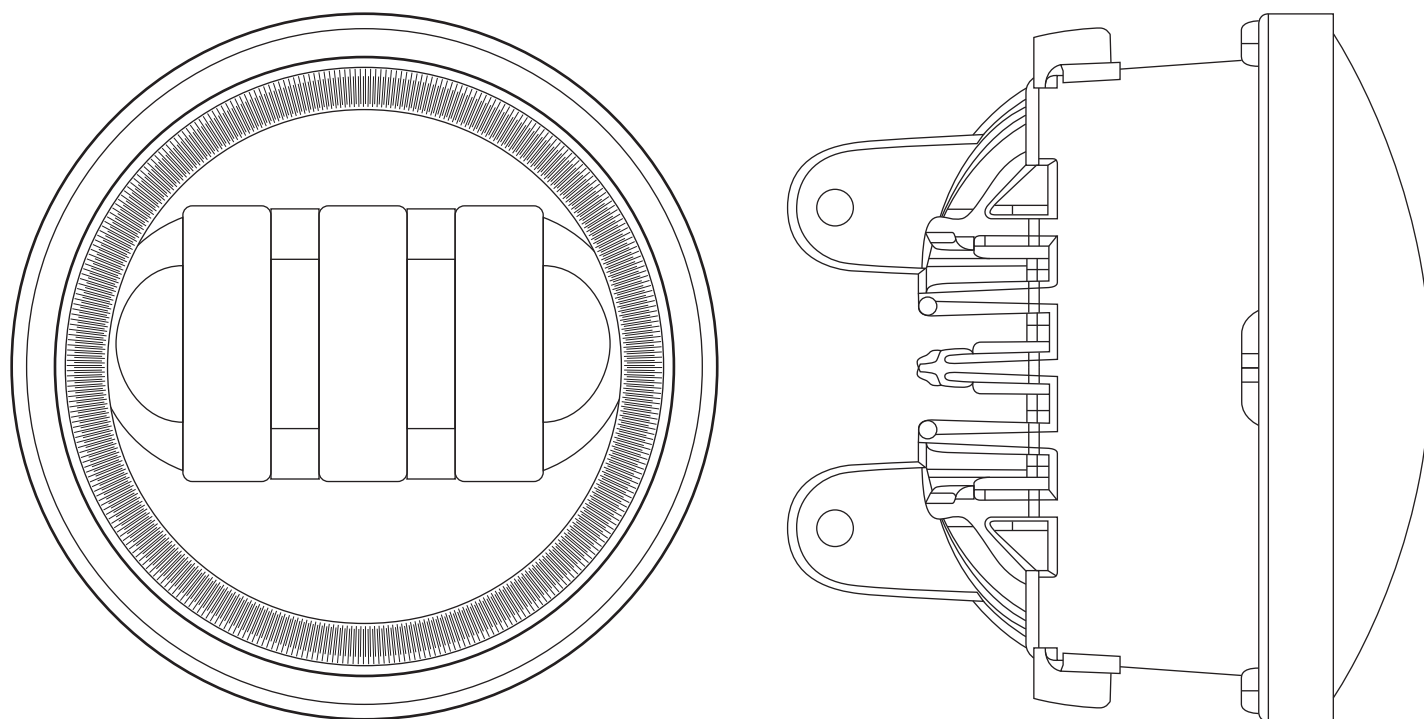


LUMEN

LED fog light, with or without DRL halo

INSTALLATION INSTRUCTIONS

For Chrysler corp. vehicles





Lumen SB3030AA-BLK - Black LED Fog Lights



Lumen SB3030BA-BLK - Black Halo LED Fog Lights

The fog lights are designed to replace factory fog lights on various late model Chrysler Corporation vehicles. These instructions show the installation on a Jeep JK Wrangler. Installation may vary on your vehicle.


