

# “Luminator” Low-Rise Headlight system for C5 Corvette

Designed and built by  
Radioflyer Innovations

# Tools Required

- Phillips head screwdriver
- Flathead screwdriver
- Torx 15 screwdriver
- Torx 20 screwdriver (ratchet bit is suggested)
- 8mm and 9mm open end wrench
- 10mm and ½” deep-socket wrench
- Needle-nose pliers
- WD-40, PB blaster or similar
- General purpose cleaner/paper towels
- Blue thread-locker (Optional)

# Major Parts Checklist

- Matched Set of Aluminum frames
- Matched Set of Shrouds
- Pair of lifting arm assemblies
- 2 high/2 low beam projectors
- HID Kit (Bulbs & Ballasts)
- Hi-4 harness
- LED high beams (or halogen if ordered)
- Hardware Bag

# Hardware checklist

- (2) 2" 1/4-20 mounting bolt
- (2) 1.5" 1/4-20 mounting bolt
- (2) 1.0" 1/4-20 mounting bolt
- (6) 1/4" Nylon Lock nuts
- (6) #8 1.5" screws
- (6) #8 1.75" screws
- (12) #8 standard nuts
- (12) #8 serrated lock washers
- (24) #8 flange Nuts
- (2) 5/16" x 2.25" bolt
- (2) 5/16" nylon locking nut
- (2) 5/16" x 1/8" x 3/4" nylon washer
- (2) 1" #8 screw
- (2) 1/8" #8 nylon spacers w/ mounting tape (First production run only)



# Removal of Factory headlights:



1. Remove the rubber cap on the headlight motor. (On 97-98 models, there will not be a cap)

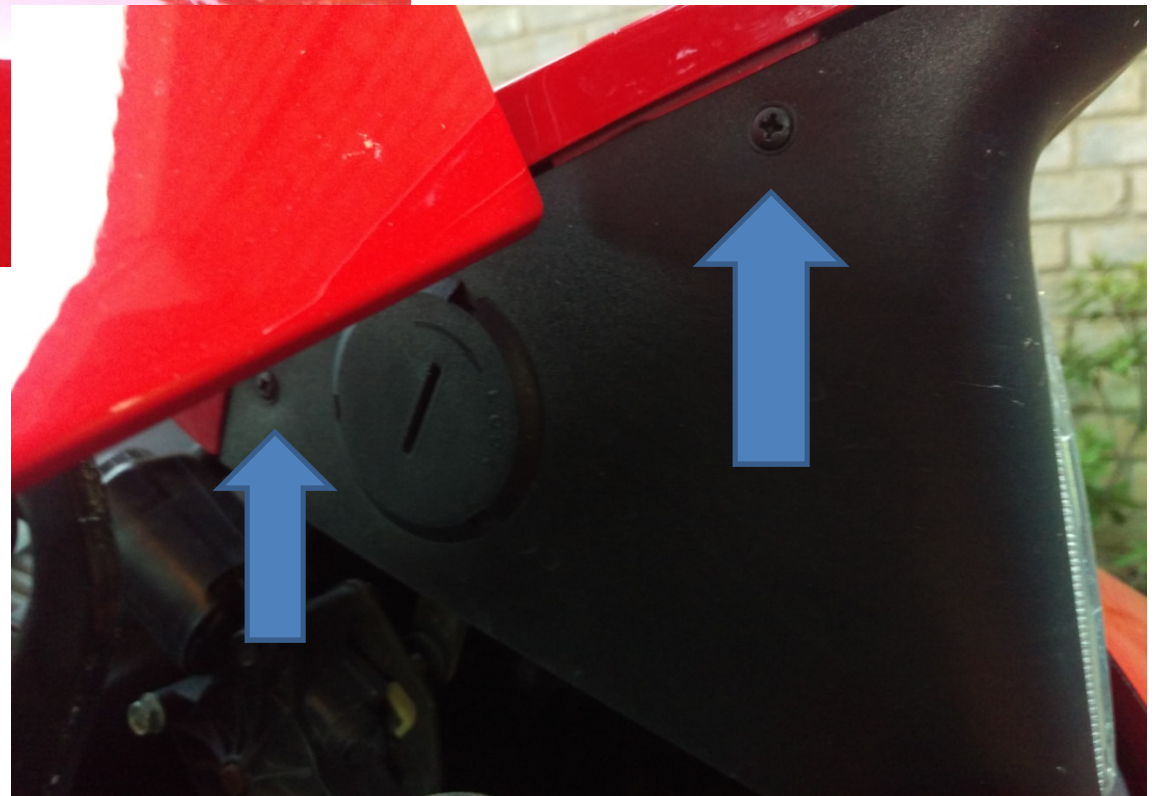
Manually raise the headlight by turning the motor until the headlight is in the full-up position.

2. Remove the two t-15 screws on the back of the headlight cover

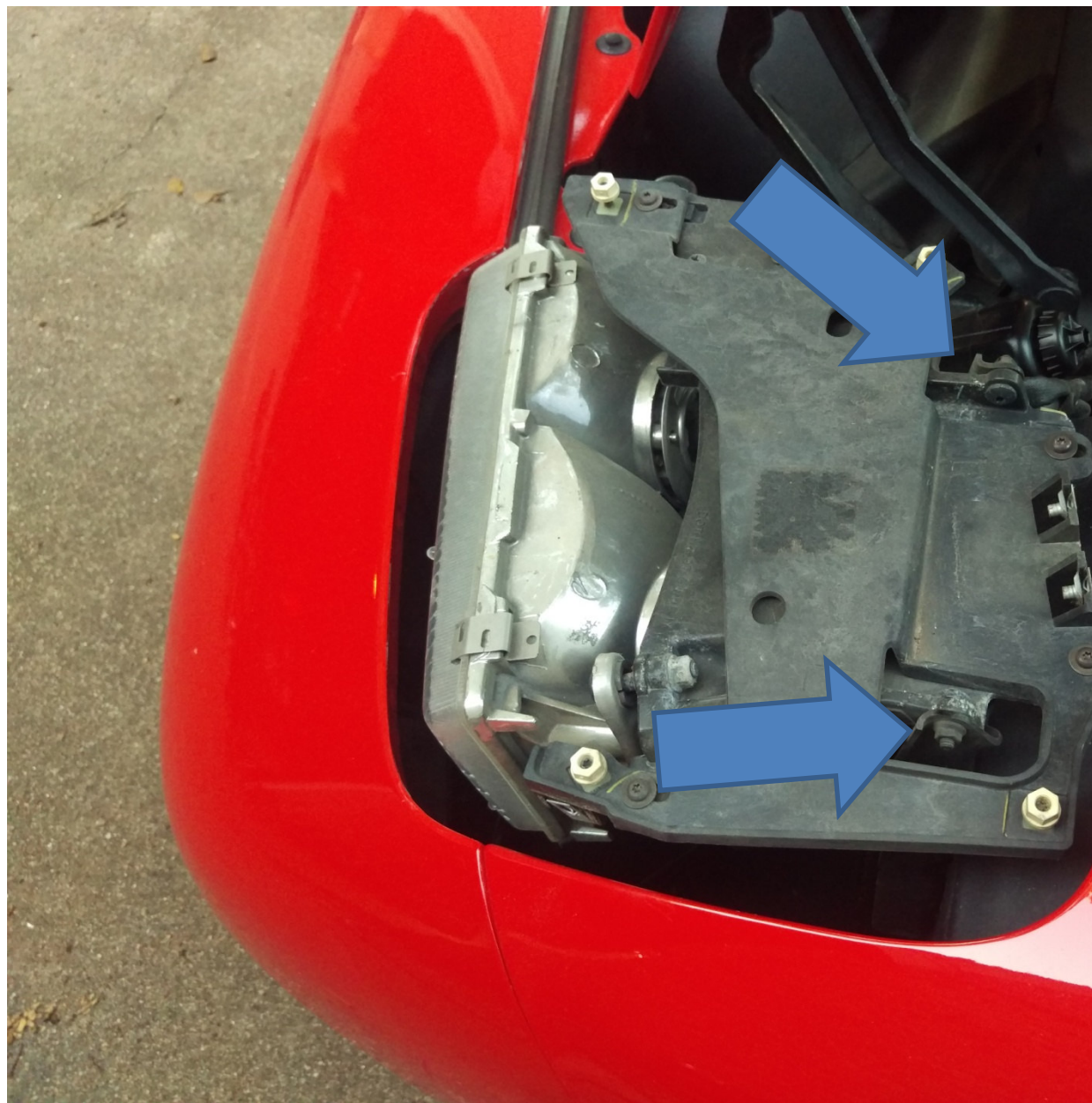


3. Remove the three Phillips head screws that hold the headlight shroud in place. Remove the shroud by gently pulling down where the shroud meets the cover and pulling forward.

