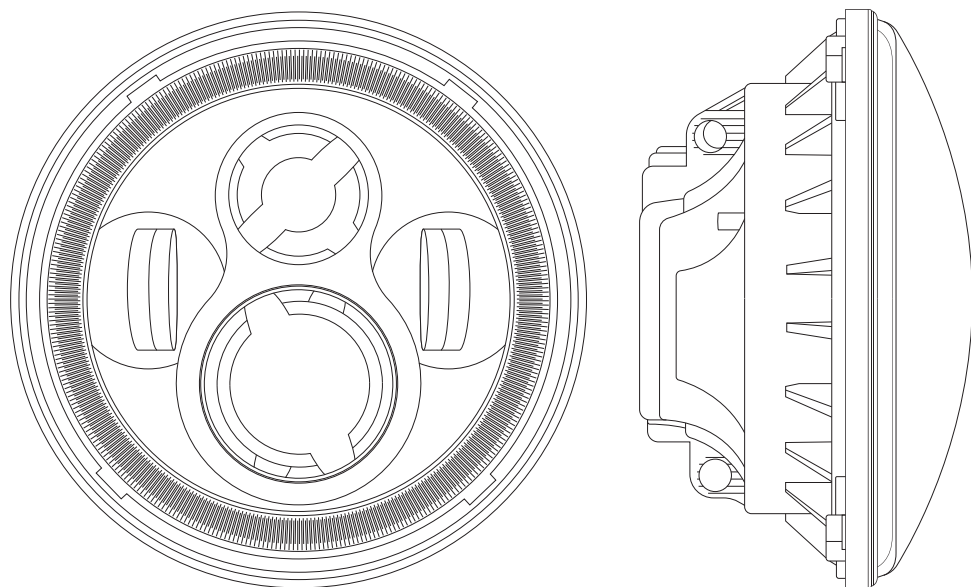


LUMEN

7" LED sealed beam headlamp with white/amber halo ring

INSTALLATION INSTRUCTIONS

For 2007 and newer Jeep Wrangler JK





These instructions may vary slightly among different model year Wranglers. They can also be used as general guidelines for any year and model 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:

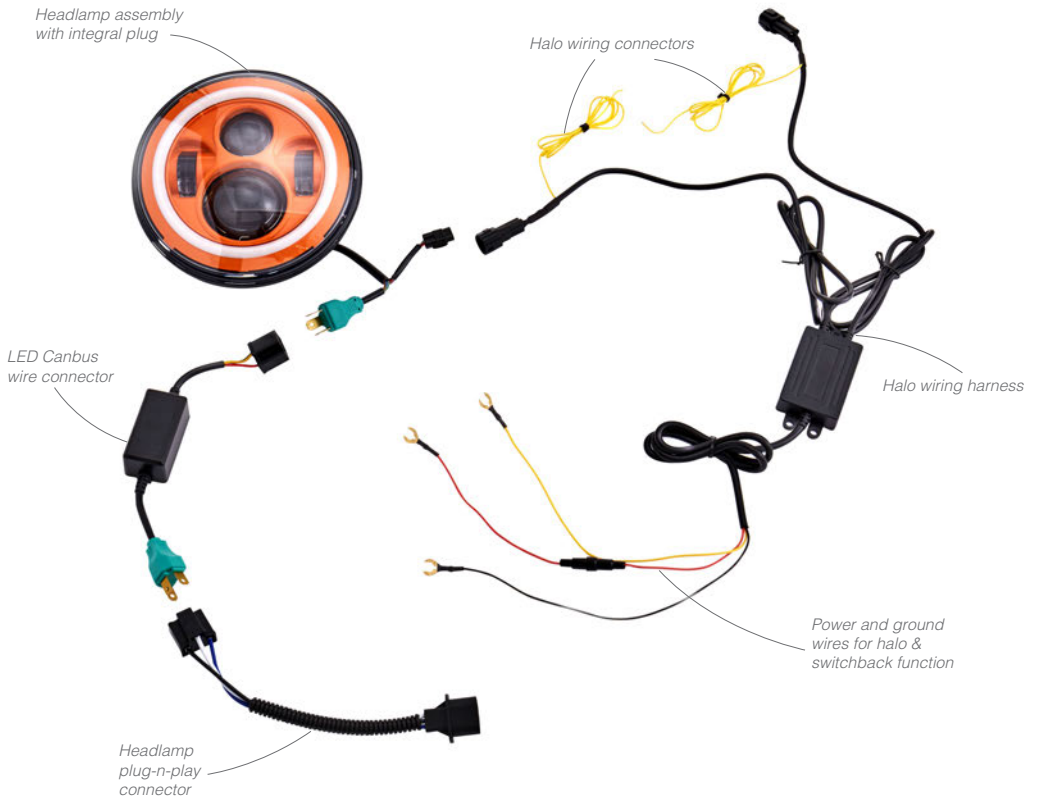
- Assortment of flat, Philips, and Torx screwdrivers
- 12V test light or multimeter
- Wire cutters/strippers/crimpers
- Electrical wire and connectors as needed (see text)
- Electric tape
- Plastic cable ties