 Caution

These instructions presume some automotive technical knowledge/repair experience. If you are unfamiliar with basic automotive repair, please seek professional installation assistance. These instructions are not intended to take the place of good workshop practices and common sense. Improper repairs can lead to property damage or personal injury!

 Tools and supplies needed:

- Assortment of screwdrivers;
- 12V test light or multimeter;
- Wire cutters/strippers/crimpers;
- Electrical wire and connectors as needed (see text);
- Electric tape;
- Plastic cable ties.

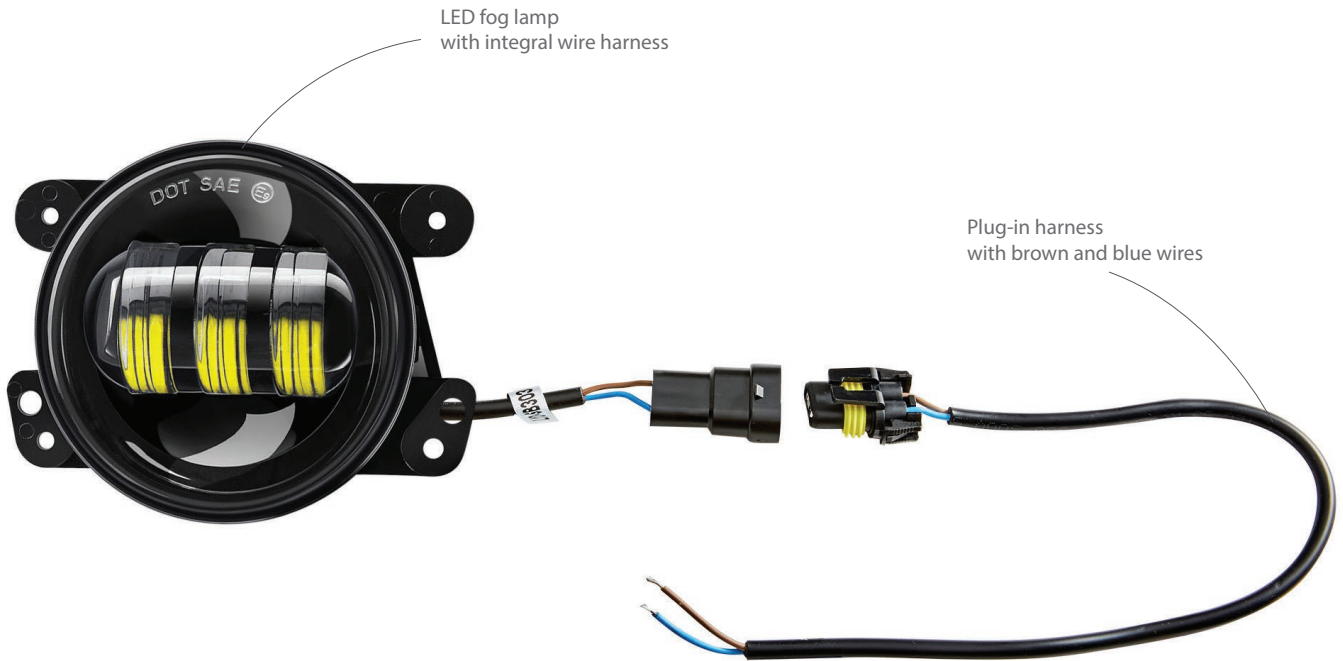


 In the box:

Verify that you have 2 of each of the following, as shown in photos:

- LED fog lamp with integral wire harness;
- Plug-in harness with brown and blue wires