4. Remove the two Torx 15 screws behind the shroud, then gently lift the headlight cover off and set it somewhere safe







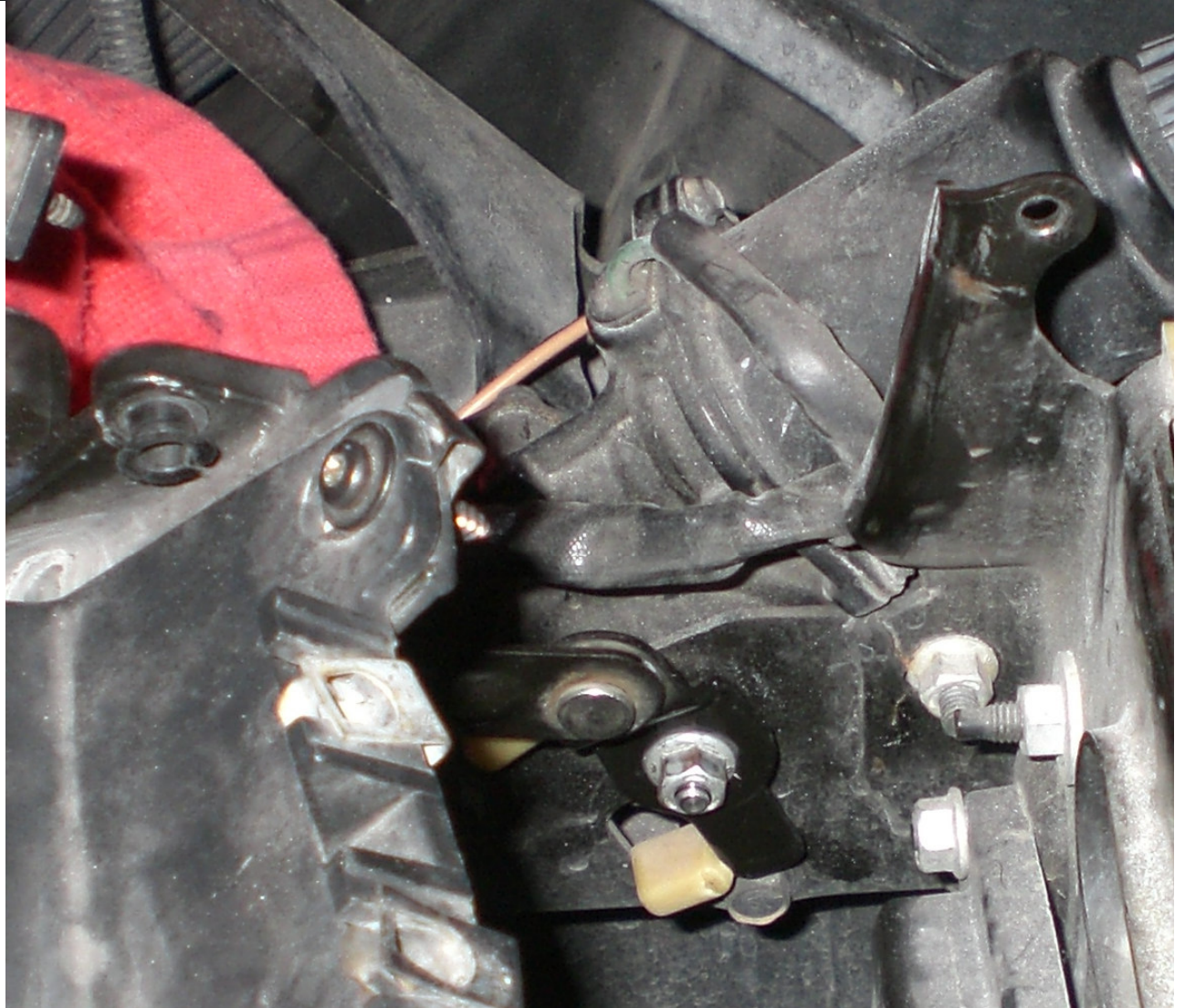
5. Apply WD-40, PB blaster or other penetrating lubricant to the hinge bolts. Allow a few minutes to penetrate.

Remove the 8mm nut and T-20 screw. There is a sleeve on the hinge bolt that is either metal or nylon. Take care not to loose these pieces.

6. Once the headlight hinge bolts are removed, allow the headlight to rotate forward into the headlight area.

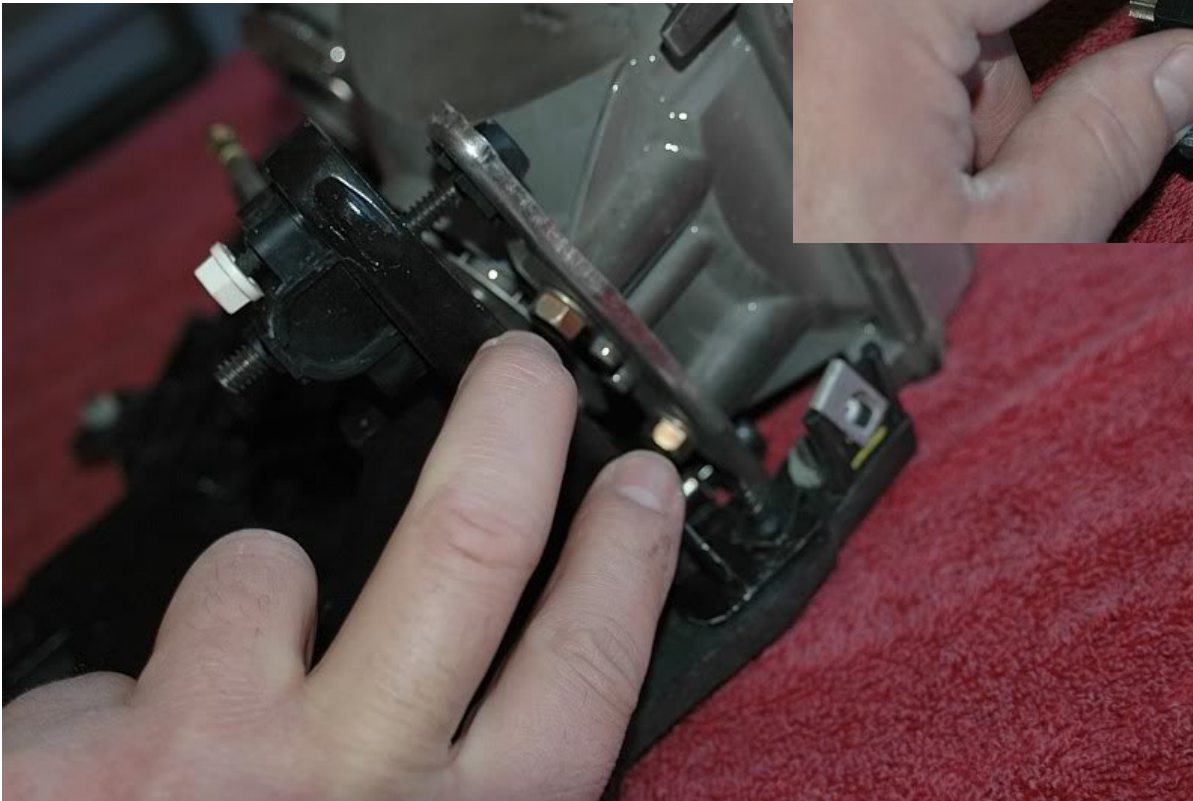
Disconnect the bulbs from the sockets. Remove the 10mm nut that holds the headlight lifting arm to the headlight motor.

