

4" Round 30W LED Retrofit Fog Light Assembly

Manual ID: PIM-00000152-V002

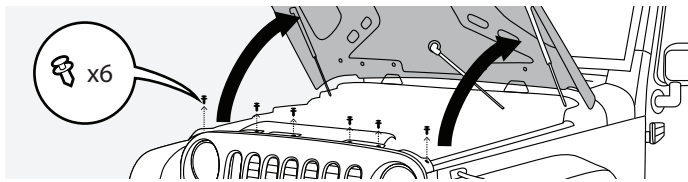
IMPORTANT: READ CAREFULLY BEFORE ASSEMBLY AND USE.

- Installer of this product must have a good understanding of automotive electronics, systems, and procedures.
- **WARNING!** Whether it is replacing the headlight low beam, headlight high beam, or fog lights, always refer to the vehicle's owner's manual for detailed instruction on how such lights can be replaced. The instructions listed in this guide serves as a general reference and the steps detailed may not apply to your specific vehicle's make and model. Seek professional assistance when in doubt.

- **WARNING:** When working with electricity make sure all relevant safety procedures are followed. Always turn the key off and disconnect the battery before working on vehicle electronics, neglecting to do so may result in bodily harm and damage to sensitive electronic components.
- Never cut or splice a wire without first consulting a vehicle specific manual and using a digital multimeter (DMM) to verify the identity and purpose of the wire. This product contains strobe light(s), halogen light(s), high-intensity LEDs, or a combination of these components. Do not look directly into the lights. Momentary blindness and/or injury to the eyes could result.

Installation:

Step 1: Remove the Grille Assembly

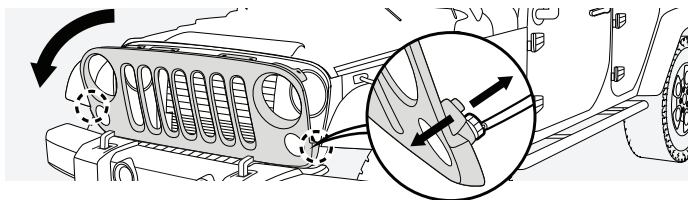


- 1.1 Open the hood.

TIP: In many newer Jeeps the hood can be opened completely and laid against the windshield making it much easier to work under the hood. When doing this always make sure any finished surfaces are protected to avoid damage.

- 1.2 Locate the six black plastic rivets along the top facing edge of the grille.
- 1.3 Remove all six rivets by using a flat head screwdriver to pry up on and remove the center section followed by the body of each rivet.

TIP: The center portion of the rivet does not have to come completely out to be able to remove the entire rivet. The center portion can be easily reassembled when reinstalling if removed completely.



- 1.4 Grab hold of the grille close to the base and pull it away from the vehicle with a firm tug being careful not to pull the grille too far away from the vehicle as the wiring for the turn/parking lights will still be attached at this point.

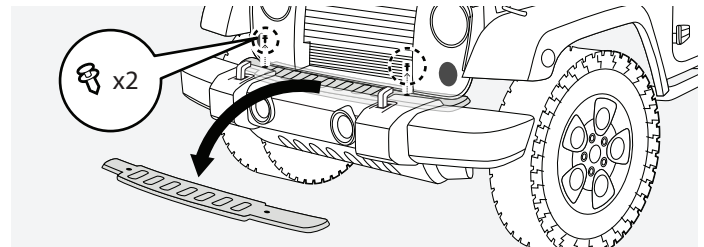
TIP: A towel may be placed between the grille assembly and the bumper to help prevent damage to the grill.

- 1.5 Tip the top edge of the grille away from the vehicle and carefully disconnect the wiring harness from the back of the two factory turn/parking lights.

NOTE: If your vehicle comes with locking style connectors, carefully slide the red locking tab toward the rear of the connector and then push the retaining tab to remove the connector.

- 1.6 Inspect for any other wires or lights attached to the grille and remove.
- 1.7 Remove grille from vehicle and place in a safe location.

Step 2: Remove the Bumper Valance

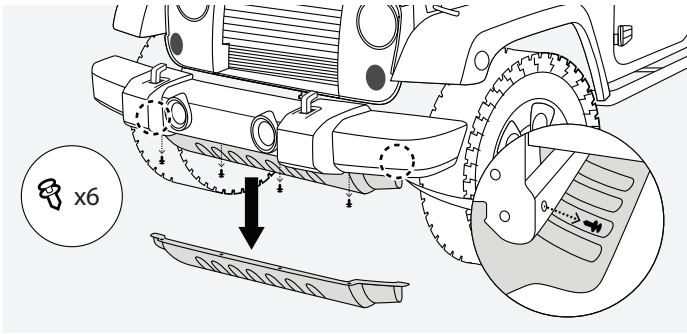


- 2.1 Locate the two black plastic rivets in the top of the bumper valance.
- 2.2 Remove both rivets by using a flat head screwdriver to pry up on and remove the center section followed by the body of each rivet.

