LUMEN

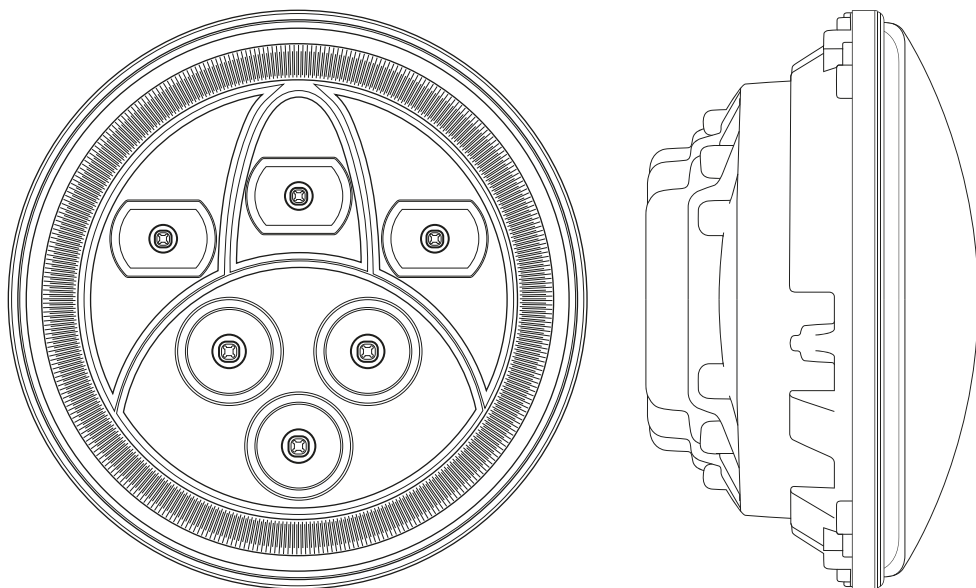## 7" LED sealed beam headlamp with white/amber halo ring

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;
- 12-14 gauge 3M Scotch-Lok quick connectors or similar;
- Electric tape
- Plastic cable ties

📦 **In the box:**
   Verify that you have 2 of each of the following, as shown in photo.

   ◉ 7" sealed beam headlamp with double 3-prong plug;
   ◉ "LED Canbus" wire connector, with male 3-prong plug on one end and female 3-prong plug on other;
   ◉ Headlamp "Plug-n-play" wire connector, with female 3-prong plug on one end, and male 3-in-a-row plug on other end;
   ◉ Halo wiring connector, with one short yellow wire, and one long red wire

*LED Canbus
wire connector*

*Headlamp assembly
with integral plug*

*Headlamp plug-n-play
connector*

Halo wiring connector
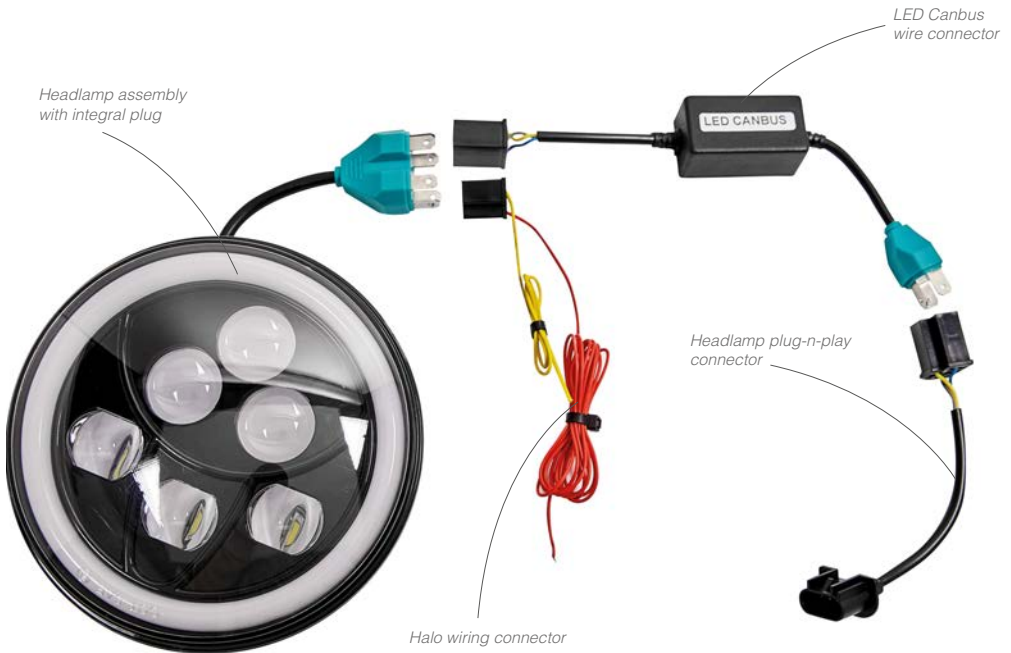
STEP 1: Removal of factory (existing) headlamps.

