

This Halo Removal DIY is for a 2006 E90/E91 (pre-LCI) headlamp. This procedure replaces the Halo Rings (Angel Eyes) OEM lamp unit P/N 63117161444 and includes modifying the lamp unit to change just the 10W BA9S-base light bulb (a \$7 part vs. the \$45 lamp unit). This Halo lamp unit is used in the head lamp assembly for the following cars:

**E90:**

E90 323i Sedan  
E90 325i Sedan  
E90 325xi Sedan  
E90 328i Sedan  
E90 328xi Sedan  
E90 330i Sedan  
E90 330xi Sedan  
E90 335i Sedan  
E90 335xi Sedan

E90N 328xi Sedan  
E90N 335d Sedan  
E90N 335i Sedan  
E90N 335xi Sedan

**E91:**

E91 325xi Touring  
E91 328i Touring  
E91 328xi Touring

**E90N:**

E90N 323i Sedan  
E90N 328i Sedan

**E91N:**

E91N 328i Touring  
E91N 328xi Touring

Parts needed:

- 12 Volt, 10 Watt, BA9S-Bayonet Base lamp, Osram P/N 64113. Most foreign-car parts store will have it in stock.
- Isopropyl alcohol and cotton swab (to clean the new bulb)

Tools needed:

- Wheel removal tools: jack, jackstands, 17MM wheel-bolt (lug) wrench, etc.
- 8MM socket (or nut driver)
- 10MM socket (or nut driver)
- T15 Torx screwdriver
- Small flat-head screw driver, long-shaft
- Dremel tool w/ ball-shaped metal cutter

Basic Procedure:

- 1) Remove wheel
- 2) Remove front wheel well (fender liner)
- 3) Remove plastic cover to Halo light
- 4) Remove Halo light unit
- 5) Cut holes in Halo light holder

- 6) Install new bulb in the holder
- 7) Reassemble

Specific instructions:

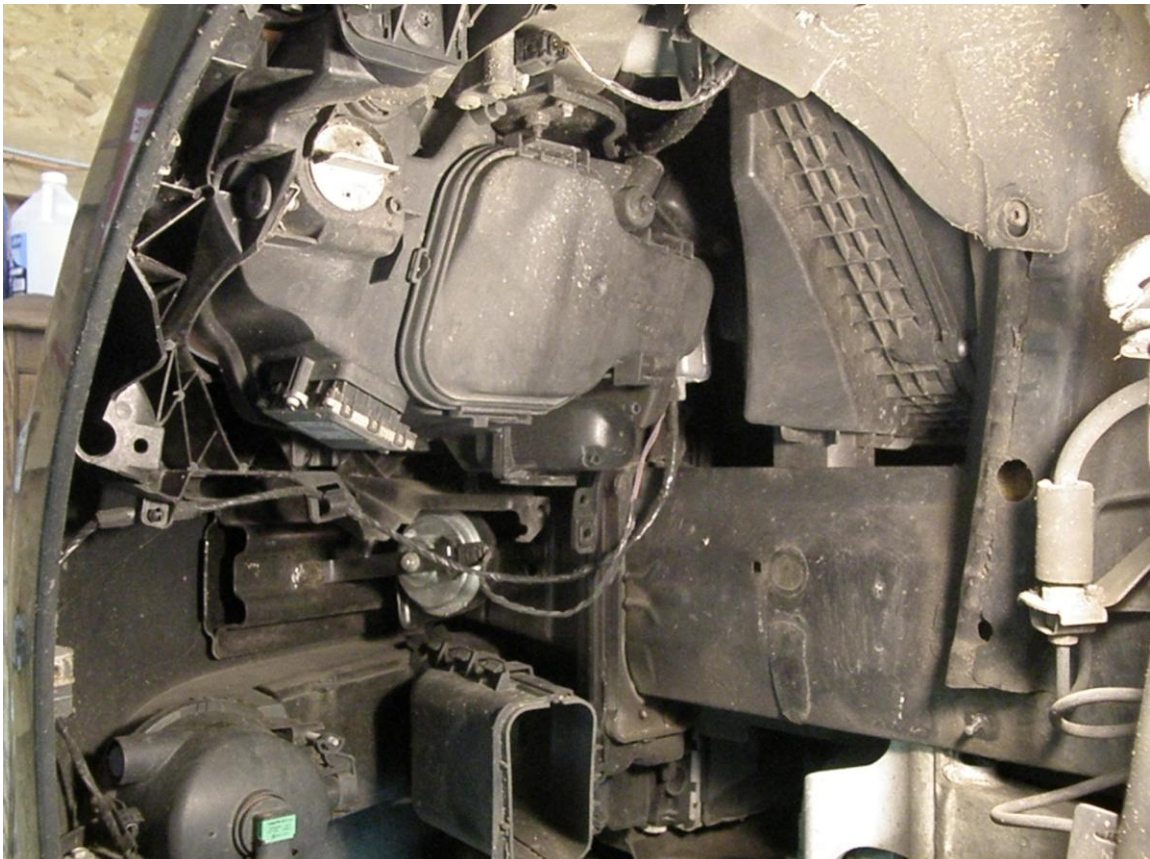
- 1) **Remove wheel.** Make sure the car is sturdily placed on jackstands and remove the front wheel. Wheel bolt torque is 88 ft lb when re-installing. I recommend jacking the car all the way off the ground on 4 stands. I know it is overkill for this procedure, but a car on 4 stands will not roll off onto you!
- 2) **Remove inner fender liner.** The fender liner is in two sections. The front half of the fender liner comes out separately from the rear. The rear can stay in place. Remove the following bolts:



