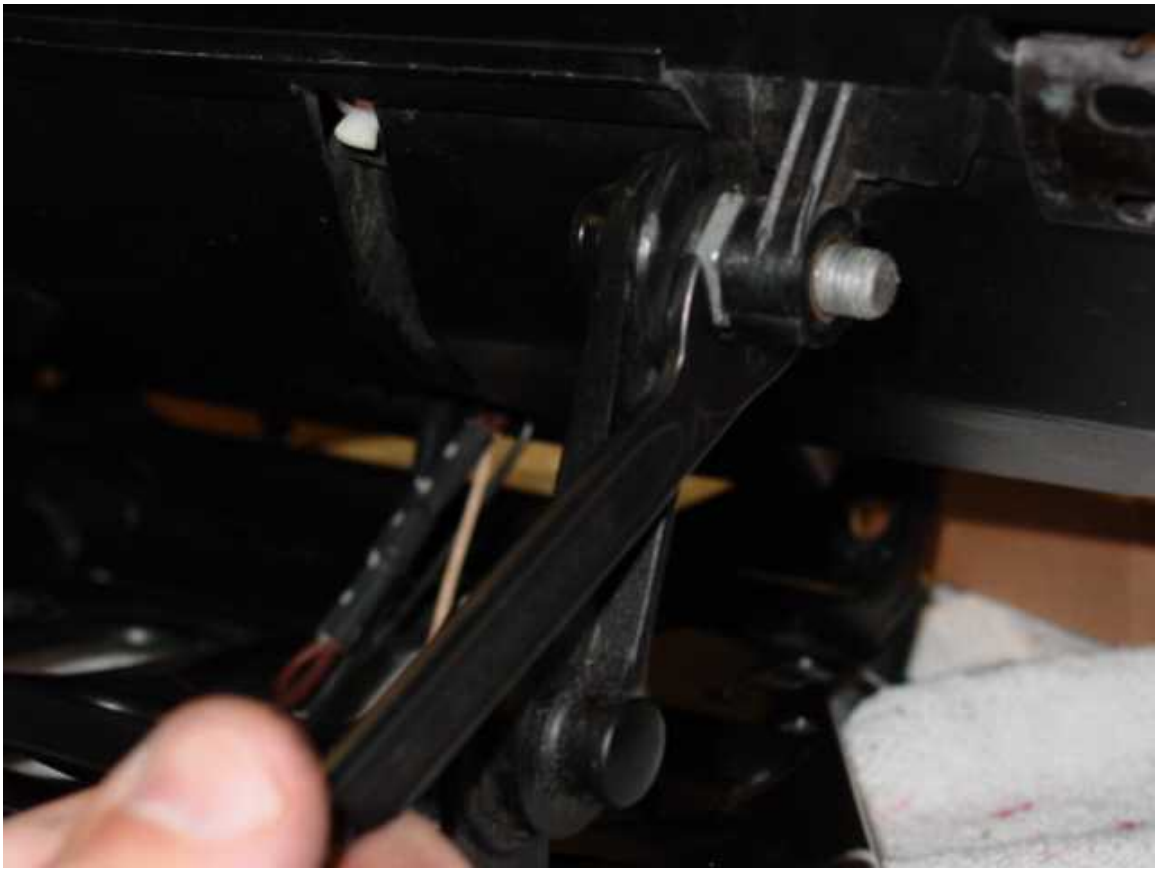
First, I circled the 4 large nuts/washers on each side with a sharpie to make realigning them when finished easier. Next, remove the one black 10mm bolt on the retaining strap next to the radiator. Finally, unhook the two wiring harnesses on the outside of the air filter boxes. Then you can completely lift out the headlight assembly.

With the headlight assemblies out, it is a good time to clean up everything underneath. It is amazing how much stuff is under there!

To take the headlight assemblies apart, follow the steps Wuffer has previously posted. I won't cover all these steps from Tom's great post, but here are some things to do.