NOTE: Your vehicle may have screw style rivets. If this is the case, the center section may be removed with a Phillips screwdriver.

- 2.3 Grab the edge of the valance that is closest to the vehicle and carefully lift. Once it clears the radiator supports it can be lifted away and removed.

Step 3: Remove the Fog Lights



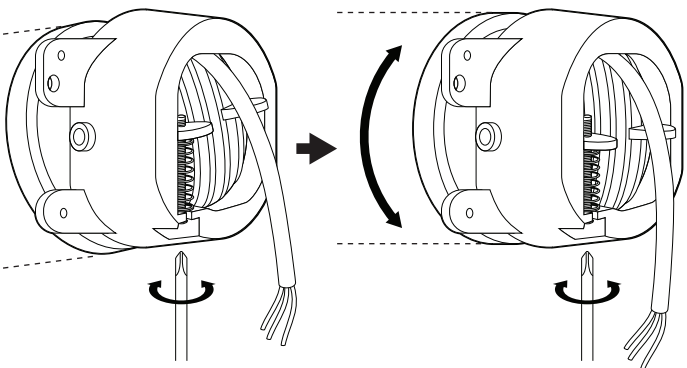
TIP: At this point the fog lights can be removed. However, for better access and visibility while working on the lights the lower plastic skid plate (air dam) may also be removed. To do so, locate the six plastic rivets or screws holding the plate to the vehicle. There will be four across the front edge and two at the back edge on the top side of the plate. Once these are removed the plate can be dropped out and set aside.

- 3.1 Disconnect the vehicle harness from the back of the fog lights.
- 3.2 Locate and remove the four screws securing each fog light to the back side of the bumper.

NOTE: The screws in the driver side fog lamp might be hard to reach with a regular Phillips screwdriver. Consider using a stubby screwdriver instead.

- 3.3 Remove the fog lights.

Step 4: Install and Adjust New Fog Lights



- 4.1 Use the included blue and yellow extension wires to tap into the vehicles turn signal and running light wiring (CAZLEDHDL1021, 1022, and 1032 only). For suggestions on how to accomplish this refer to the Suggestions for Electrical Installation section.
- 4.2 Plug the included adapter into the vehicle wiring harness.

TIP: A high quality dielectric grease may be used inside any electrical connector that may be exposed to moisture in order to create a more weather resistant connection

TIP: At this point it is advisable to plug in and test the fog lights for correct operation before they are installed in the vehicle.

- 4.3 Take note of the location of the angle adjustment screw as you will need to adjust this later when the lights are installed in the vehicle.
- 4.4 Attach each new fog light to the back side of the bumper using the four screws removed from the original fog light.
- 4.5 Plug wiring harness adapter into each fog light.
- 4.6 Use zip ties to secure any hanging wires away from moving parts and pinch points.
- 4.7 Using a screwdriver, turn the adjustment screw until the lights are correctly adjusted.

Step 5: Replace All Removed Parts

- 5.1 Replace lower skid plate (air dam) if it was removed.
- 5.2 Replace bumper valance and its two plastic rivets by reversing the removal procedure.
- 5.3 Position grille on top of the bumper in preparation for installation.
- 5.4 Plug wiring harness into parking lights making sure the red locking tabs are pushed forward into the locked position.
- 5.5 Line the bottom of the grille up against the front of the vehicle making sure the centering pin aligns with the centering hole while making sure that all of the metal retaining clips line up with their respective holes.
- 5.6 Push firmly but carefully on the bottom of the grille so that all of the clips seat in their holes.
- 5.7 Put all six plastic rivets back into the top of the grille.
- 5.8 Carefully inspect the work area for anything that may have been unplugged or not reinstalled.
- 5.9 Close the hood and enjoy your new fog lights!