Use the flathead screwdriver to gently pry the lifting arm off of the headlight motor.

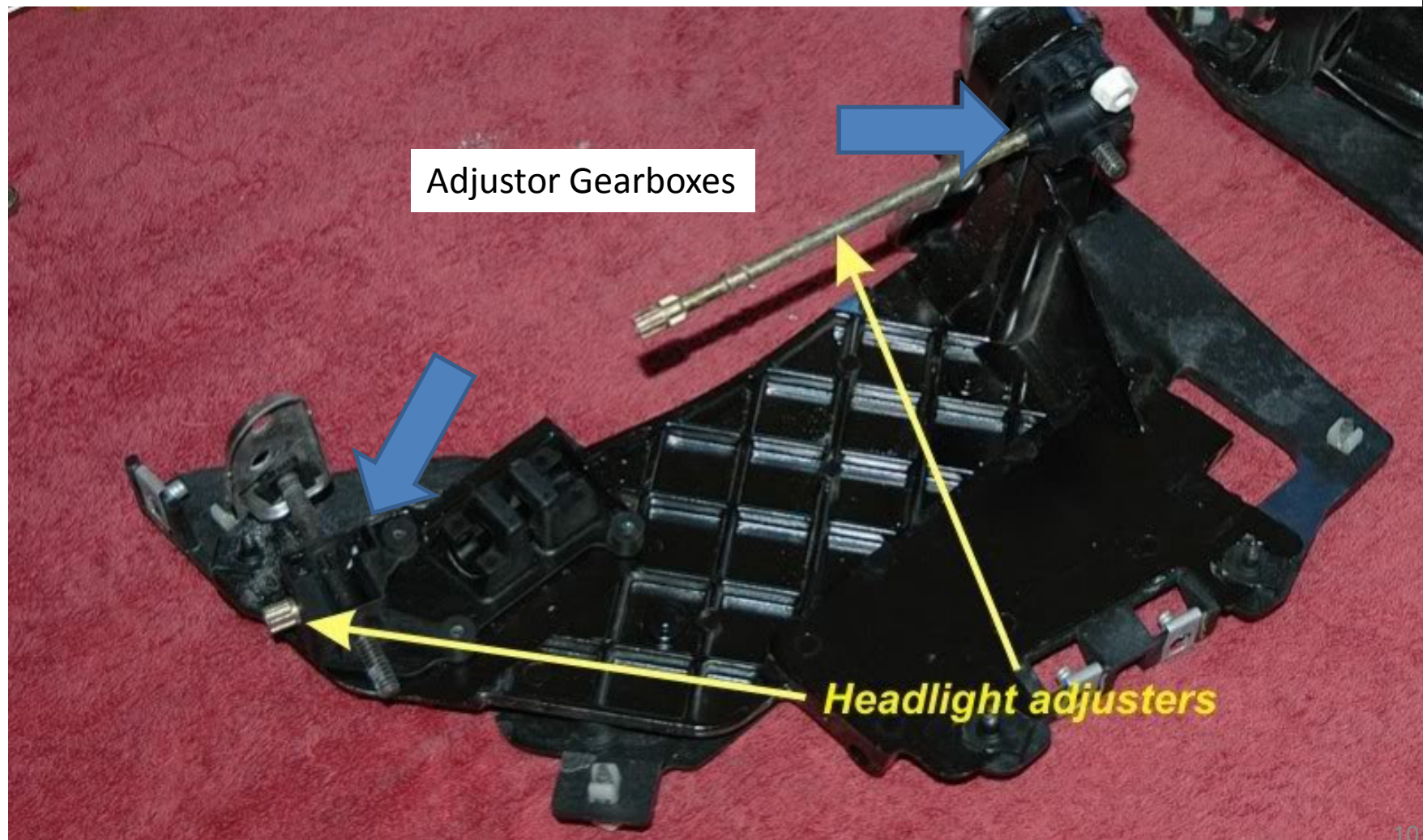




7. Remove the three 10mm mounting screws that hold the headlight reflector assembly to the rest of the headlight assembly.



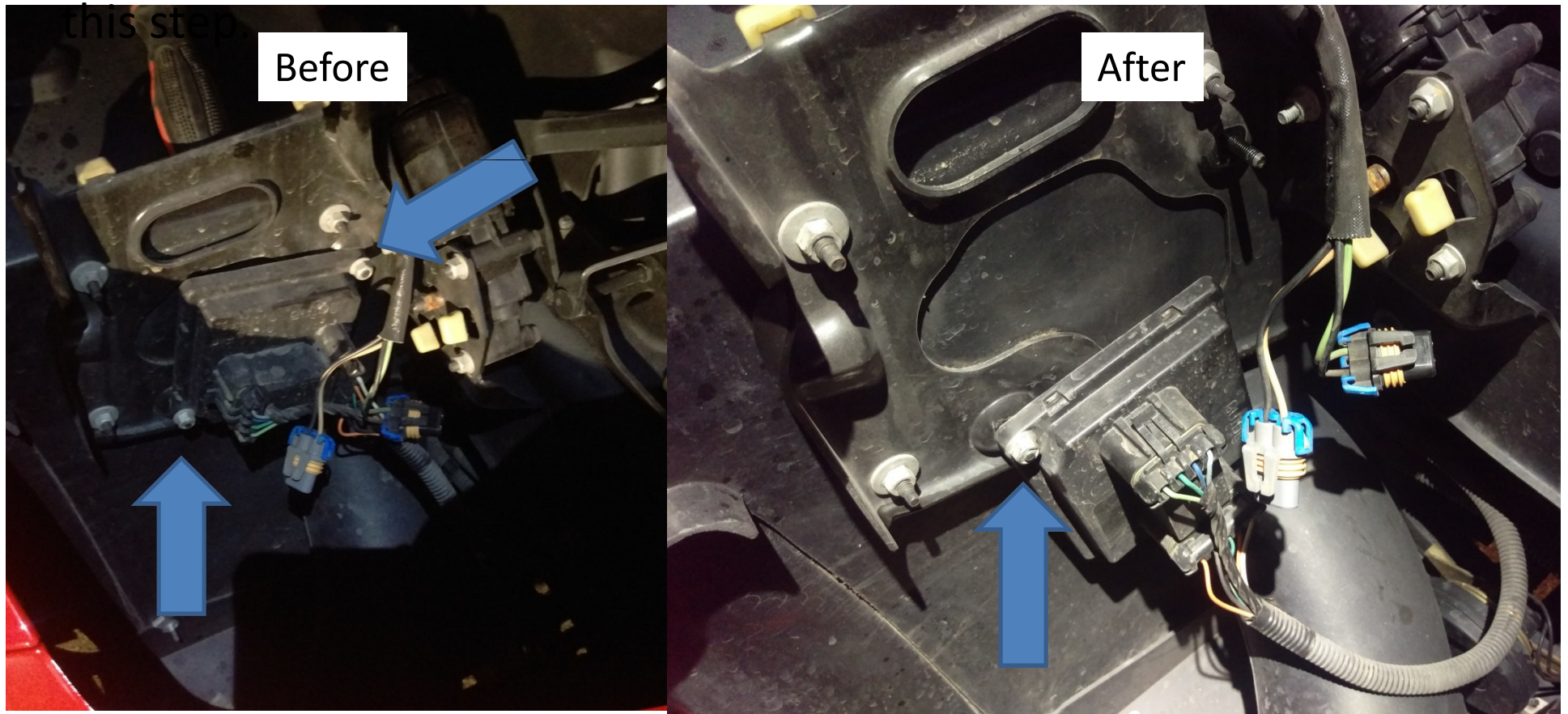
9. Generously lubricate the factory headlight adjuster gearboxes with WD-40, PB blaster or other penetrating lubricant. (failure to do this may result in the brass rod breaking when trying to aim)





# For Passenger side only

10. The headlight control module (located on the passenger side only) will need to be re-located. Simply remove the two mounting nuts and rotate the assembly downward. Re-attach the lower mounting nut and tighten. The harnesses may remain connected in this step.