Remove the four clips holding the front shroud on. Then remove the two rear 10mm nuts and bolts. Note that there are very fine brass bushings inside where the 10mm bolts go. Don't loose them.

Unhook the two nuts on the pivots using a thin wrench to hold the inside. This open end wrench makes life a lot easier to remove the nuts (thanks Steve for letting me borrow it). Gently push the bolt out and also remove the shock absorber.



Unhook the lights, thread the light looms out from underneath, and the bucket is free.

I found out that on both assemblies that at least one of the adjustment knobs were missing. This is what allowed the assemblies to move freely from side to side. The missing wheels can be noted in the photo.

In the original factory US assembly, the adjuster wheels are simply pressed onto the shaft. If it is still present, you may have to softly tap off the wheel from the shaft. Do so by placing a small screw driver into the groove and giving it a soft tap. This will drive the shaft off the wheel so you can take the bucket apart.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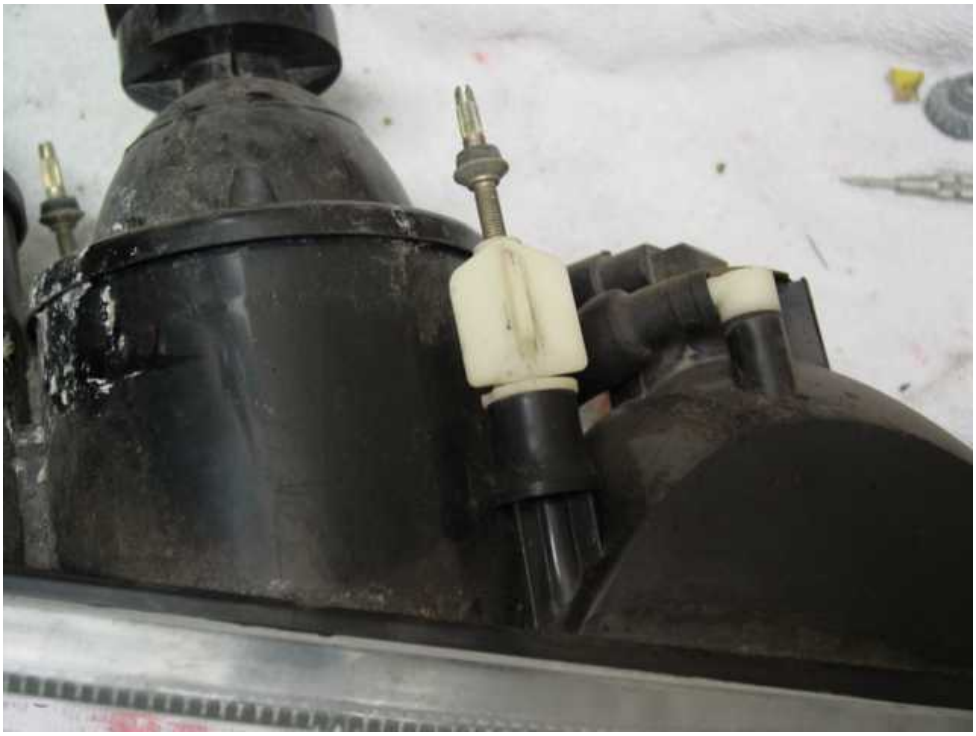
Lastly, you will have to back out the adjuster on the bottom without the wheel. Place a screw driver into the hole and back it out.

Finally, if not already broken, remove the adjusters from the back of the bulb assembly. If your collars are not already broken (most are, or are at least cracked or very brittle), simply lightly twist on the collar and each one snapped leaving the screw head exposed. Remove this screw to use in placing Jon's copper replacement caps.

