



Bi-Xenon ACA headlights for C5 Corvette

Installation Guide

Tools list

Required tools

- - Philips head screwdriver
- - Torx 15 screwdriver
- - Torx 20 screwdriver
- - 8mm open end wrench
- - 10mm wrench or socket
- - 1/2" socket
- - socket extension (6" ideally)

Suggested Tools

- WD-40, Liquid wrench or similar
- Socket extension suggested

Phase 1: removal of old headlights:

1. Raise your headlight using the manual crank. You'll see three Philips head screws that hold the plastic trim bezel in place. remove these screws and the bezel



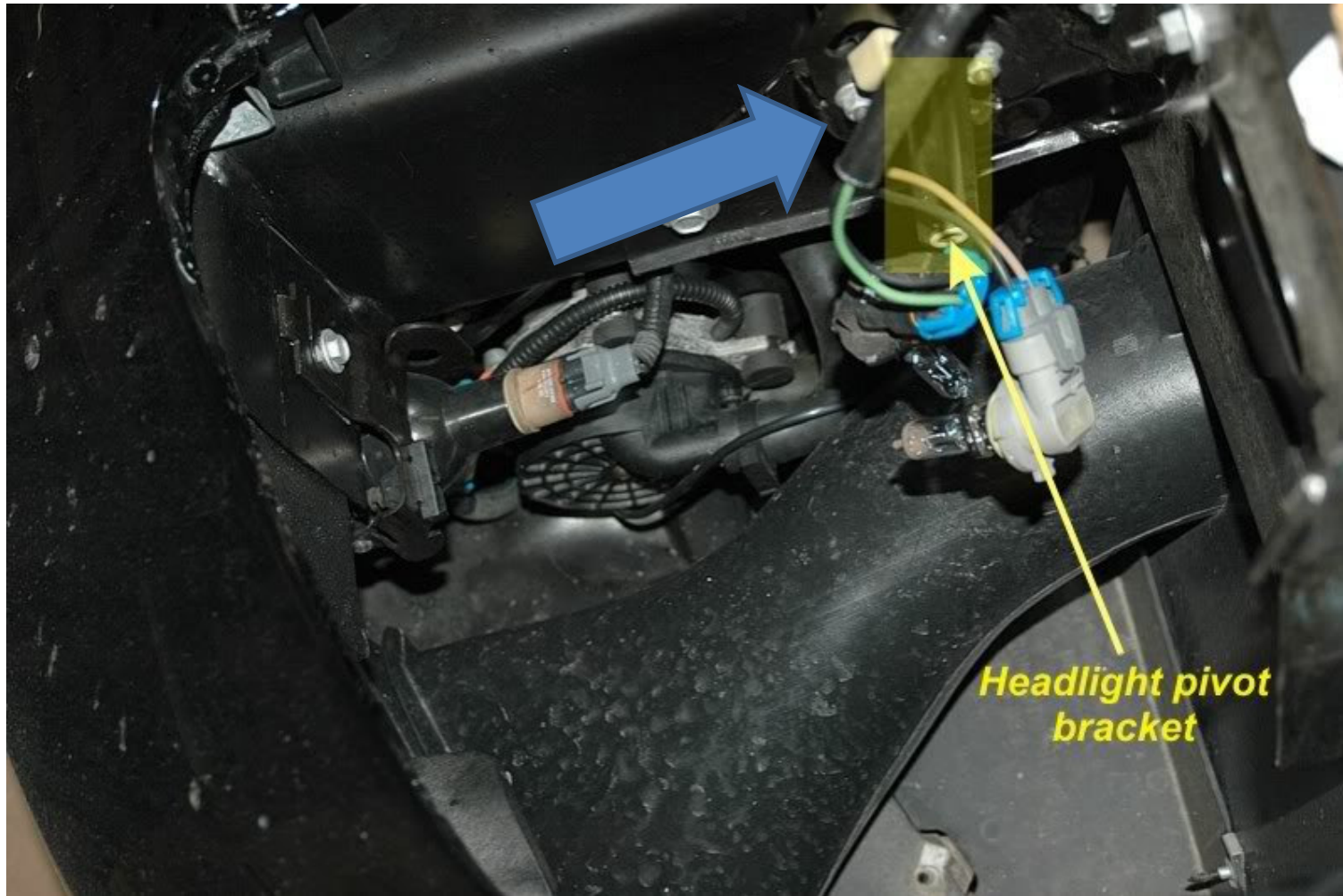
2. Remove the 4 torx 15 screws that hold the headlight cover in place. 2 are on the back and there's one on each side. Remove these and the headlight cover. Be sure not to lose the plastic or metal sleeve for the bolts.