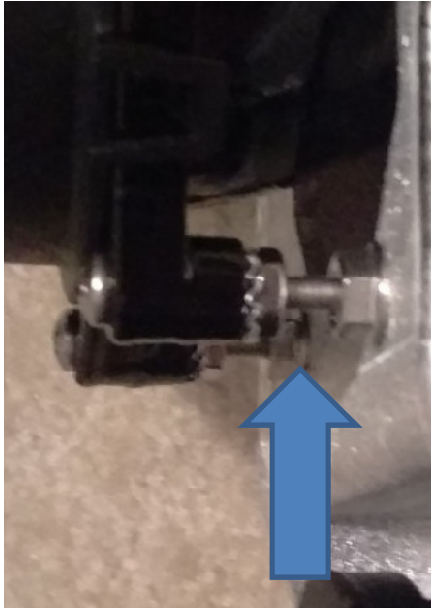


# Assembly of “Luminator” headlights

11. The High beam projector has a cylindrical profile while the Low beam has a an oblong profile. The Low beam mounts to the outside location and the high beam to the inside location as shown:

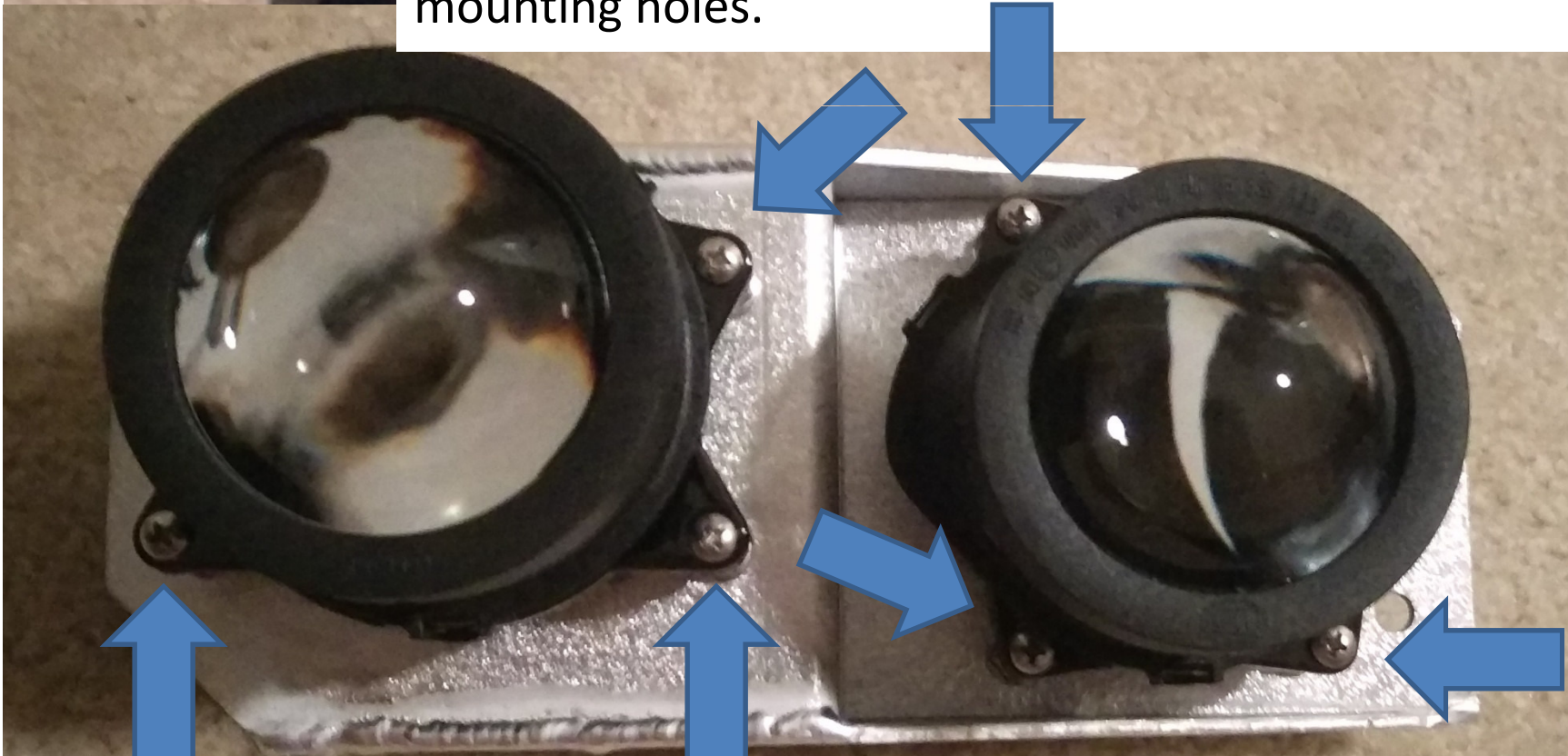




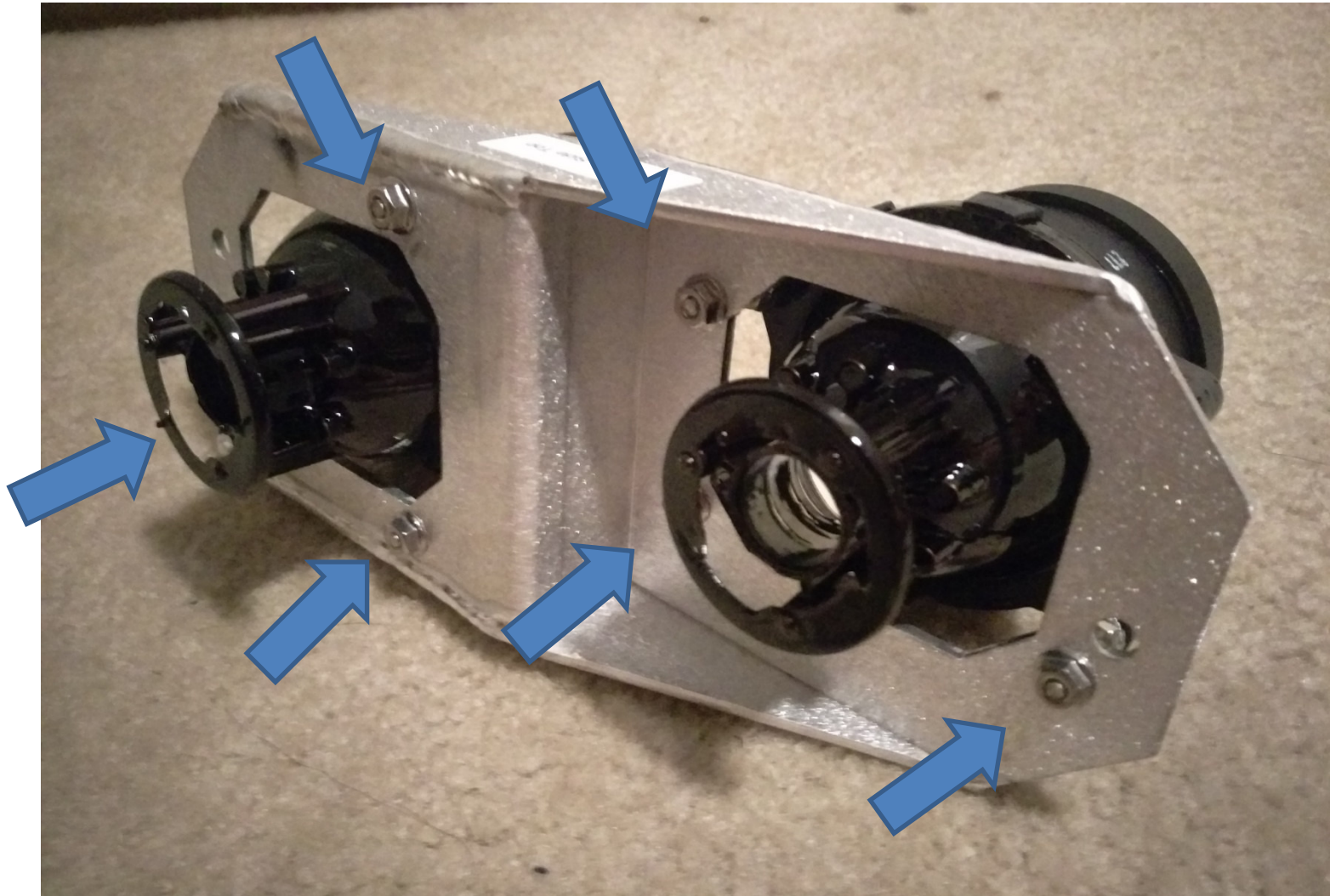


12. Low beam projector uses the 1.75" #8 screws and the high beam uses the 1.5" #8 screws. Screws install from front side of projector, then serrated lock washer and standard nut. Secure