- a. There are a total of eleven (11) 8MM-headed bolts and one (1) 10MM plastic nut holding the fender liner. Under the front of the car there are four (4) bolts holding the

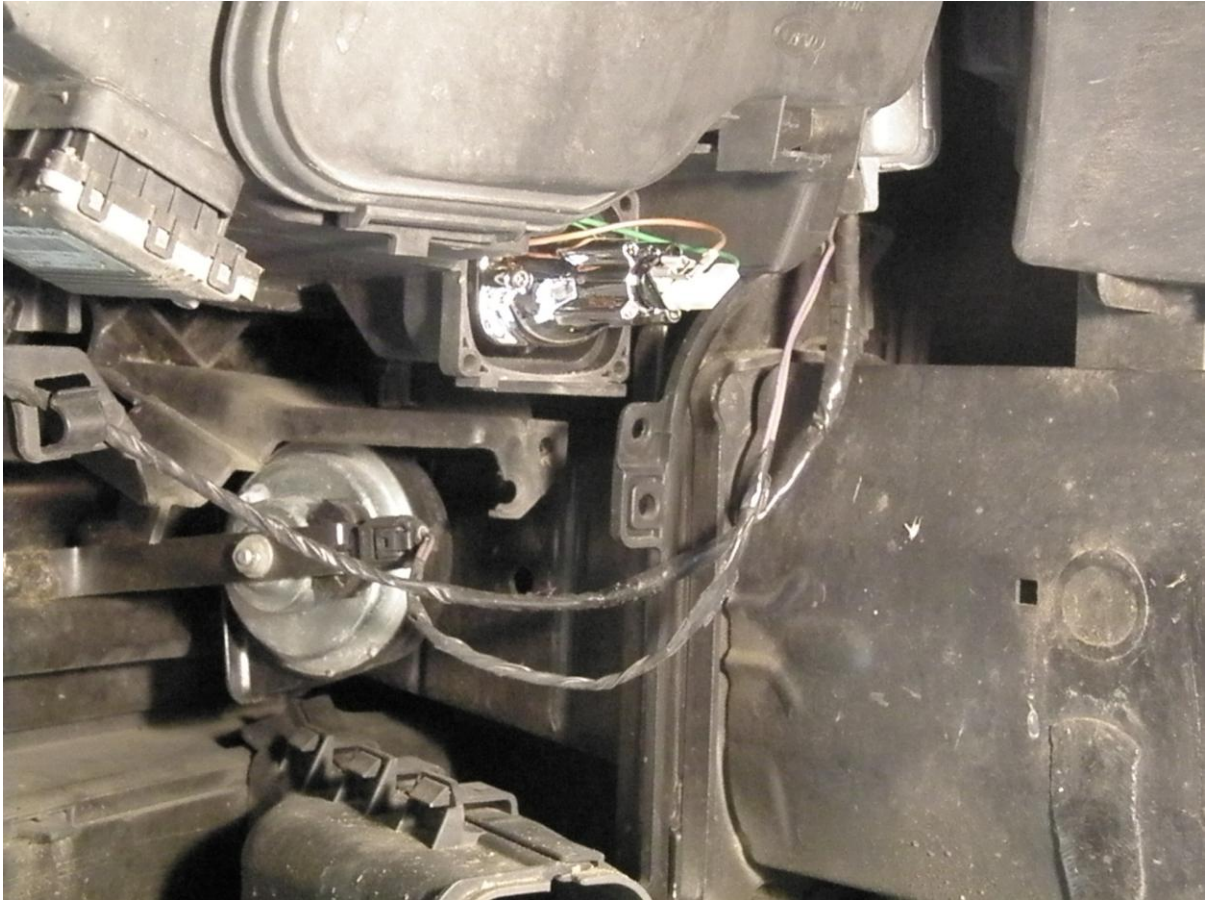
liner in; two are on the engine belly pan (close together) and the other two are on the bottom of the bumper cover in front of the front wheel.