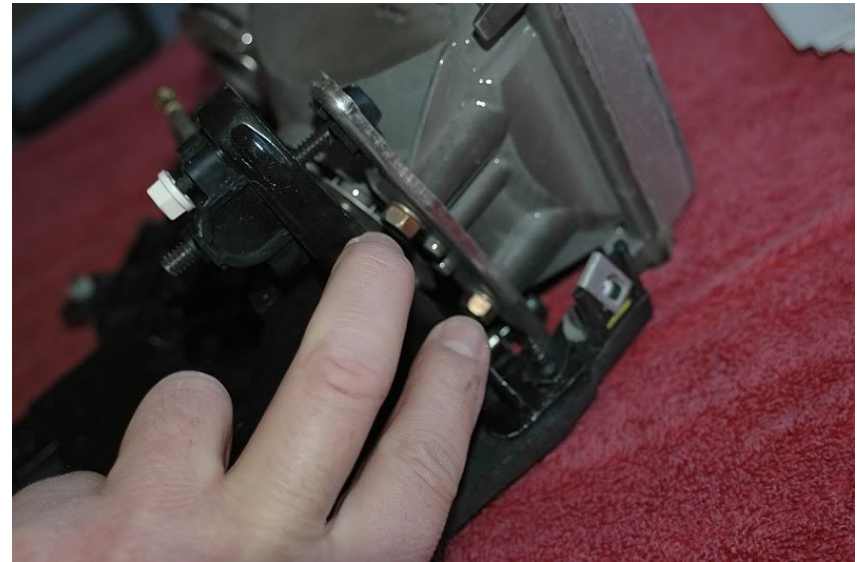
3. Remove the 2 Torx 20 bolts/8mm nuts that are the headlight hinge joint. (It may be beneficial to spray these with WD-40 or similar as they are installed with Blue Lock tight from the factory)



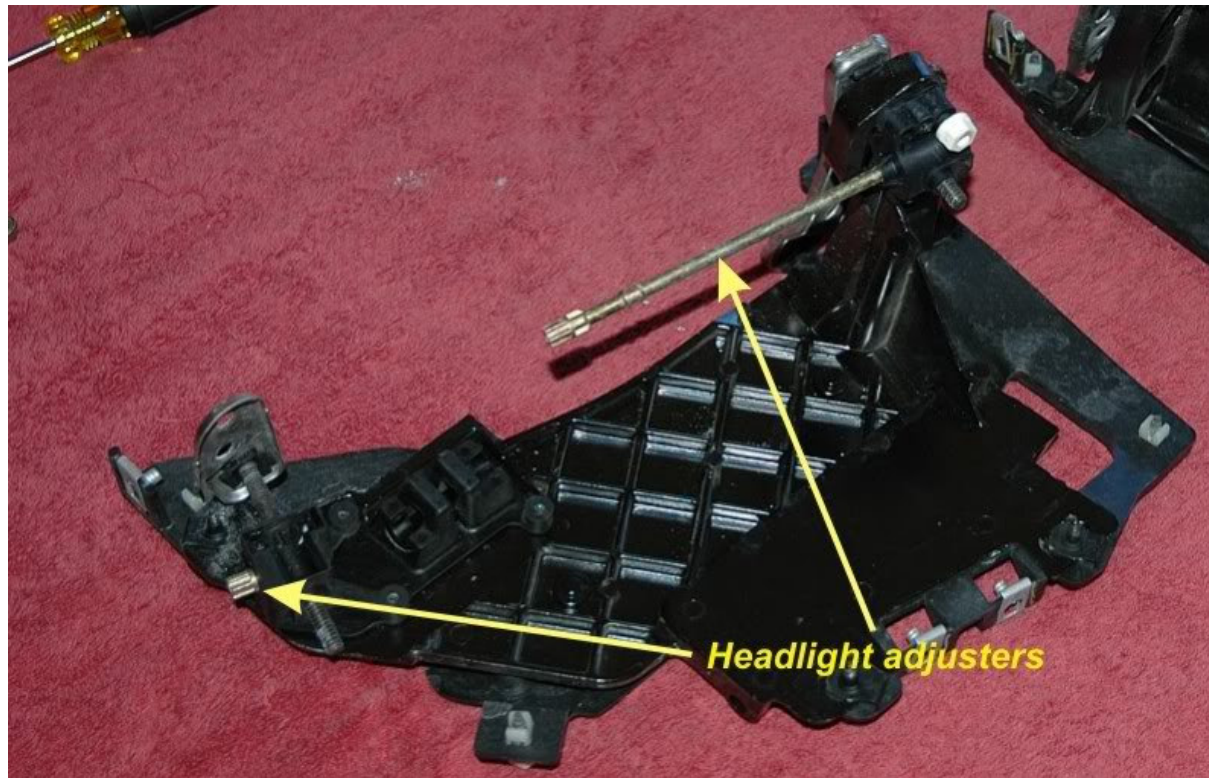
4. With the headlight tilted down, remove the 10mm nut that holds the headlight lifting arm to the headlight motor. Disconnect the headlight bulb sockets and remove the headlight (picture shows the placement of the nut without the headlight).