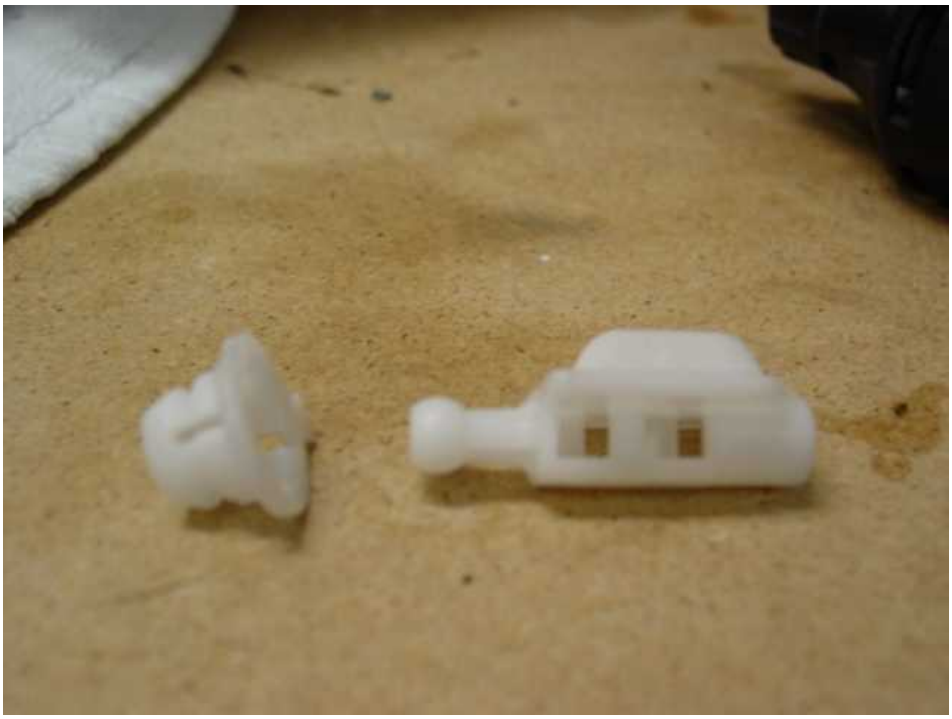


To facilitate reassembly, I marked how far each adjuster was screwed into the assembly before removing it.

Remove the 4 screws from the copper cap. Using the screw removed from the headlight assembly under the old cap which came off, place the copper cap onto the assembly and tighten to where you can just rotate the copper cap with firm pressure.

I purchased 4 new adjuster kits from Gault. Each kit contains all you need to replace the adjuster except for the shaft itself.

I suggest doing one adjuster at a time, matching the parts from the kit to those on each adjuster. The female end which fits into the copper cap is separate from the second slider section. To place the male end of the slider into the female end, simply place the female end on the counter and gently tap the male end in place. I also placed a very small amount of white lithium grease on the ball on the male end.



Next thread the shaft into the slider portion. I inserted it up to the line previously drawn.