 **In the box:**

Verify that you have the following, as shown in photo on the following page:

- Two (2) 7" sealed beam headlamps;
- Two (2) "LED Canbus" wire connectors, with male 3-prong plug on one end and female 3-prong plug on other;
- Two (2) Headlamp "Plug-n-play" wire connectors, with female 3-prong plug on one end, and plug to match vehicle headlight connector on other end;



STEP 1: Removal of factory (existing) headlamps.

The Jeep headlamp 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 pliers and/or flat blade screwdrivers to remove clips (clip design may be 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 headlamps:
a. Remove the metal bezel ring, which is held in place with 4 screws. Use a T-15 Torx bit/screwdriver.



The headlamp bezel is held in place with 4 Torx screws. Note the parking lamp still attached (circled)

- b. As the last screw is removed, hold onto the headlamp, as it could fall.
c. Remove the bulb from the assembly with a $\frac{1}{4}$ turn, remove the headlamp assembly from the car and put it in a safe place. Unplug the factory harness from the bulb.
d. Proceed to Step 2, Method A OR Method B.

STEP 2: Making the halo harness electrical connections to the vehicle.

The procedure below results in the halo ring 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-circuit” connector.



Method A:

- You may begin this step at either the driver or passenger side of the vehicle.
- Take the halo wiring harness, and locate its box near one of the headlights. You will permanently mount this box in a later step.
- Start with the harness end which has the single black, yellow, and red wires.
- Connect the BLACK wire to a good ground connection.
- The YELLOW wire is for other markets, and is NOT USED in this installation. Securely tape it out of the way, ensuring that it cannot short against any other component or ground source.
- The RED wire in the halo wiring harness must be extended to reach the interior; connect an additional length of wire to this red wire, so that the wire will reach the dashboard

- Ⓐ The red wire illuminates the DRL, and it must be connected to a circuit which is “hot” with the ignition on.

⚠ Caution

CAUTION! Some Jeeps 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

CAUTION! Modern (JK) Jeeps 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 red 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 red wire to that 12V accessory socket wire.
- Ⓔ Using cable ties and/or electric tape, neatly secure the red wire along its travel path.
- Ⓕ **Proceed to Step 3.**

Method B:

- Begin this step at the side of the vehicle where the fuse box is located.
- Take the halo wiring harness, and locate its box near the headlight WHICH IS CLOSEST TO THE FUSE BOX. You will permanently mount this box in a later step.
- Start with the harness end which has the single black, yellow, and red wires.
- Connect the BLACK wire to a good ground connection.
- The YELLOW wire is for other markets, and is NOT USED in this installation. Securely tape it out of the way, ensuring that it cannot short against any other component or ground source.
- The RED wire in the halo wiring harness must be extended to reach the fuse box; connect an additional length of wire to this red wire, so that the wire will reach the dashboard.

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.



⚠ 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 red wire illuminates the DRL, and it must be connected to a circuit which is “hot” with the ignition on.
- Ⓑ Run the red wire up 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:
 - a. 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.

- b. The upper fuse receptacle is to be used for the accessory you are adding. Plug that fuse in. For DRL function of a sealed beam headlight, a 10 AMP fuse is sufficient. But make sure that you use the correct fuse for the location you have selected.
- c. Plug the Add a Circuit into the selected fuse position.