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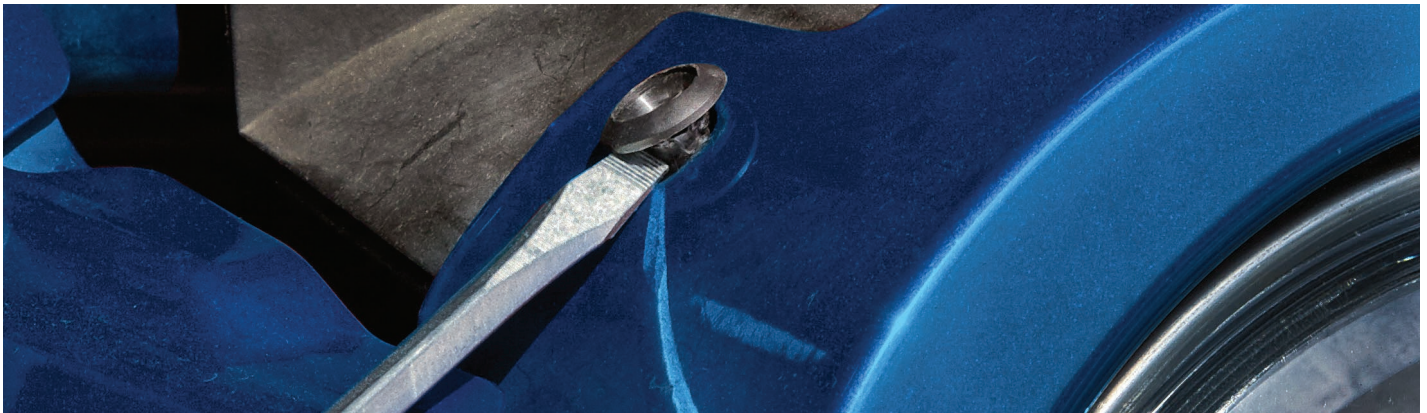
STEP 1: Removal of factory (existing) fog lights

The Jeep JK Wrangler fog light removal requires that the grille be removed first.

- Ⓐ To remove the grille: open the hood; along the top of the grille where it meets the shroud, remove all the plastic clips.



Circled are 3 of the clips to be taken out when removing the Jeep grille



Use philips and/or flat blade screwdrivers to remove clips (clip design may differ on your vehicle)

- Ⓑ Gently pull the top of the grille outward, away from the car. Reach down and release the parking lamp bulbs and holders, by turning them a quarter-turn. Keep them attached to the wire harness, and place them where they will not be damaged (They can be left to hang in the opening between the bumper and the body of the Jeep)



The parking light assembly has already been removed from its location in the grille

- © The bottom of the grille is held in place by clips. Gently pull on the bottom of the grille until the clips disengage; remove the grille from the car and put aside in a safe place.