5. With the headlight assembly out of the car, remove the headlight housing by removing the three 10mm screws on the back of the housing. (you may need your socket extension to reach the bolts on the outer side).

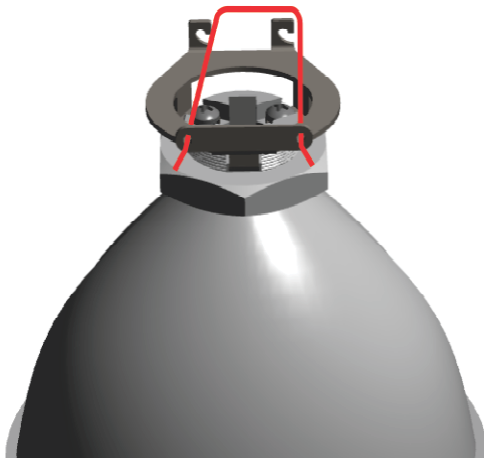


6. At this point, it's a good idea to identify your factory headlight adjusters. I **STRONGLY** suggest shooting the gear mechanisms with WD40, PB blaster or similar lubricant compound as these have a tendency to seize up and sometimes break after many years of non-use. The short rod is your horizontal adjuster and the long one is the vertical adjuster. You'll need to remember this when aiming. After letting the lubricant penetrate, test the adjusters gently. If the brass adjusters turn but the black adjuster screw spins but doesn't move in/out, hold the adjuster screw with a Torx 15 from the screw head and gently turn the brass adjuster rod until the black adjuster screw moves. (force may be required)

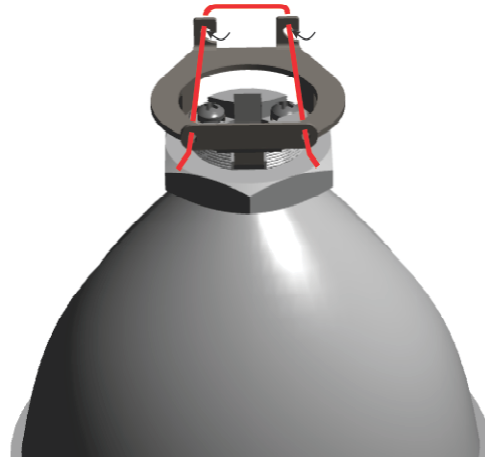


Phase 2: Installation of new headlights

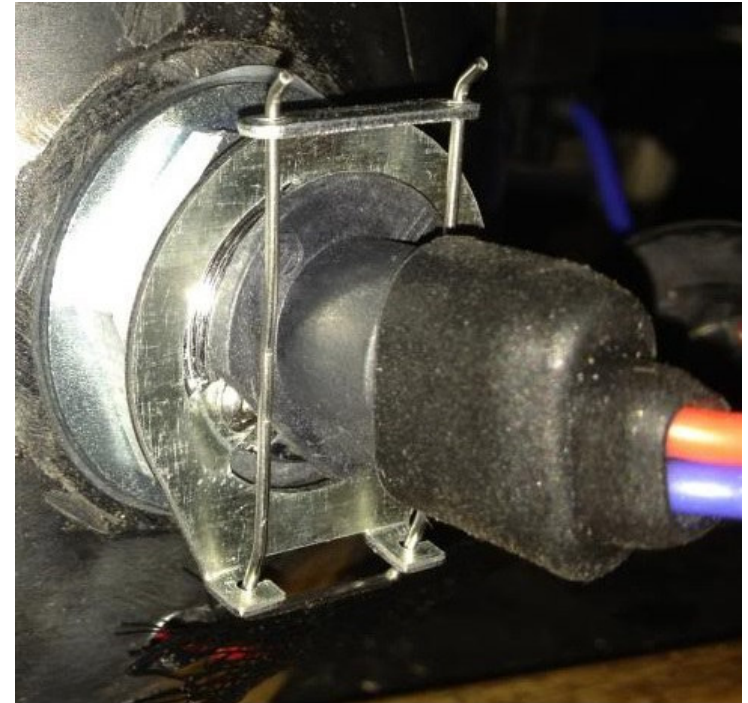
7. On the back of the projector there is a retaining pin. Remove the pin by shifting the bottom of the "U" to the side and pulling the top of the "U" out of the holes. Insert the HID bulb into the opening then re-install the retaining pin. The mounted bulb should look like this when completed:



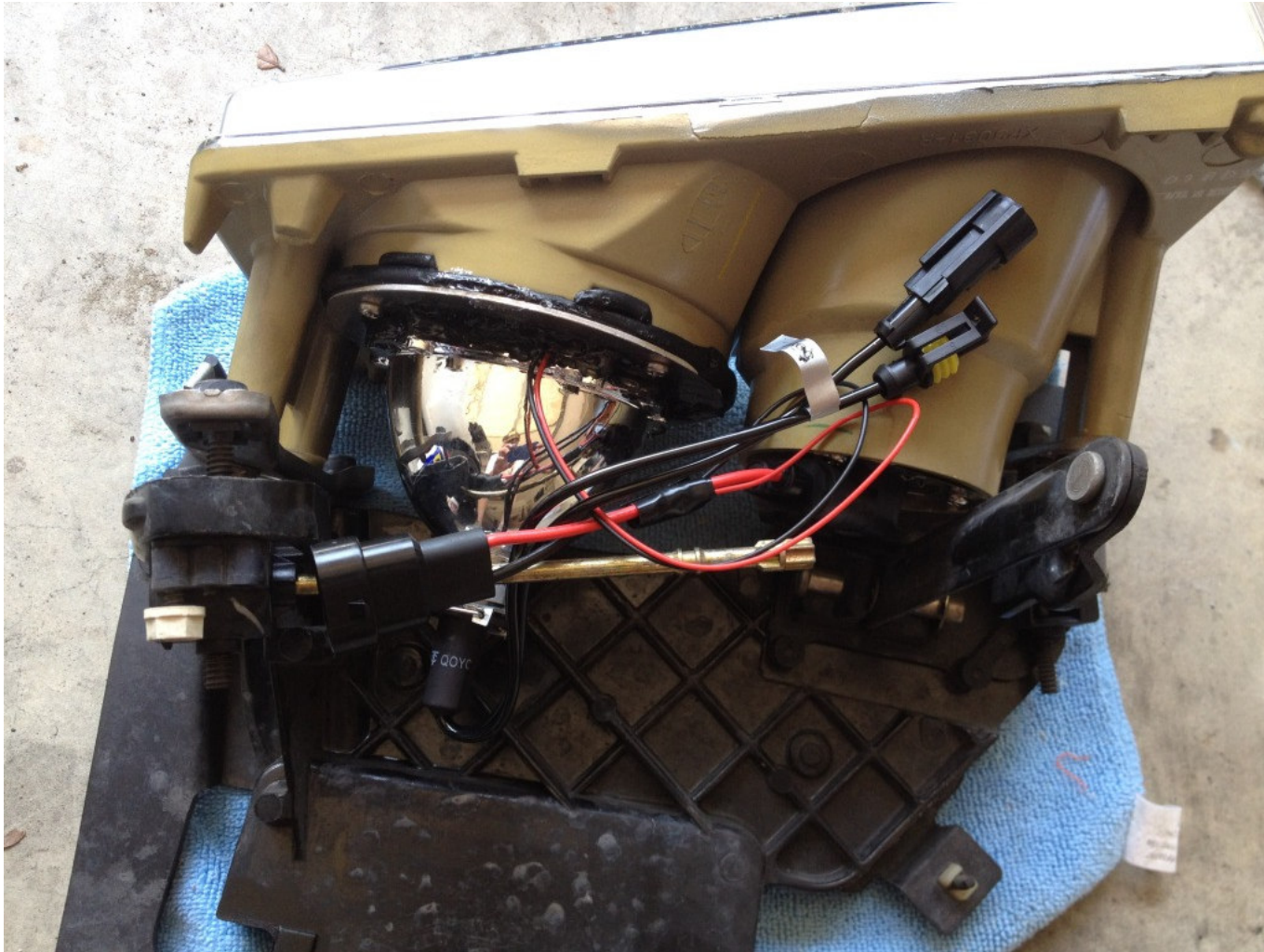
STEP 1



STEP 2



8. Mount the new headlights using the same mounting screws removed from the factory headlights. Tighten the screws until they are snug, but be careful not to over tighten or the mounting points will crack. (DO NOT use power tools here.)