the nut snugly. (One of the 4 bolts holes will not be used. Reference positions of screws in the photo below. )

13. Install a flange nut on each screw with the flange facing away from the screw head. Insert the screws through the mounting holes.

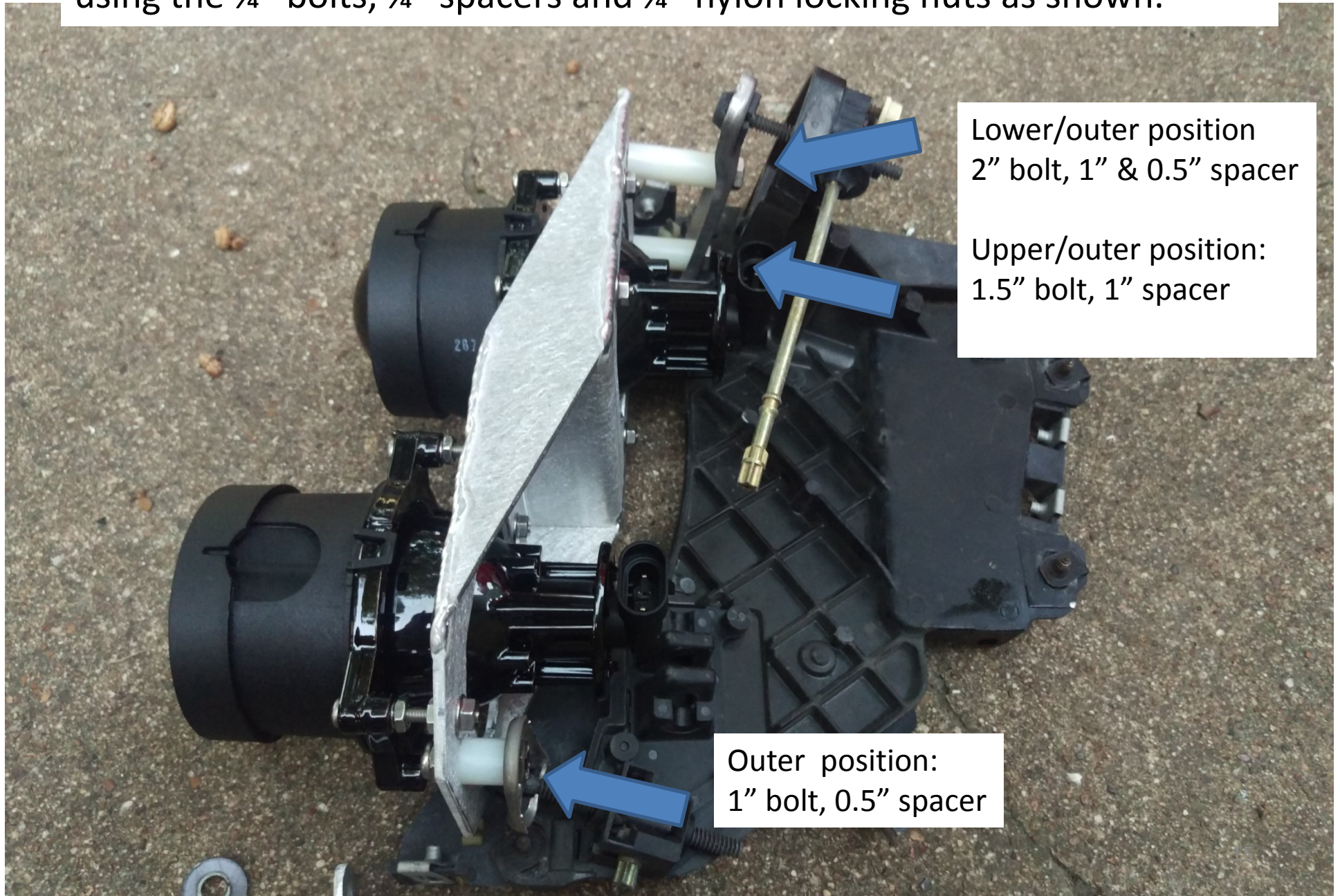


14. Install the second flange nut with the flange facing towards the screw head. Adjust the front and rear flange nuts until the tip of the screw is flush with the backside of the rear flange nut. Tighten the nuts by hand as these may be adjusted later.