Next, place the assembly into the Jon's copper cap which you have put on the headlight assembly and have previously removed the 4 screws. Replace the 4 screws one at a time and use thread lock. Jon did a wonderful job of designing these, as the 4 set screws fit into a groove on the plastic piece which fits into the copper cap.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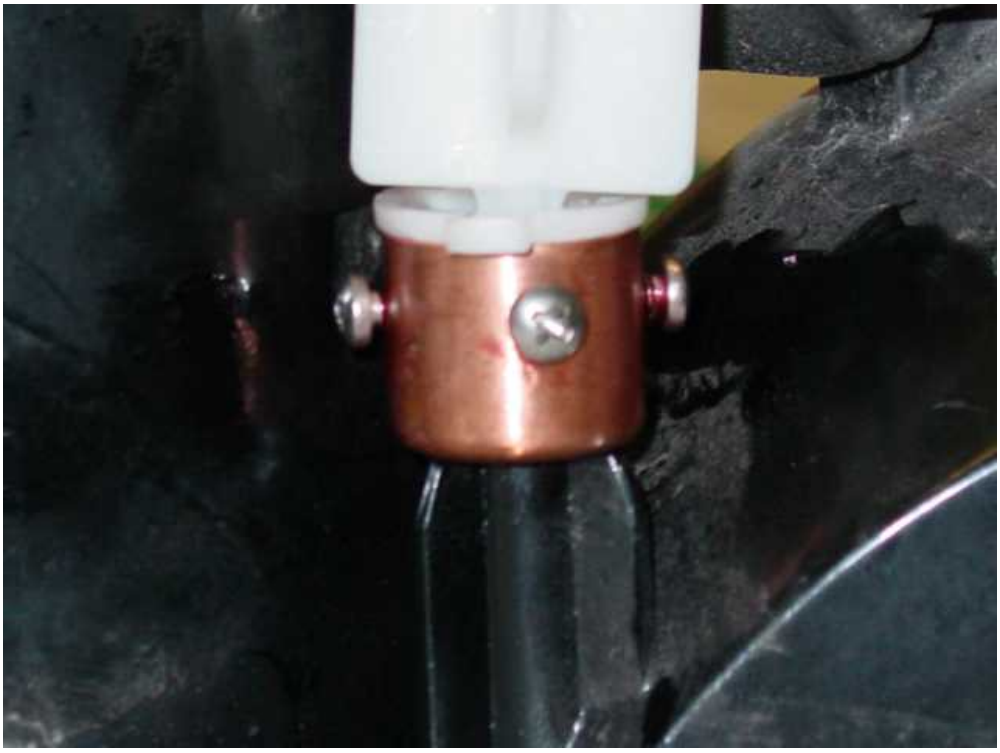
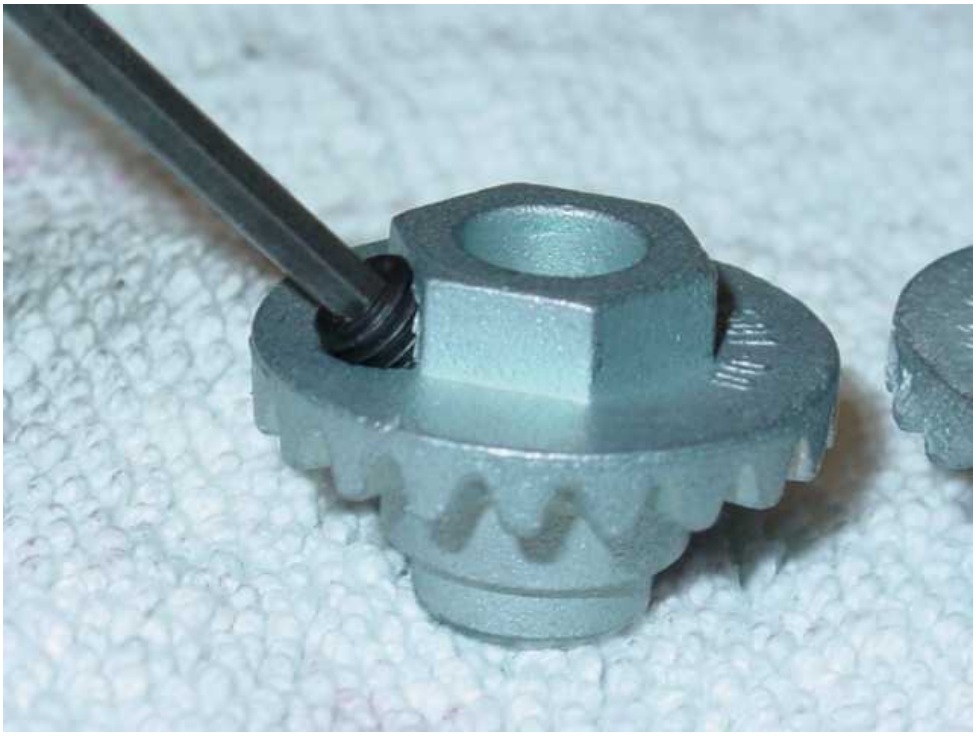
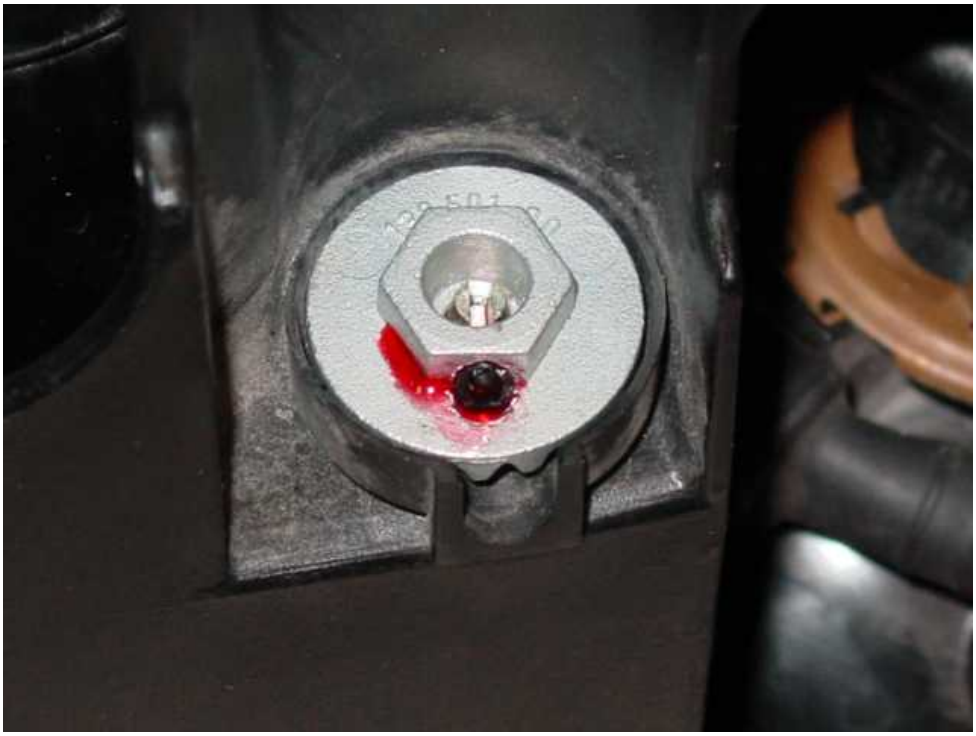