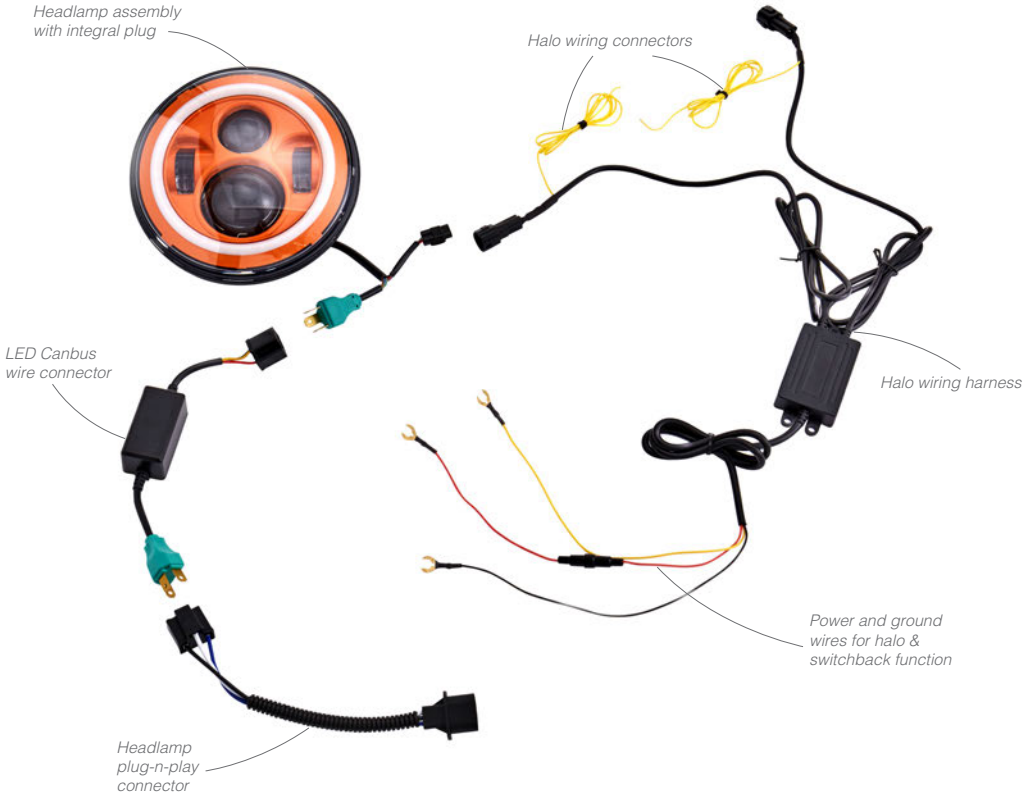
Ⓓ TEMPORARILY connect the red wire to the Add a Circuit connector (use electrical tape), as you will NOT want to finalize (crimp) the connection until both headlights are installed and all functionality testing has confirmed that all connections are correct.

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.

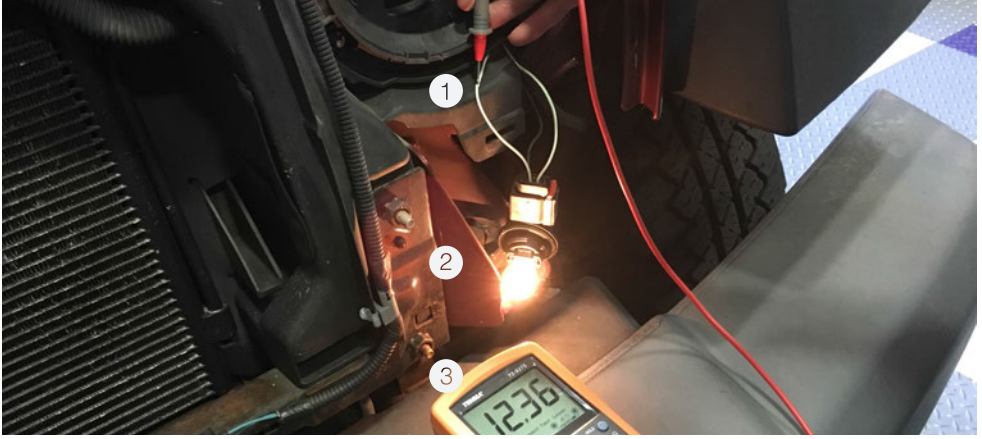
Ⓔ Proceed to Step 3.



STEP 3: Making the turn signal electrical connections to the vehicle.