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 philips and/or flat blade screwdrivers to remote 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).
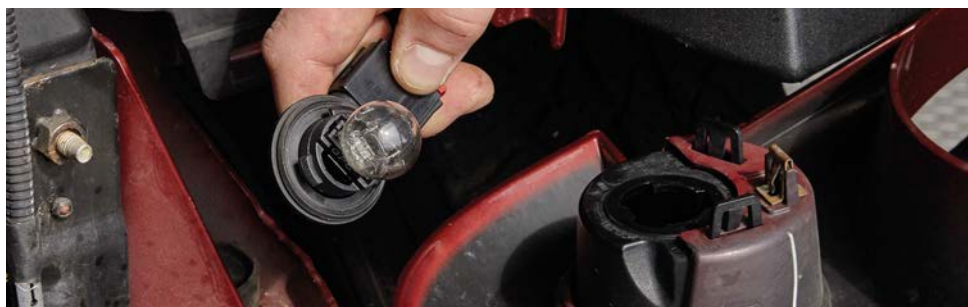
The parking light assembly has already been removed from its location in the grille

Ⓒ 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

   b. As the last screw is removed, hold onto the headlamp, as it could fall.
   c. Remove the bulb from the assembly with a ¼ turn, remove the headlamp assembly from the car and put it in a safe place. Unplug the factory harness from the bulb.

The procedure below results in the halo ring illuminating WHITE whenever the key is "on" (DRL function), and each halo ring blinking AMBER with its respective turn signal. Should you desire different functionality, you would alter the connections as necessary.

Ⓐ You may begin this step at either the driver or passenger side of the vehicle; we recommend the driver side if you are tapping into accessory power, so that the red wire has a shorter path to the driver's side interior.
Note. You can start on either side if you are using the Add a Circuit method outlined in the following pages.

Ⓑ Start by taking the halo wiring connector (with short yellow and long red wires) and passing the wires through the headlight bezel opening, leaving the 3-prong plug end out the front.

Ⓒ The short yellow wire is for the turn signal and needs to be connected to the corresponding 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

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

Ⓕ The long red wire illuminates the halo in white. For this to function as a DRL, the red wire must be connected to a circuit which is "hot" whenever the ignition is on. You can use one of the 12V accessory sockets in the center console. If you are going to choose this method, please proceed. If you are going to use the *Add a Circuit method*, go to the next section.

⚠ **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**

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. The interior 12V accessory socket is a good, safe choice.

Ⓖ Pass 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.

Ⓚ Repeat the steps above for the other side of the vehicle.
Note. However, that the 2nd red 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. Secure all wiring.

Add a Circuit Method.

Bussimann® 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

This is a very simple way to tap into a desired power circuit for any accessory that requires it.

⚠ **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.

Ⓐ Run the red wire from the halo wiring connector 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:
    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), 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 your fuse box is able to close completely, when functionality has been confirmed, you will need to create a channel for the wire to pass through the

fuse box wall without being pinched or the fuse box being compromised. Picture below shows the completed wire passing through the fuse box. This channel was created using a triangular file. Now go to STEP 3.

This part of the electrical installation is essentially "plug-and-play".
First, make sure you select the correct connectors for each side as shown in the photo below.

Ⓐ 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 LED 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 that the dual plug on the headlamp assembly has two 3-prong outlets which look identical. One is labeled "H" for headlamp, and the other is labeled "DRL" for daytime running lamp.
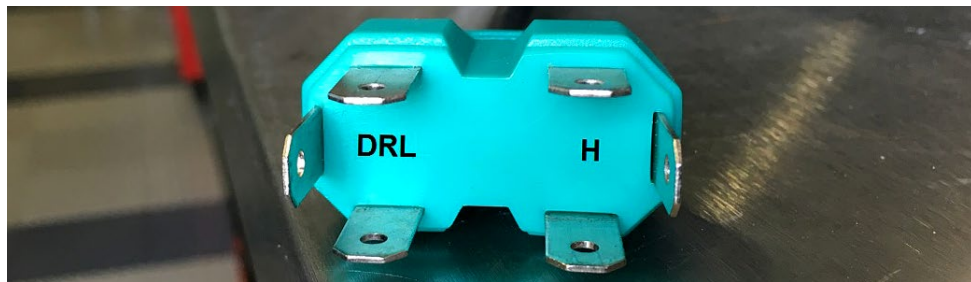
The 2 prongs on the end of the headlamp harness are labeled "DRL" and "H"

Note. During Steps D and E below, take care to ensure that the headlamp does not drop.

Ⓓ Plug the female end of the LED-Canbus wiring connector into the "H" plug on the LED headlamp assembly.

Ⓔ Plug the halo light plug connector into the "DRL" 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. Install the LED headlamp in place by reattaching the bezel ring.

Ⓖ Repeat Steps A-F above for the other side.

Ⓗ Test all lights: low beam, high beam, DRL, turn signals.

Ⓘ Reinstall any interior panels which were removed during 12V accessory wiring installation.

Ⓙ Reinstall turn signal bulbs into grille.

Ⓚ Reinstall grille onto vehicle.