The new adjuster kit replaces the rubber washer with 3 new o-rings. Remove the old rubber washer and put on the 3 new o-rings.

Reassemble the lense assembly and the bucket by threading the 3 shafts into their appropriate positions. Rethread the one screw which does not have the wheel assembly into its proper position (I noted how much of the head was showing in the hole, and tried to rethread it to the same position). Next place on the new wheel assemblies. Note that these have a set screw (the old wheel is on the right, the new wheel with the set screw is on the left).



Be sure to use the suggested thread lock on the set screw.



NOTE: when you push the wheel onto the shaft, push hard on the front of the lense to COMPLETELY seat the wheel on the shaft while pushing the wheel toward the lense. You want NO play back and forth. I had to redo one of mine as I did not push hard enough the first time.

Due to the expense of the lense assemblies, I decided to place protective film on the front. I have used this on several cars and it saves the front of the lense from pitting and provides a level of protection against rocks. On one of our previous BMWs, we took a direct rock hit on the lense with this material on it, and it did not break. I used Bavarian Autosports' pre-cut kit. It includes pre-cut material for both headlight lenses, the FTP strip and side turn indicators. Once it goes on, you can't see it. Take your time working the air out as you bring the protective strip down onto the glass, and it goes on pretty easily. The Bavarian Auto kit also includes a semi-hard rubber blade to help placement and avoid air bubbles. I think others sell similar kits – I have just had experience and luck with the Bavarian Auto kit.