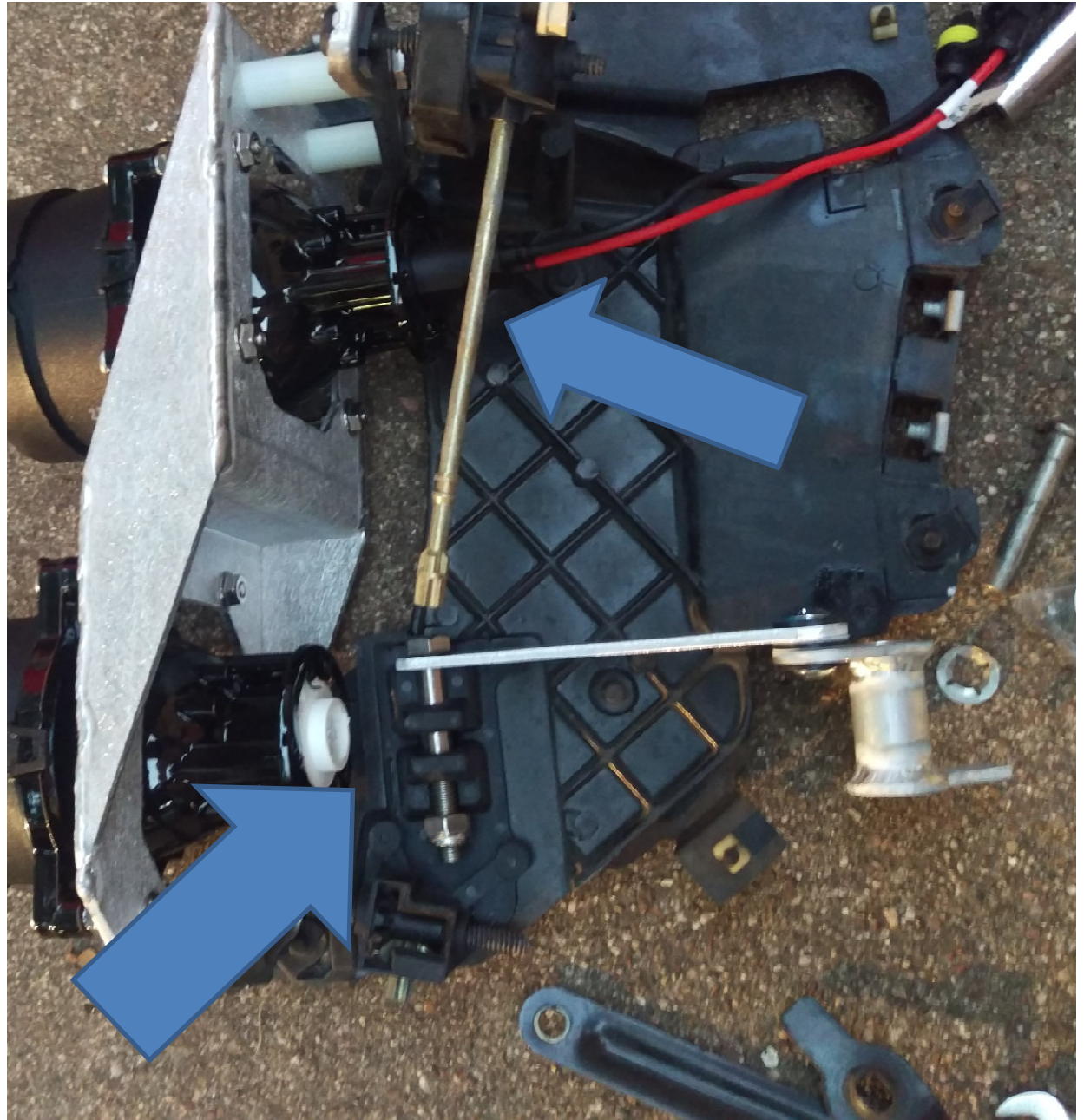
15. Mount the Luminator assembly to the factory headlight assembly using the  $\frac{1}{4}$ " bolts,  $\frac{1}{4}$ " spacers and  $\frac{1}{4}$ " nylon locking nuts as shown.





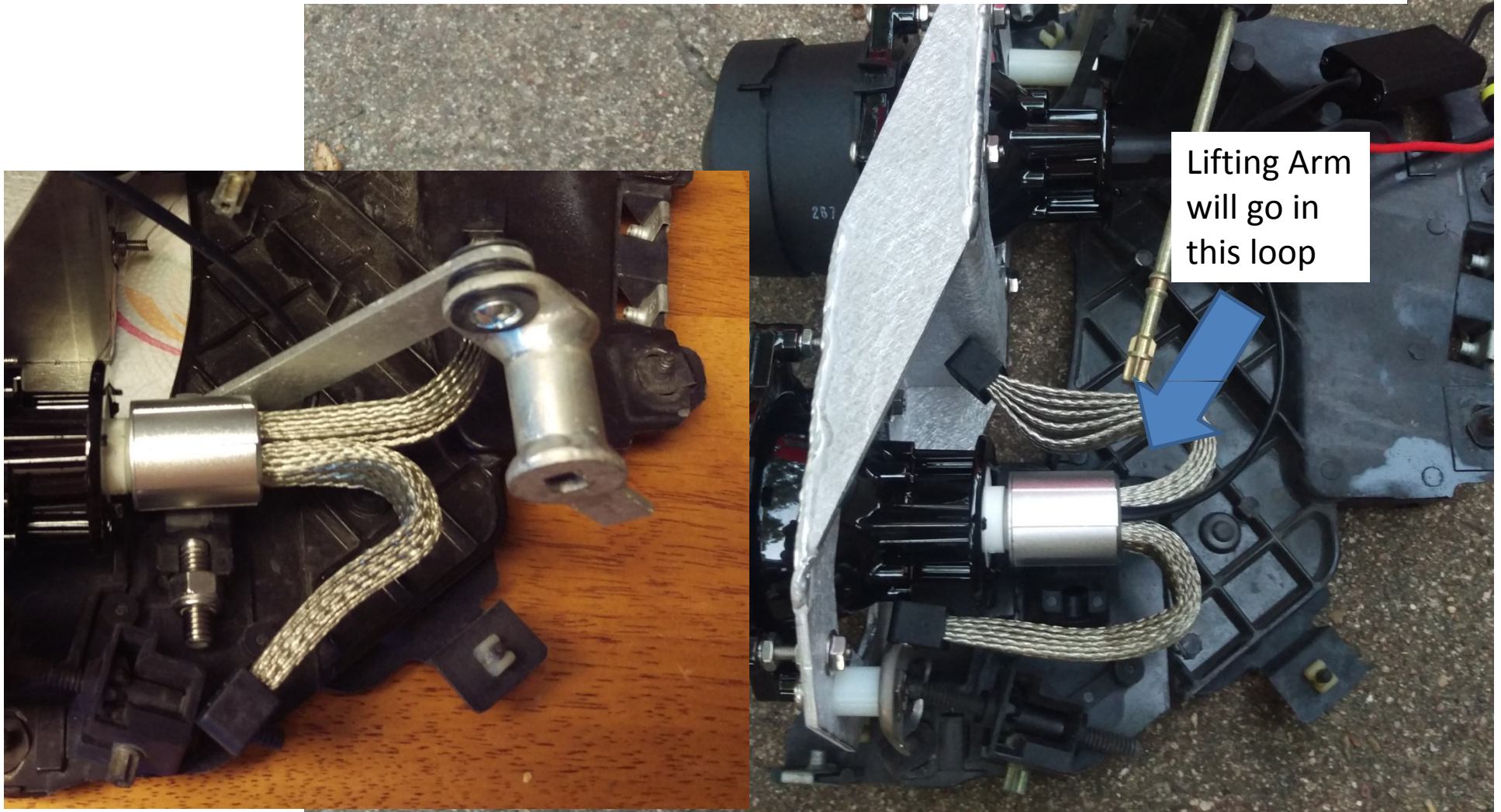
16. Install the lifting arm assembly using the 5/16" bolt and nut as shown. Tighten to the point where there is minimal lateral wiggling but still loose enough to allow free movement.

17. Install the high Low beam HID bulb. The bulb will twist-lock into the housing. (needle nose pliers may be needed to twist into the fully locked position.





18. Install LED high beam bulbs and twist-lock into the high beam projector. Fold over the heat sink mesh bands so the lifting arm sits inside the looped band. (ref: photos)



19. Clean off a surface below the headlight bracket and mount the HID ballast. Connect the HID ballast to the low beam factory connector (the one with brown and black wires) . Note the +/- signs on the HID ballast connector.