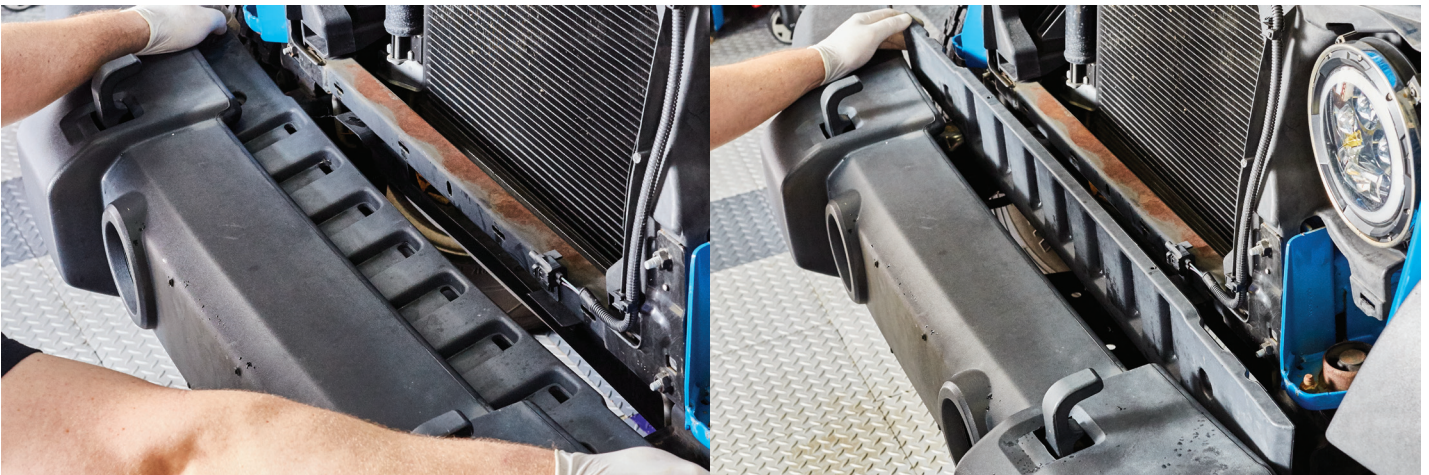


The bottom clips are disengaged by pulling at the bottom of the grille

- © To remove the filler panel behind the front bumper:
 - a. Remove the 2 Philips head screws at the panel ends.



- b. Push the panel forward, slightly under the front bumper, then pick up the panel from its back end, and remove it from the vehicle.



⑤ To remove the fog lamps:

- a. Remove the 4 Philips head screws holding each fog lamp assembly in place.
- b. Save these screws as they will be used to install the new Lumen fog lamps.
- c. Disconnect the wiring connector at the back of the fog light.



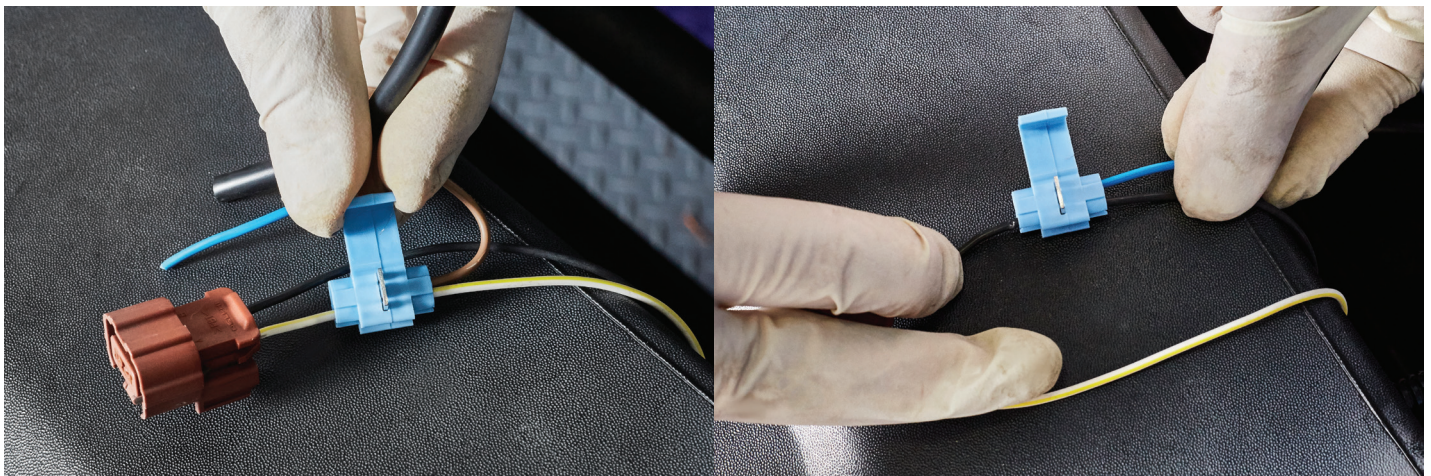
STEP 2: Making the fog light electrical connections

The installation method below does not permanently alter the vehicle, and allows you to revert back to the factory lamps, if so desired. Should you want a different installation method, you would alter these directions accordingly.

- Ⓐ Identify the fog light wiring:
- Using a 12V test light or multimeter, identify which of the 2 fog light wires is “hot”, and which is ground.