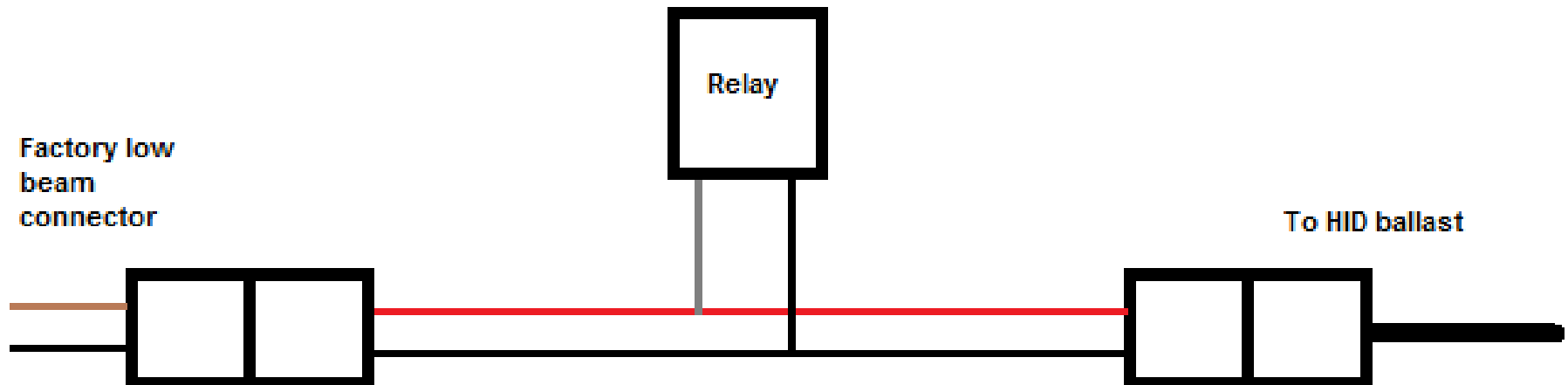


9. Mount the HID ballast out of the way of the headlight and lifting arm and but close enough to reach the factory headlight connector . It's suggested to use the supplied mounting tape and secure to a clean flat surface. (The style of ballast may be different than what is pictured)

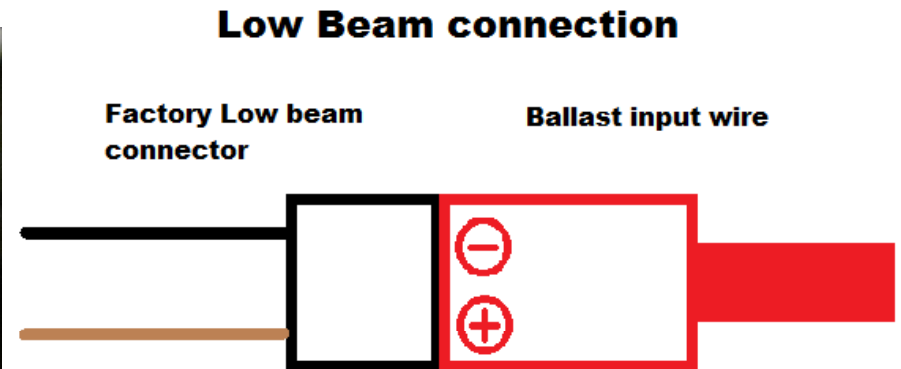
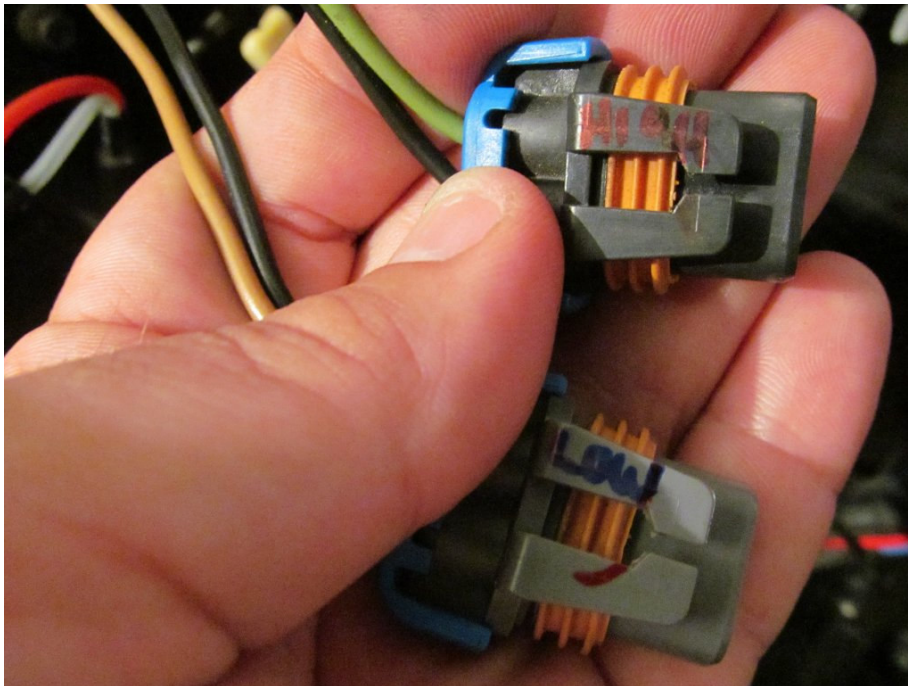