Suggestions for Electrical Installation:

Splicing Location

- The BLUE daytime running light (DRL) wire will need power supplied from a ACC switched power source (power is on when the car is on but off when the car is turned off). (CAZLEDHDL1021, 1022, and 1032 only)
- The YELLOW turn signal wire will need power supplied from the power side of the turn signal switch or a turn signal lamp. (CAZLEDHDL1021, 1022, and 1032 only)
- The above requirements can often be met by tapping into the wiring of the parking light harness behind the grille assembly. See step 1.5.
- The parking light usually has a three-wire harness with one black wire and two lighter colored wires. In most cases, the center wire in the harness is switched power while the wire farthest from the black wire is power for the turn signal.
- Always use a multimeter to verify power is present on each wire only at the appropriate times.
- When power has been verified the correct wires can be spliced into the factory harness using the method of your choice. Don't forget, BLUE is DRL and YELLOW is turn signals. (CAZLEDHDL1021, 1022, and 1032 only)
- Since there are two fog lights and two parking lights, each fog light can be wired into the closest parking light. This will reduce the amount of wire needed and reduce the risk of wire damage.
- Any exposed metal connectors should be protected with heat shrink tubing.

Wire Routing:

- Always route wiring away from any moving parts and pinch points.
- Never use more wire than necessary. Leave slack for movement but avoid excess wiring. Not only does it look bad but it also increases the risk of damage.
- Never leave wires hanging. Use zip ties or other methods to secure wires to a nonmoving part of the vehicle or an existing wiring harness.
- Always consider using wire loom to protect wires from chafing.

Specifications:

Input Voltage: 10 – 32 V DC
Input Current @ 12V DC:
Fog Light: 1.15A
DRL: 75mA (CAZLEDHDL1021, 1022, and 1032 only)
Turn Signal: 165 mA (CAZLEDHDL1021, 1022, and 1032 only)

LED Fog Light for Jeep Wrangler JL/JT

Manual ID: PIM-00014118-V001

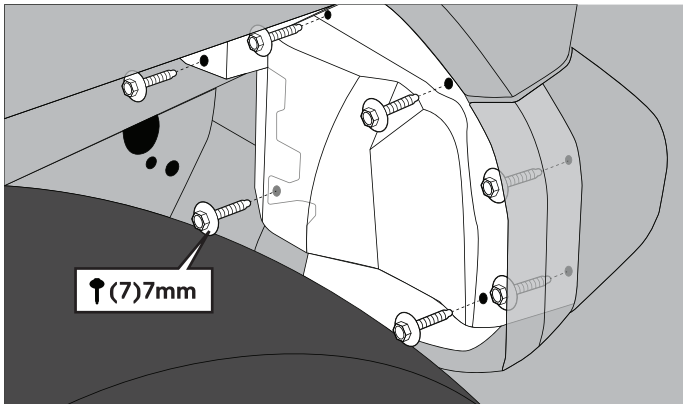
IMPORTANT: READ CAREFULLY BEFORE ASSEMBLY AND USE.

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- This product contains strobe light(s), halogen light(s), high-intensity LEDs, or a combination of these components. Do not look directly into the lights. Momentary blindness and/or injury to the eyes could result.
- If mounting this product requires drilling holes, the installer **MUST** be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any holes and remove any metal shards or remnants. Install grommets into all wire passage holes.
- Do not attempt to activate or control this device in a hazardous driving situation. The installer or user must make sure the intended mounting location and application of the product conform to the law set forth by the federal, state, or local agency.

Installation:

TIP: Turn the wheel inward to allow better access to the back of the bumper.

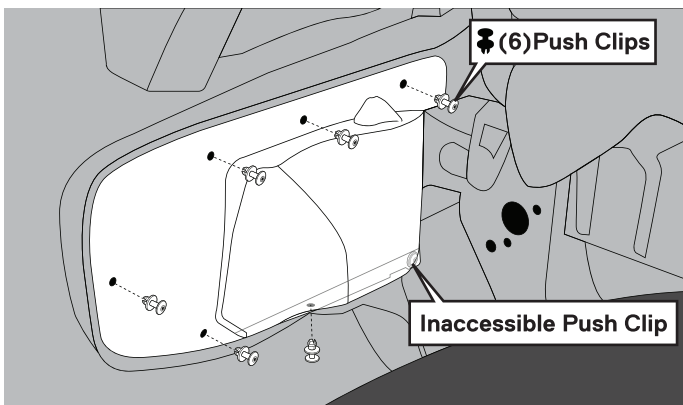
Step 1A: Access the Fog Light Housing (Standard Plastic Bumper)



1.1a For the standard plastic bumper on most Sports trim, remove the SEVEN screws using a 7 mm socket.

1.2a Remove the close out panel on the back of the bumper to expose the fog light housing.

Step 1B: Access the Fog Light Housing (Premium Plastic Bumper)



1.1b For the premium plastic bumper on most Sahara or Rubicon trims, there are a total of SEVEN push retainer clips securing the close out panel over the fog lights. Only SIX would need to be removed using a trim removal tool or flat head screwdriver. The close out panel can be peeled back to expose the fog lights.