- On the Lumen fog light, the BROWN wire is “hot”, and the BLUE wire is ground.
- Ⓑ Using the connection method of your choice, connect the brown wire from the fog lamp to the “hot” wire at the vehicle’s fog lamp wiring; then connect the blue wire from the fog lamp to the factory fog lamp ground wire.



(NOTE: In the photos below, we use 3M Scotch-Lok quick connectors)

If your Lumen fog lights have the optional halo light, proceed to Step 3 below.

If your Lumen fog lights do not have the halo light, proceed to Step 4 below.

STEP 3: Making the halo light electrical connection

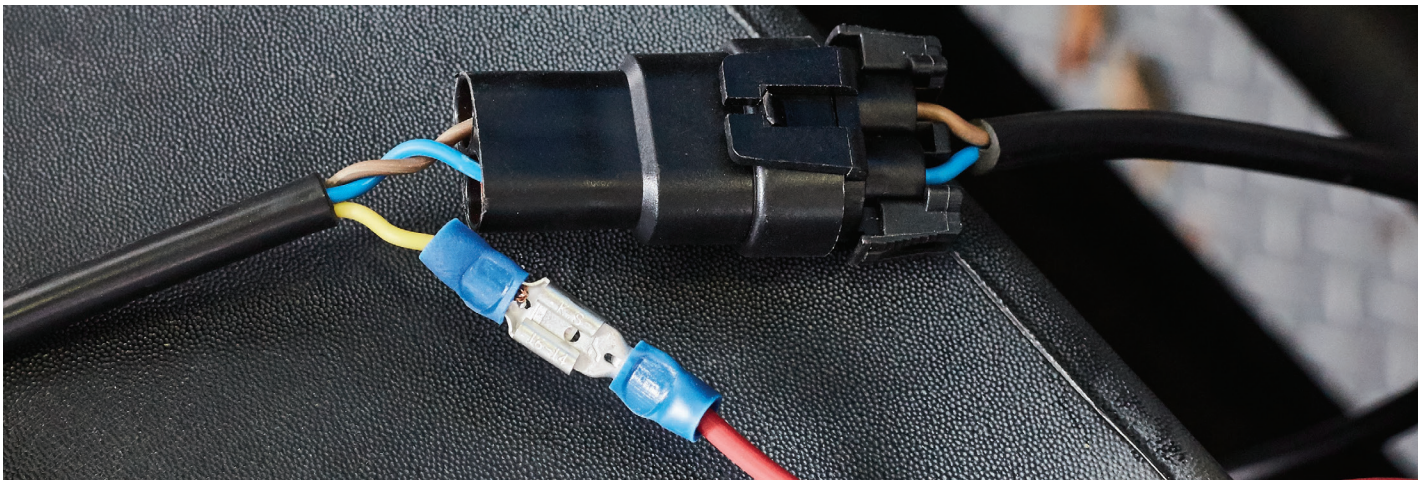
The procedure below results in the DRL halo illuminating WHITE whenever the key is “on” (DRL function). Should you desire different functionality, you would alter the connections as necessary. Below are two recommended methods for making these connections.

- Method A: Making the DRL connection at a 12V accessory socket.
- Method B: Making the DRL connection at the fuse box with an “add-a fuse” connector.

Method A

You may begin this step at either the driver or passenger side of the vehicle; we recommend the driver side so that the wire has a shorter path to the driver’s side interior.

- Ⓐ The YELLOW wire from the fog light assembly illuminates the DRL, and it must be connected to a circuit which is “hot” with the ignition on. Extend the yellow wire to the desired length for proper connection.



NOTE! In the image above, we have crimped a terminal onto the end of the YELLOW wire, and have extended its length using a red wire, also with a terminal crimped onto its end.

Ⓑ ⚠ Caution

Some vehicles have TWO 12v accessory sockets, one hot with the key on, and one hot all the time. Select the one which is “on” only with the ignition on. If you select the one which is always hot, the DRL lights will never turn off, and you will drain the battery.