10. The small relay harness with male and female headlight connections installs on the passenger side only between the factory low beam connector and HID ballast as shown. Make sure the polarity is correct on the connections (black wire should line up with the (-) symbol on the ballast connector and the black wire on the factory connector).

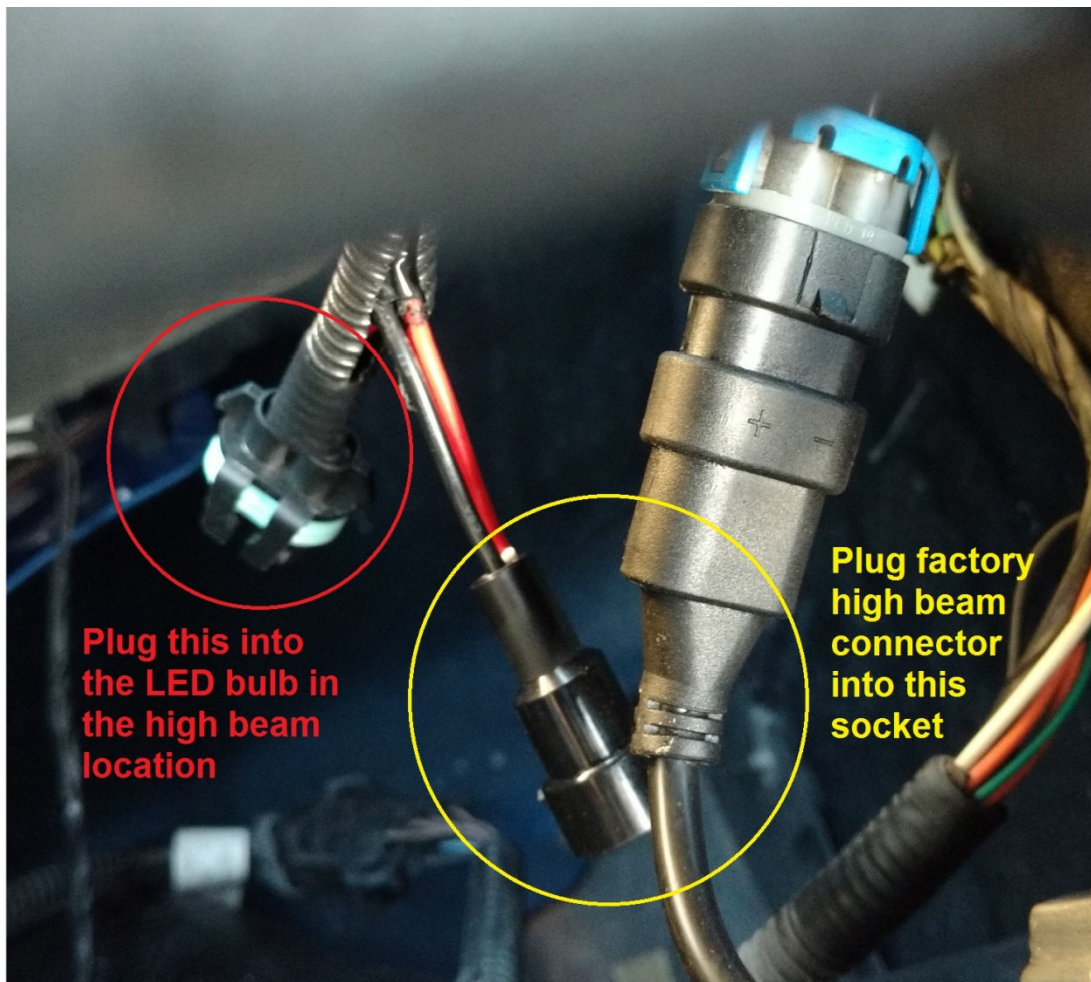
Install on Passenger side Headlight Only