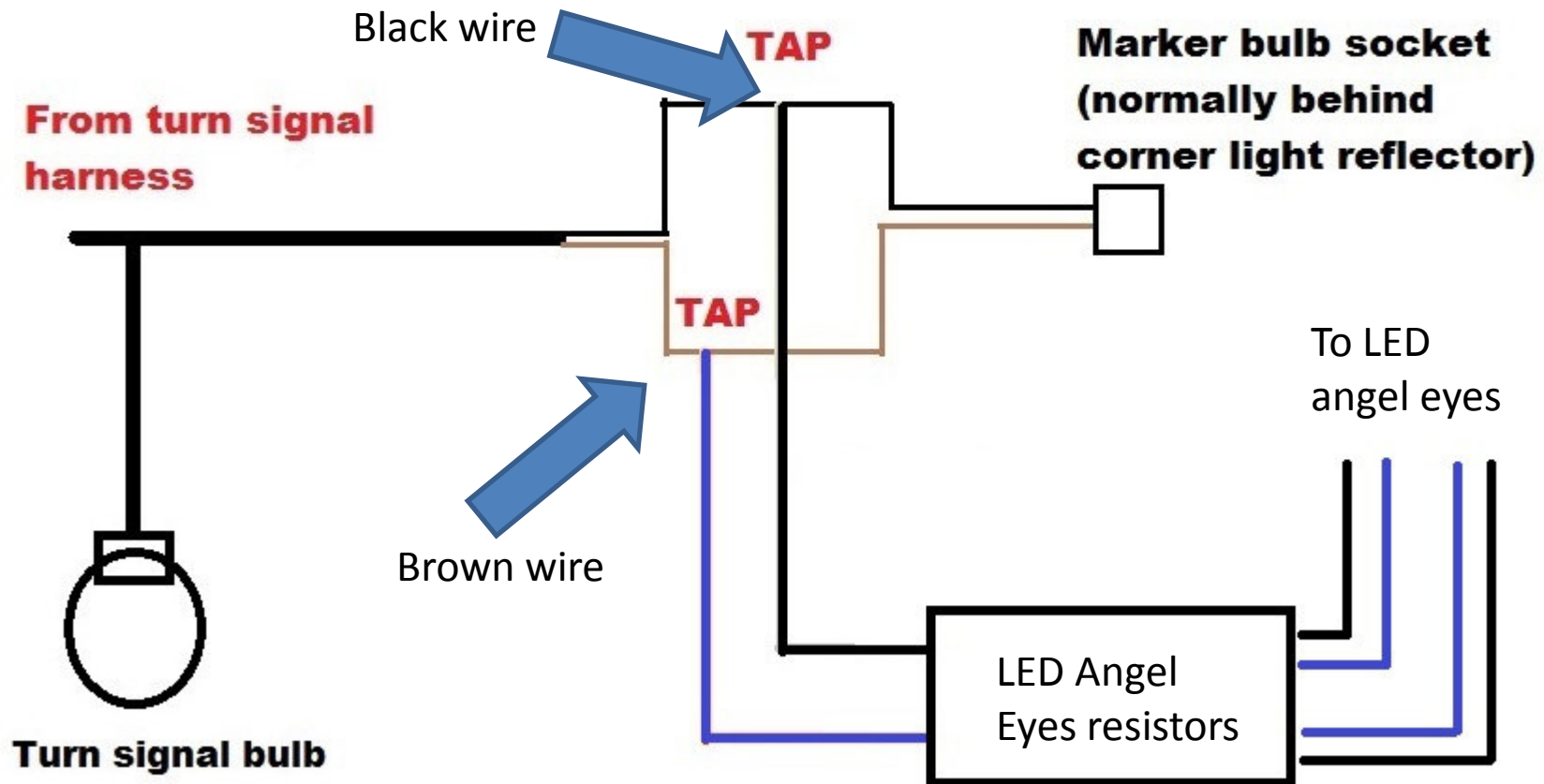
Make sure the (-) sign lines up with the black wire which usually means inserting the socket into the connector so the locking tab is not used. Friction will keep these connected, but you may use zip ties or electrical tape to secure the connection further if desired.



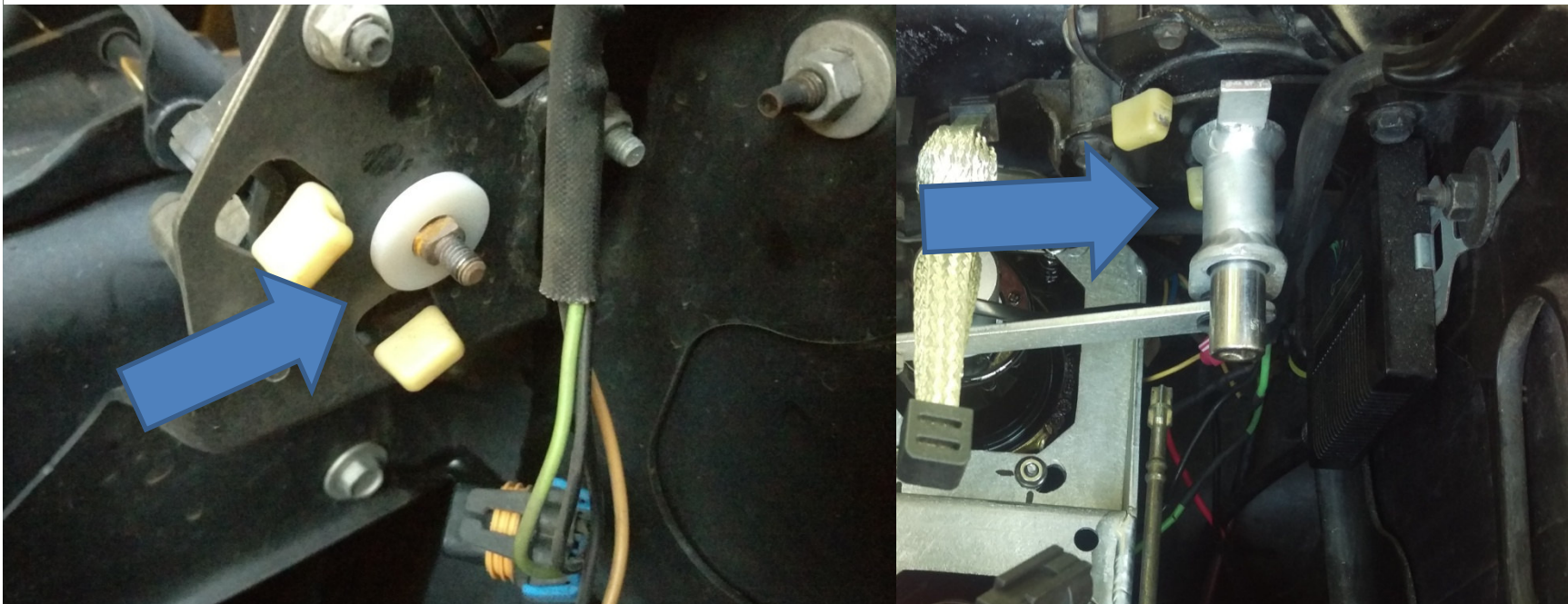


# OPTION: Angel eyes (Solid color)

Connect Angel eyes harness as shown to the marker light circuit using the supplied T-taps , then connect output to angel eye pigtail connector.