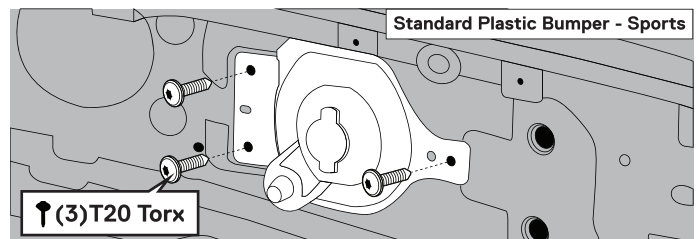
NOTE: One of the push retainer clips to be removed is located at the bottom of the close out panel and is used to secure both the close out panel and air dam trim pieces. Be sure to note how the trim pieces are positioned and reassemble accordingly.

1.2b Peel back the close out panel on the back of the bumper to expose the fog light housing.

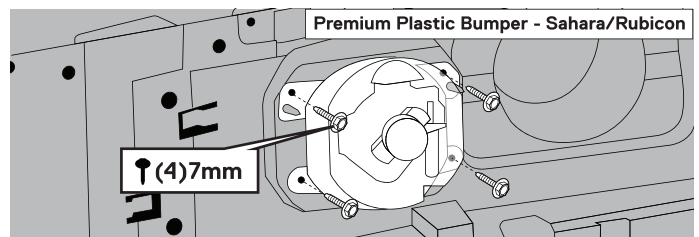
Step 2: Remove Old Fog Light Housing

2.1 Locate the factory fog light harness and plug.

2.2 Unplug the harness from the fog light.



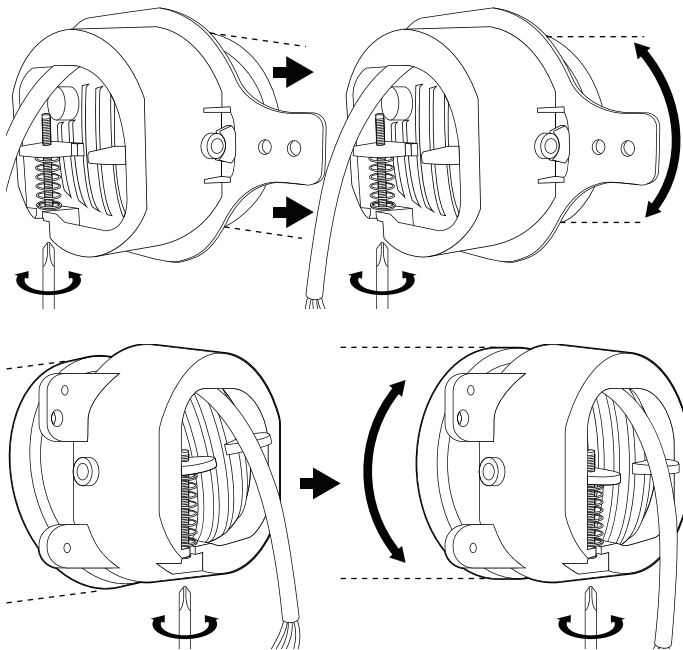
2.3 For the standard plastic bumper, remove the THREE T20 Torx screws securing the old fog light housing to the bumper.



For the premium plastic bumper, remove the FOUR 7 mm screws securing the old fog light housing to the bumper.

Step 3: Install New Fog Light Assembly

- 3.1 Align the new fog light in its mounting position and secure it using the fasteners removed in the previous step.
- 3.2 Connect the new fog light to the factory fog light harness. Use the included convertor harness if necessary.



- 3.3 Adjust the aim of the new fog light.

TIP: Replace the fog lights one at a time. Turn ON the fog lights and use the old fog light's beam pattern as a guide to adjust the new fog light. Then use the new fog light that was first installed as a guide to adjust the second fog light. Be sure to shine the fog lights about 20 feet away from a wall on a leveled surface when using its beam pattern as a guide.

NOTE: A small screwdriver or angled ratcheting screwdriver may be needed to access the beam angle adjustment screw.

- 3.4 Secure any excess or loose wiring using zip ties or wiring retainer clips.

Step 4: Re-install All Removed Parts and Repeat

- 4.1 Re-install the close out panel using the fasteners previously removed.
- 4.2 Repeat the above steps to replace the fog light on the other side of the vehicle.