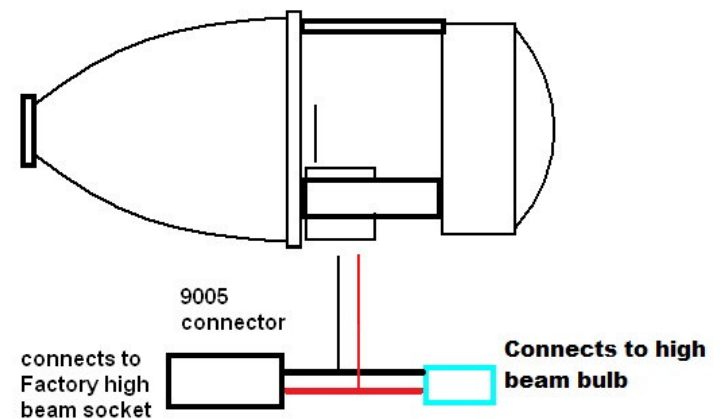
11. Identify the Factory low and high beam connectors as shown below Connect the Factory low beam connector (tan and black wires) directly to the ballast. The HID ballast connector has + and – markings on it. Make sure the black wire lines up with the – sign and the tan lines up with the + sign.



12. Set the lights gently inside the headlight cove and bolt the lifting arm back to the motor. Once this is secure, connect the HID ballast output to the HID bulb in the projector. Connect the OEM high beam connector to the High beam mini-harness already installed on your new housings. Connect the other end of the mini harness to your LED high beam bulb (the mini harness acts as a pass-through for the high beam circuit)



ACA bi-xenon projector High beam wiring



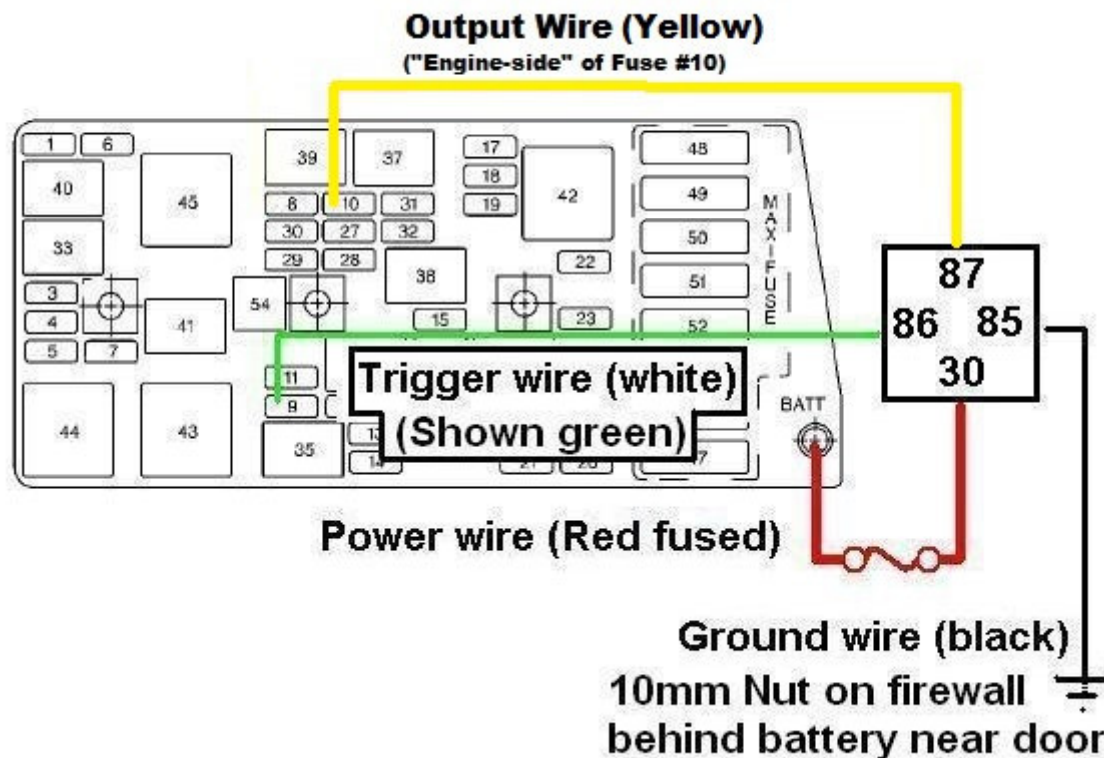
13. Re-install the Torx 20 screws, washers and nuts, then conduct a quick test of the headlights to verify all circuits have been wired correctly. Check your high beams as well. At this point, your projector will shut off in high beam mode, but your halogen high beams will turn on and you should be able to hear the bi-xenon solenoids activate with a "click" sound. (Full function will be established with the installation of the Hi-4 harness in phase 3)



Phase 3: Installation of Hi-4 harness

The Hi-4 harness keeps the Low beams on with the high beams and is essential for the Bi-xenon system to operate correctly.