In our 2007 Wrangler, the LEFT 12 socket is hot only with key on, so this is one we used. The RIGHT socket is hot at all times

⚠ Caution

Modern Chrysler Corporation vehicles use multiplex (Canbus) wiring throughout the vehicle. You CANNOT randomly select a 12V under-hood wire and splice into it without potentially disturbing the Canbus system.

- Ⓒ Run the yellow wire through the firewall and under the dash. Access the wiring behind the 12V accessory socket. (You may need to view videos online to learn the proper way to remove the dash of your vehicle)
- Ⓓ With the ignition on, using the multimeter/test lamp, probe the two wires to find the one which is hot with key on. Turn off the ignition.
- Ⓔ Using a 3M Scotch-Lok or similar, connect the yellow wire to that 12V accessory socket wire.
- Ⓕ Using cable ties and/or electric tape, neatly secure the yellow wire along its travel path.
- Ⓖ Repeat the steps above for the other side of the vehicle. NOTE, however, that the 2nd yellow wire does not need to be routed into the interior; instead, route this red wire across the engine compartment, and connect it to the 1st red wire. Tape up and secure all wiring.
- Ⓗ Proceed to Step 4.

Method B

You may begin this step at either the driver or passenger side of the vehicle; we recommend the passenger side so that the wire has a shorter path to the engine compartment fuse box.

Bussmann® add-a-circuit. Part# BP/HHH-RP

Important!

If there is a fuse in your chosen fuse box location, move it to the lower fuse location in the add-a-circuit. If no fuse is there, add one to the lower fuse location.

Upper fuse location
Lower fuse location



⚠ Caution

Please research which fuse position to use in order to properly wire your lighting accessory. Choosing the wrong location could result in major electrical issues.

- Ⓐ The yellow wire from the headlamp assembly plug illuminates the DRL, and it must be connected to a circuit which is “hot” with the ignition on. Extend the yellow wire to the desired length for proper connection.



NOTE! In the image above, we have crimped a terminal onto the end of the YELLOW wire, and have extended its length using a red wire, also with a terminal crimped onto its end.

- Ⓑ Run the yellow wire along a path within the engine compartment that will end next to the fuse box. Leave plenty of slack in the wire until all connections are complete.
- Ⓒ Once you have selected the proper fuse position, insert the fuses to your Add a Circuit as follows:
- With the blades of the Add a Circuit pointing down, the lower fuse receptacle is to be used for the existing fuse in your fuse box. Plug that fuse in the Add a Circuit.
 - The upper fuse receptacle is to be used for the accessory you are adding. Plug that fuse in. For DRL function, a 10 AMP fuse is sufficient. But make sure that you use the correct fuse for the location you have selected.
 - Plug the Add a Circuit into the selected fuse position.
- Ⓓ TEMPORARILY connect the yellow wire to the Add a Circuit connector (use electrical tape), as you will NOT want to finalize (crimp) the connection until both fog lights are installed and all functionality testing has confirmed that all connections are correct.
- Ⓔ Repeat the steps above for the other side of the vehicle. NOTE, however, that the 2nd yellow wire does not need to be routed into the fuse box; instead, route this yellow wire across the engine compartment, and connect it to the 1st red wire. Tape up and secure all wiring.