Optional Connection for DRL and Turn Signal Wires (applicable products only)

NOTE: The signal for the daytime running light (DRL) and turn signal can be acquired from the fender turn signal and running light assembly. Alternatively, the DRL signal can be acquired from the fuse box or other ignition activated power source. This is especially the case for the Sports and similar trims which does not have factory DRL enabled on the fender light assembly. Always use a multimeter to verify power is present from the desired source at the appropriate times.

Access the Fender Light Wiring Harness:

Step 6: Remove the Fender Liner

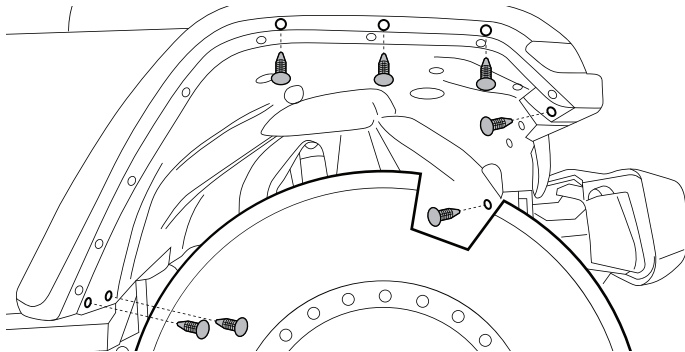
NOTE: The pull rivets holding the fender liner to the fender are not re-usable as they will be destroyed during the fender removal process. Consider purchasing some 6506007AA pull rivets and a rivet tool for proper reinstallation of the fender liner.

TIP: The wiring harness to the fender light will be accessible without removing the entire fender liner. The fender liner can be peeled back after removing the push retainer clips and screws located towards the front of the fender.

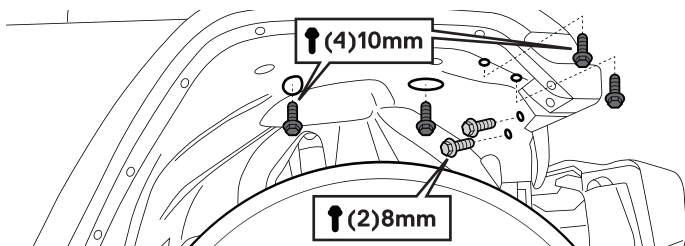
- 6.1 Use a trim removal tool or flat head screwdriver to remove the SEVEN push retainer clips.
- 6.2 Remove the TWO 8 mm screws located on the fender liner right behind the fender light.

- 6.3 Remove the FOUR 10 mm screws located on the top of the fender liner.
- 6.4 Using a pick tool or drill to remove the EIGHT pull rivets along the outer edge of the fender liner.
- 6.5 Remove the fender liner by pulling it away from the fender.

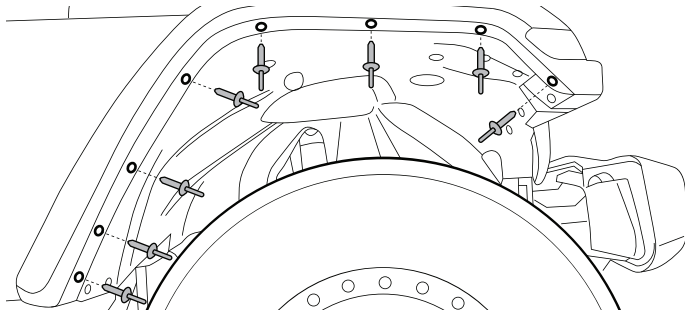
Seven Push Retainer Clips:



Two 8mm Bolts and Four 10mm Bolts:



Eight Pull Rivets:



Step 7: Splicing of the Optional Wires

- 7.1 Determine how the DRL and turn signal wires from the fog light are to be routed from the back of the bumper, into the engine bay, then into the fender or other desired power source.
- 7.2 If acquiring signals from the fender light wiring harness, locate the wiring harness connected to the back of the fender light assembly.
- 7.3 Disconnect the fender light wiring harness from the fender light assembly.
- 7.4 Identify the power wire for the daytime running lights and turn signal using a multimeter.
NOTE: The Sports and similar trims would not have the DRL function enabled. One would need to re-program the vehicle's computer settings using a programmer or acquire an ignition-activated power from elsewhere on the vehicle for hands-free operation of the DRL.
- 7.5 Splice the BLUE wire into the daytime running light wire and the YELLOW wire to the power wire of the turn signal.
- 7.6 Test the lights for functionality.
- 7.7 Secure any excess or loose wiring using zip ties or wiring retainer clips.
- 7.8 Re-install the fender liner.
- 7.9 Repeat the above steps to wire the optional DRL and turn signal functions for the other side of the vehicle.