- b. There are two(2) bolts located on the inside lip of the fender
  - c. There are three (3) bolts on the inner fender well that bolt the liner to the frame and one (1) holding the brake-cooling duct.
  - d. There is one 10MM plastic nut down near the bottom of the liner near the brake line.
  - e. The fender liner will now be loose so pull it out from behind the rear section at the top of the fender well arch.
  - f. Under the front of the car there is a small tab/hook near the outside of the bumper cover lip. Push it up and pull the liner rearwards to remove from the fender well.
- 3) **Remove the plastic cover.** You'll see the rear of the headlight assembly. The Halo light is underneath a long tube-looking black plastic housing. It will be clean looking as compared to the rest of the back-side of the headlight assembly.
- a. To remove the cover there are tabs on the top and on the bottom. There are four (4) pins on the face of the housing (you can't see them) that will probably break off, but they make it difficult to get the housing off.
  - b. The top tab is hard to get at, so use the long-shaft small screw driver to push the tab down. It should audibly snap out of place. You need to pull back on housing and wiggle it left and right as you lift the tab.
  - c. The bottom tab is visible. You push it up to unlock it while further wiggling the housing (you'll cuss during the housing removal part; it's a PIA)





- 4) **Remove the Halo light holder unit.** Note the polarity of the wires! This is DC power, so you have to keep the polarity correct. The “center” spade is the Green (power) wire; it’s covered by a white plastic sheath, the Brown wire (ground) is bare.



- a. There are two (2) small black Torx screws that hold the Halo housing to the headlight. You see only one of the screws, the other is hidden on the opposite side of the housing.
  - b. Use the T15 Torx driver to remove them. They come all the way out (i.e. they are not captured in the housing), so don't lose them.
  - c. Note that the Halo housing is “indexed”, meaning it sits only one way into the back of the headlight assembly, so note how it sits in the mount. The face of the Halo housing is oddly shaped with a large tab section.
- 5) **Removing the bulb from the Halo Housing.** The bulb is captured in the housing (it's manufactured that way). The housing is plastic (the actual bulb socket), and aluminum (the light bezel). The bulb can be pushed down and turned (like normal with any bayonet-base bulb) to release it from the bulb socket. To make the holes, leave the bulb locked down in the holder.
- a. Use the picture below as a guide to Dremel out holes in the Halo bezel to get the bulb out. Cut two holes, 180 degrees apart from one another, and 90 degrees away from the bulb's “locked-down” position (so the bulb cannot fall out if it vibrates loose). Basically cut a hole at the bottom of the bezel (where the bulb is) at the location of the large tab section and then the other hole on the opposite side of that.



- b. Use a small Dremel ball-shaped cutter (I think it is a 3/32-inch sized ball cutter that I used) to cut the holes as shown above.
- c. Once the holes are cut, the bulb will come out by pushing down and turning it counter-clockwise, then rotating it to get the pins lined up with the new holes you just cut.

- 6) **Install the new 10W bulb into the modified Halo holder.** It's a halogen bulb, so clean it with isopropyl alcohol and a cotton ball or swab once it is in place. Oil from your fingers will allow bulb to burnout quickly if it is not cleaned properly.
- 7) **Reassemble** the Halo housing into the headlight (it's indexed remember); make sure it seats correctly.
  - a. Careful here, no need to over-torque the small Torx screws!
  - b. Reattach the wires (green – center, Brown –outer connector). **Check to make sure the lamp lights at this stage before you finish re-installing everything else.**
  - c. Reinstall the plastic housing by pushing it straight in; it will snap into place.
  - d. Reinstall the front fender liner
  - e. Remount the wheel and torque to 88 ft-lb.