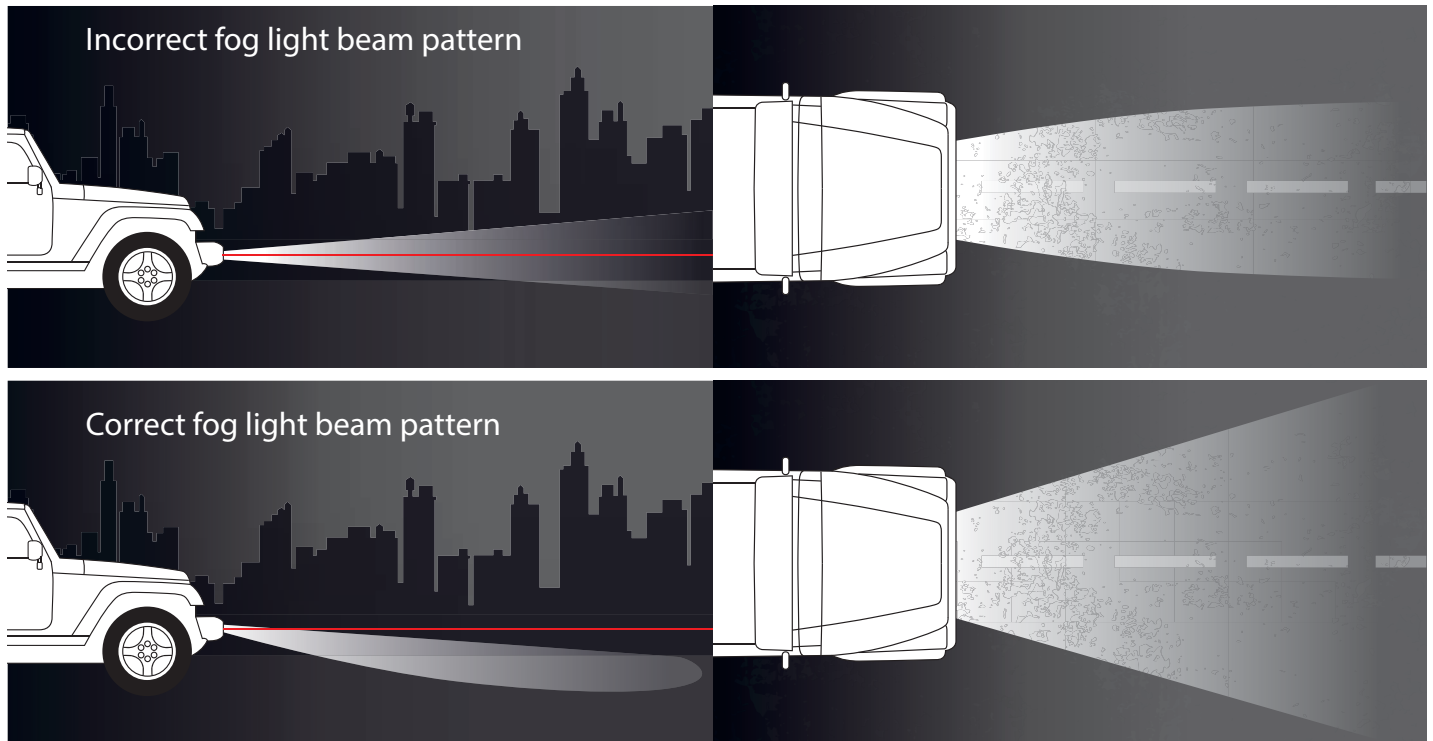
NOTE: It is important that lid fuse box lid can be closed completely. Once functionality has been confirmed, create a channel for the wire to pass through the fuse box wall without being pinched or the fuse box being compromised. The picture below shows the completed wire passing through the fuse box (red box). This channel was created using a triangular file.

Ⓕ Proceed to Step 4.



STEP 4: Completing the fog light installation

- Ⓐ Secure all wiring as necessary, using cable ties and/or electrical tape.
- Ⓑ Before installing the fog lights in the bumper, perform a full function test of the fog lights and if applicable, the DRL halo lights.



- Ⓒ Once you have determined that all lights function correctly, if you used Method B in Step 3, go back and make final crimp of wiring at Add-a-Fuse plug.
- Ⓓ Reinstall any panels which were removed during wiring installation.
- Ⓔ Reinstall the filler panel behind the front bumper.
- Ⓕ Reinstall turn signal bulbs into grille.
- Ⓖ Reinstall grille onto vehicle.



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