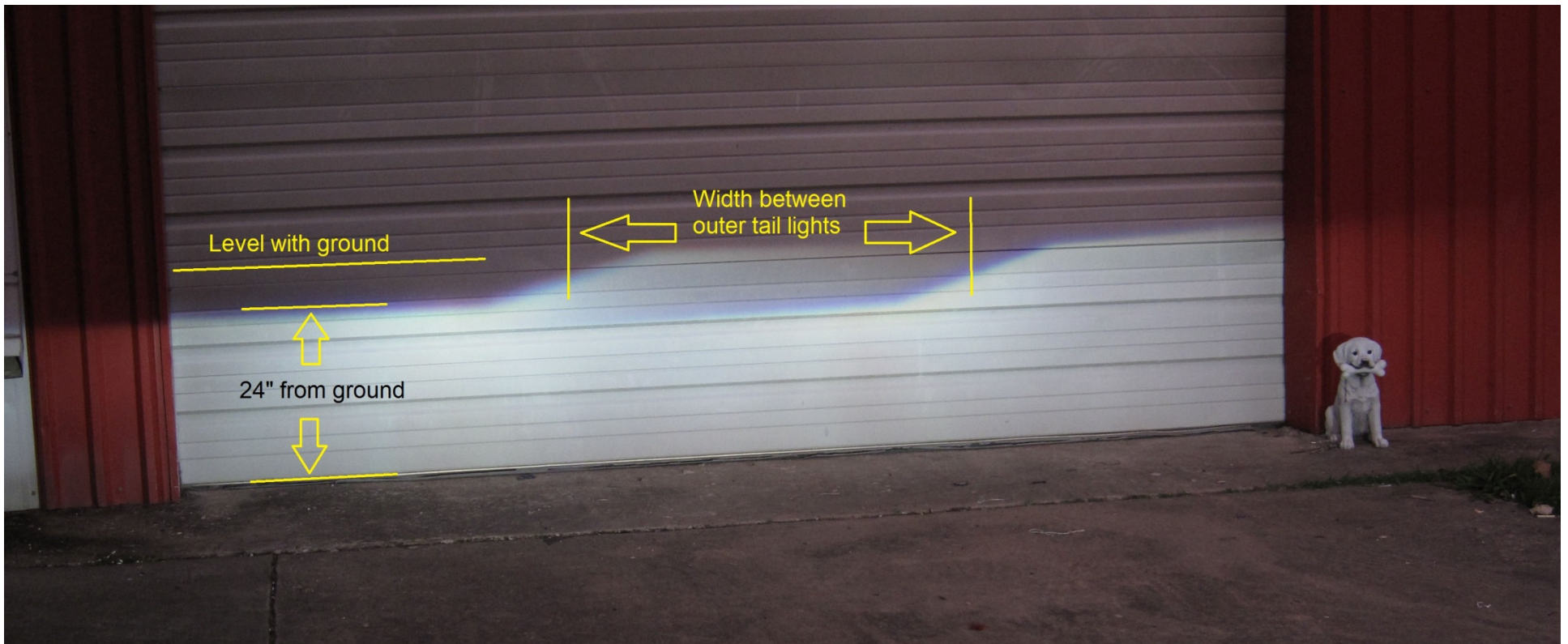
20. Install the  $\frac{3}{4}$ " x  $\frac{5}{16}$ " x  $\frac{1}{8}$ " spacer on the headlight motor bolt. Then, gently set the headlight in the headlight cove. (optional: you may put a drop of blue thread-locker on the threads of the headlight motor bolt)
21. Connect the factory high beam connector to the LED high beam socket. (again note the +/- polarity and make sure the black wire lines up with the (-))
22. Set the new headlight lifting arm on headlight motor nut. (You may need to adjust the headlight motor manually to set the lifting arm correctly into the bolt) Set the 10mm headlight motor nut on the 10mm deep socket and insert it into the open end of the lifting arm as shown.
23. Re-install the headlight hinge bolts and test rise/lower function manually first, then with headlight switch to check function of low and high beam lights.





# Aiming/Adjusting (complete before final assembly)

1. Adjust the rotation of the low beams by loosening the rear flange nut on the mounting bolts, manually holding it in place so it's level and tightening the flange nuts to lock them in place. The mounting holes in the frame are deliberately oversized to allow this adjustment.
2. Use the factory adjusters (Torx 15 screwdriver) to adjust vertical and horizontal until the pictured pattern is achieved. Further adjustment can be made by adjusting the flange nuts on each projector.



# Final Assembly

Re-mount the factory headlight cover . Re-install the rear screws and the inboard screw, but NOT the outboard screw.

Attach the #8 1/8" spacer with mounting tap onto the outboard screw location of the Luminator shroud so the new mounting screw can be installed through the center.

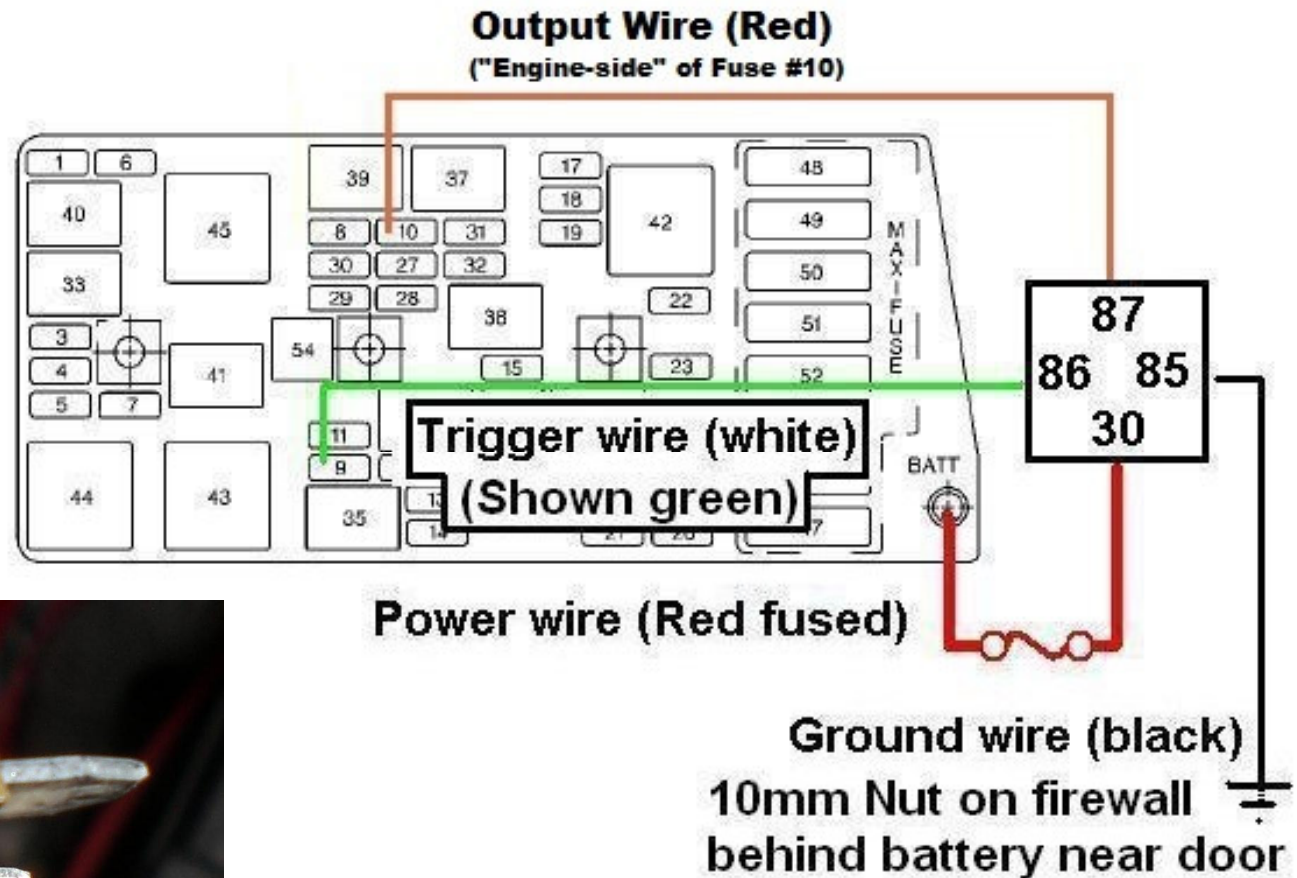
Carefully install the Luminator shroud ensuring the top tabs slide into the metal locking slot of the cover. Use the factory mounting screws in the two inboard holes and the supplied 1" #8 screw for the outboard hole.





# Hi-4 harness installation

The Hi-4 harness allows the low beams to remain on with the high beams for additional output. This relay harness installs in the factory under hood fuse box as shown. Fuse taps install on the fuses which are then inserted back into the fuse block.



# Enjoy!