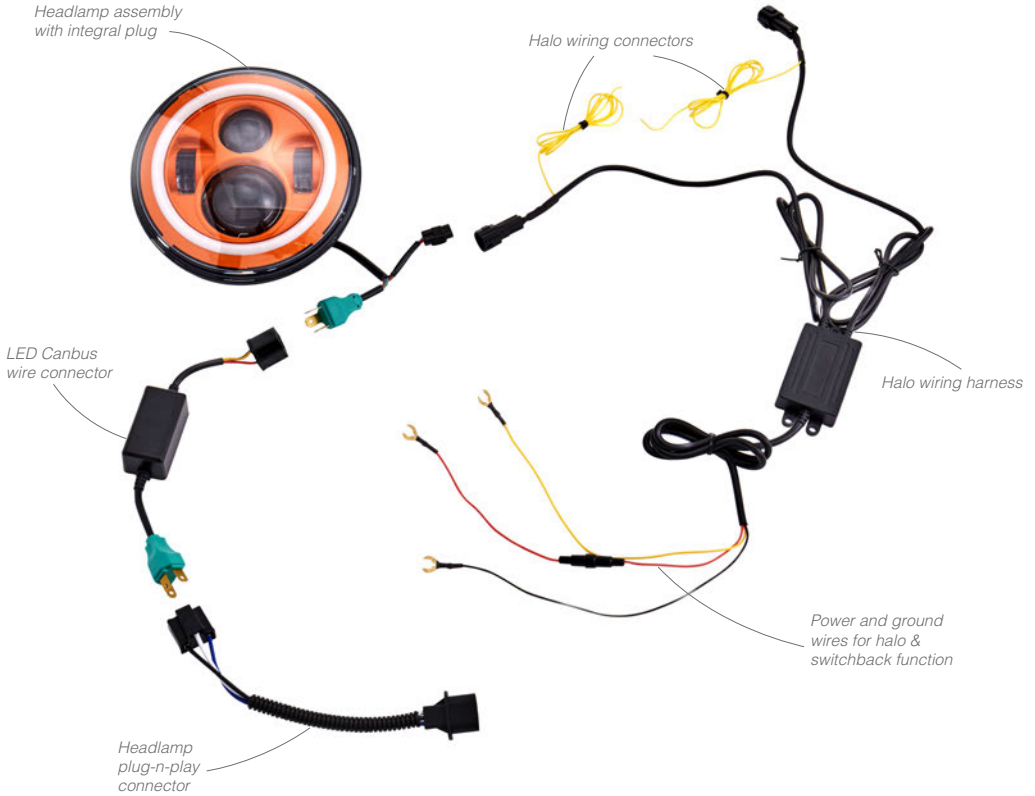
- Ⓐ Extend the halo wiring connectors at the other side of the halo wiring harness, so that each branch is located near each headlight location.
- Ⓑ Each yellow wire needs to be connected to the corresponding turn signal wire. In order to do this:
 - a. Turn on the ignition;
 - b. Operate the turn signal for the side of the car where you are working
- Ⓒ Using a multimeter or test lamp:
 - a. Probe the wires at the turn signal bulb socket; the correct wire to tap into will vary from year to year, be sure to test each wire until you find the correct one.
 - b. The correct wire will alternate between 12V and 0V as the signal flashes on and off when using a multimeter. If using a test light, it will flash with the turn signal when you have the correct wire.
 - c. Once you have correctly identified the wire, turn off the ignition.



1. Probe from multimeter probes turn signal wire. 2. Turn signal bulb is on (actually blinking on/off).
3. Multimeter confirms 12V at turn signal wire

- ④ Splice the yellow wire from the halo wiring connector to the vehicle's turn signal wire, using a 3M Scotch-Lok or similar. Securely insulate the splice with electrical tape.

STEP 4: Making the electrical connections to the headlamps, and reassembly



- Ⓐ Working at one side of the car at a time, begin at the vehicle's factory headlamp harness. Take the headlamp plug-n-play connector from the headlight kit, and plug it into the factory connector.
- Ⓑ Take the kit's LED-Canbus wiring connector and plug its male end into the female end of the headlamp plug-n-play connector.
NOTE: During the steps below, take care to ensure that the headlamp does not drop.
- Ⓒ Plug the female end of the LED-Canbus wiring connector into the plug on the LED headlamp assembly.
- Ⓓ Plug the halo light harness connector into its corresponding plug on the LED headlamp assembly.

- Ⓔ Carefully route all wiring through the headlamp bezel opening. Take your time and do not force the wiring, there is ample room for all the wires. Use cable ties to neatly secure all wiring.
- Ⓕ Mount the halo harness box, using sheet metal screws or cable ties.
- Ⓖ Install the LED headlamp in place by reattaching the bezel ring.
- Ⓗ Repeat the above steps for the other side.
- Ⓘ Test all lights: low beam, high beam, DRL, turn signals.
- Ⓝ **If you used Method B in Step 2, go back and make final crimp of wiring at Add-a-Fuse plug.**
- Ⓚ Reinstall any panels which were removed during wiring installation.
- Ⓛ Reinstall turn signal bulbs into grille.
- Ⓜ Reinstall grille onto vehicle.