14. Remove the cover of the under hood fuse box and note the positions of the fuses to be tapped.



Tap the fuses as shown using the fuse taps supplied with your harness. The leg of the fuse will slide through the tap and back into the fuse socket. The fuse may not seat completely, but as long as you have good contact it will work as intended. Fuse taps install like this:



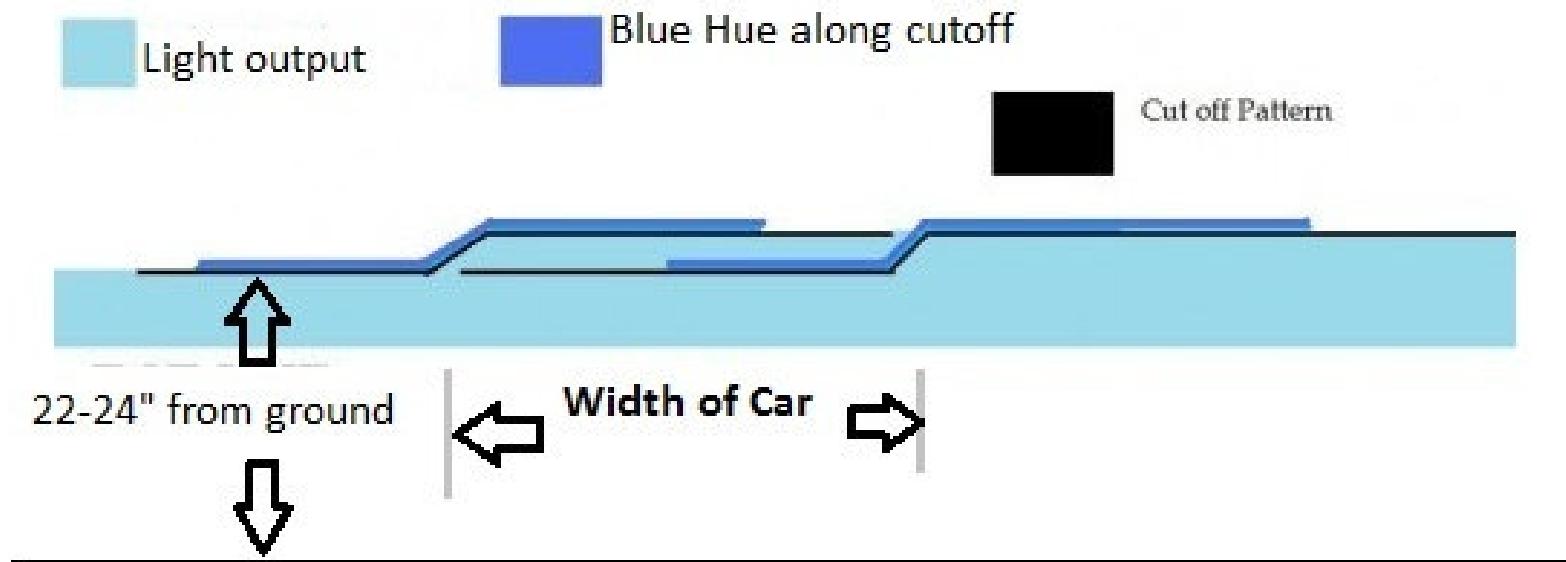
Once installed, test your lights again to ensure full function. Your low beams should remain lit when in high beam mode.

Phase 4: Aiming.

15. Park your car on a level surface 15-20 feet away from a wall (preferably a white or light colored wall) You may need painter's/masking tape and a tape measure as well.

The lower (left) portion of the cutoff should be between 22 and 24" for a stock ride-height car. Lowered cars should be 21-22" from the ground.

The "step" in the cutoff pattern should shoot directly in front of each headlight roughly the width of the car. This way, the steps (which are the most intense part of the beam pattern) remain parallel down the road and never cross. This adjustment may need to be done several times to get it perfect and you'll know after you've driven the car at night for a while.



The pattern should look like this when you're finished:



At this point, I suggest taking your car for a test drive to see if you like where the lights are aimed. Be sure to check that you have all the hardware removed from under the hood prior to a test drive.

Phase 5: Wrapping up

16. Complete the installation by re-installing the painted headlight cover with four torx 15 screws, then the headlight bezel and 3 Phillips screws.



Congratulations. You've completed the installation. If you have any questions, please let me know: (832) 431 4500 or email president@sharplightinnovations.com



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