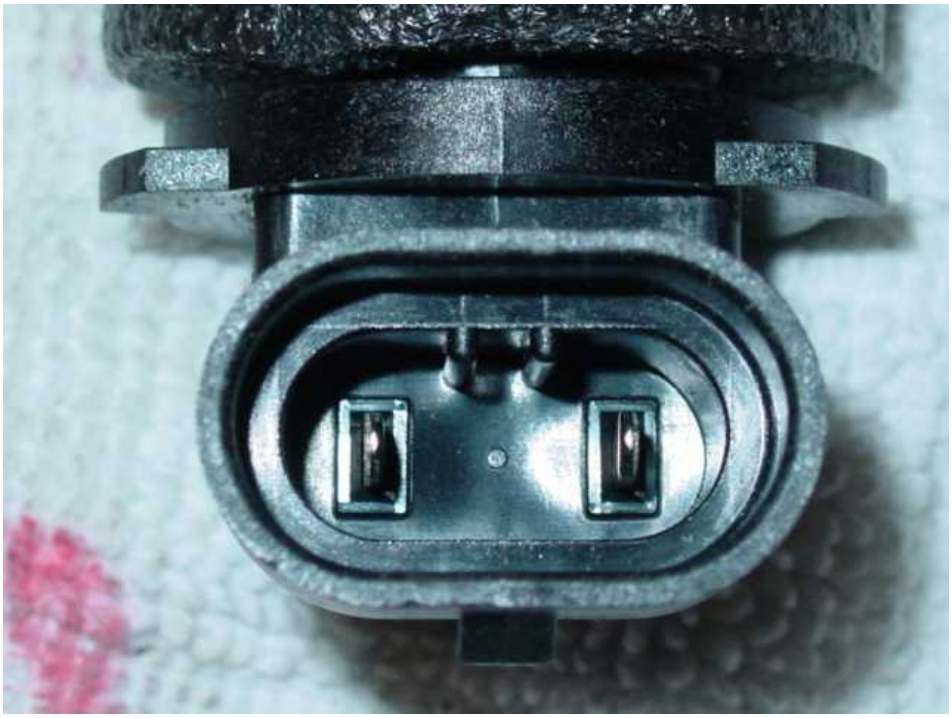
Because I wanted to increase light output, I decided to change over to HIR bulbs purchased from Chromeowner (Bill Fox). Someone suggested that one can replace all 6 bulbs with 9011 HIRs (the high beam bulb). Because I wanted to obtain more light, and after reading comments from others who have replaced all bulbs with the 9011s, I decided to go this route. Bill sends the bulbs out pre-marked as the tabs have to be trimmed for each position. Use a dremel tool to remove the marked white area.

Next, if placing the 9011 high bulbs in the low beam and fog positions, you will have to trim the inside of the plug for the low and fog bulb. Low beams have one groove, and high beams have two.

Low beam plug with one groove:

Hi Beam plug with two grooves:

To fit the 9011 bulb into the low and fog wiring harness plugs, these grooves will have to be filed smooth so the clip will fit to place.



With the excellent projection pattern of the 8 series, having a brighter light in the low position should not cause problems if aimed correctly. But, as always, using the 9011 bulb in the low position is legally for “off road purposes only” ;-).

Now that the headlight assemblies were completed, reassemble everything in reverse order. Thread the wiring harness back through the underside of the assembly and secure.

I had ordered new shocks to replace the old ones thinking that since I had everything out of the car it would be the right time to replace them. I am glad I did as both of my shocks were shot! The old one is on top and the new one is on bottom:

Again, using the thin box wrench (or something similar) reassemble everything.

Don’t forget to reattach the two wiring harnesses (one for the lights, one for the lift motor) with black plastic ties.

Finally, replace the assemblies back into the car. Reposition the 4 large nut/washers and approximate their previous position – this is why you marked the nuts with a sharpie prior to their removal at the start. I tightened them down snug, but now over-tightened as I thought I may have to adjust them to properly align the covers. Don't forget to replace the 10mm bolt on the strap on the back side of the assembly next to the radiator.

Without the covers on, aim the headlights. This is done by using a moderate size Phillips screw driver into the adjustment holes. The Phillips screwdriver will rotate the adjustment wheel.

Replace the covers and enjoy. Someone said it would take about 2 hours per side to do this. But I found out that by adding the HIR bulbs and the headlight protection sheet, pus never having done this and being by myself, it took me about 8 hours total time – I'm glad Marcia is understanding!

And now, we can see!!!