



INSTALLATION GUIDE

FREIGHTLINER CASCADIA

UNDER-CAB LED LIGHT KIT (GEN1)

IMPORTANT! No two installation scenarios are the exact same. Accent lighting is highly subjective. Not everyone shares the same lighting or installation quality goals. Some folks are OK with twisting wires together, others want to solder and heat shrink them. Some folks are OK with running wires where they may be seen or unprotected to save money/time, others want a tidy, clean install so they wrap plastic split-loom around all exposed cables. Some folks are OK with mounting their LED strips to whatever surface they can find, others want to take the time necessary to build out appropriate mounting surfaces to provide the best lighting effect on their vehicle and maximize the longevity of their lighting system. The point is it's not possible to provide all the materials necessary for all installation scenarios on all types of vehicles to meet everyone's quality and lighting coverage goals. Our light kits provide the essential components needed for a high-quality, functioning LED light system. Installation of our light kit to your specific vehicle will however likely require additional items to make it look, fit and work the way you want. This is particularly the case with electrical wiring, switching functionality and mounting surfaces for the LED strips. We have created a list of additional items you may need. Here's the link: <https://www.boogeylights.com/other-items-you-might-need/> . While we offer them for sale you can also find these items locally – usually less expensive. We urge you to review this information before starting your install to make sure you have the proper materials available.

BENCH TEST YOUR LIGHTING COMPONENTS FIRST!

We know this takes a few extra minutes, but we **STRONGLY** suggest you bench test your lights AND your controller / switches on a table before doing anything further. Test all of them. While we test every light strip and controller before shipping, bench testing your lights will eliminate the possibility of any problems with the lights or controller before mounting. It also lets you know everything is working properly. Also, the process of bench testing gives you an opportunity to understand the wiring system without interference from other wires, connectors and cables. You can use any good 12vdc battery to do this (e.g. car battery, motorcycle battery, lawn tractor battery or 12vdc power supply capable of supporting a 5 amp load). If you're not sure how to do this, we have prepared a document explaining the process here: <https://docs.boogeylights.net/?wpdmdl=1305> . Bench testing takes an extra 10 or 15 minutes. It's simple to do and can potentially save you hours of time and frustration down the road.

Did we mention the importance of bench testing every LED strip and controller before installing?

BEFORE YOU START

THIS IS A GUIDE. NOT A HOW-TO. It's simply not possible to provide detailed instructions for all installation scenarios. Far too many variables. The information in this manual is intended to be used as a guide. It is not a detailed step-by-step how-to installation manual. We do not spell out every single step along the way. We cover the essential steps related to installing this kit. Beyond that we assume the installer has the skills, knowledge and tools necessary to do the work using the information we provide as a guide. You may need to vary your installation and/or make adjustments based on your truck. This is particularly the case with electrical wire routing, electrical connections, electrical load sizing and switching. If you're unsure about how to do the installation – particularly the electrical components – we urge you to seek assistance from someone who has those skills.

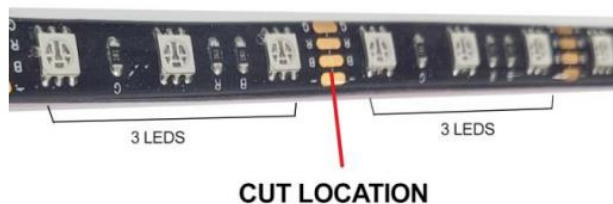
YOU MUST HAVE AN UNDERSTANDING OF 12V POWER. An essential skill with installation of any Boogey Lights LED products is knowing how to correctly wire the product to a 12vdc circuit. This includes understanding the importance of having a properly sized fuse at the power source, polarity, how to properly seal an electrical connection, using properly sized wire gauge for the load, measuring voltage and measuring the additional amperage draw you're adding. If you are uncertain or unfamiliar with any of these concepts, we urge you to ask someone who has the knowledge to assist you. Electricity is unforgiving.

WORK AREA. Make sure you have ample area in which to work and that the area is protected from rain or cold temperatures. The 3M adhesive tape and 3M adhesion promoter works best if applied when the air temperature is above 40 degrees (and of course is DRY).

KNOW YOUR AMPERAGE DRAW. Pay attention to the number of LEDs you are lighting and the total amps you will be drawing. We manufacture a number of LED Controllers of varying capacities. If you over-load the LED controller, it will either not work at all or the lights will dim in a short period of time. Amperage data for all our LED products are on each product page. You can also download it directly here: <https://docs.boogeylights.net/?wpdmdl=1137>

NOTE: If for whatever reason you need to cut the LED strip, you can (Low Profile LED strips). Details on how to cut our LOW PROFILE LED strips can be found on our INSTALLATION RESOURCES page or at this link: <https://docs.boogeylights.net/?wpdmdl=964>

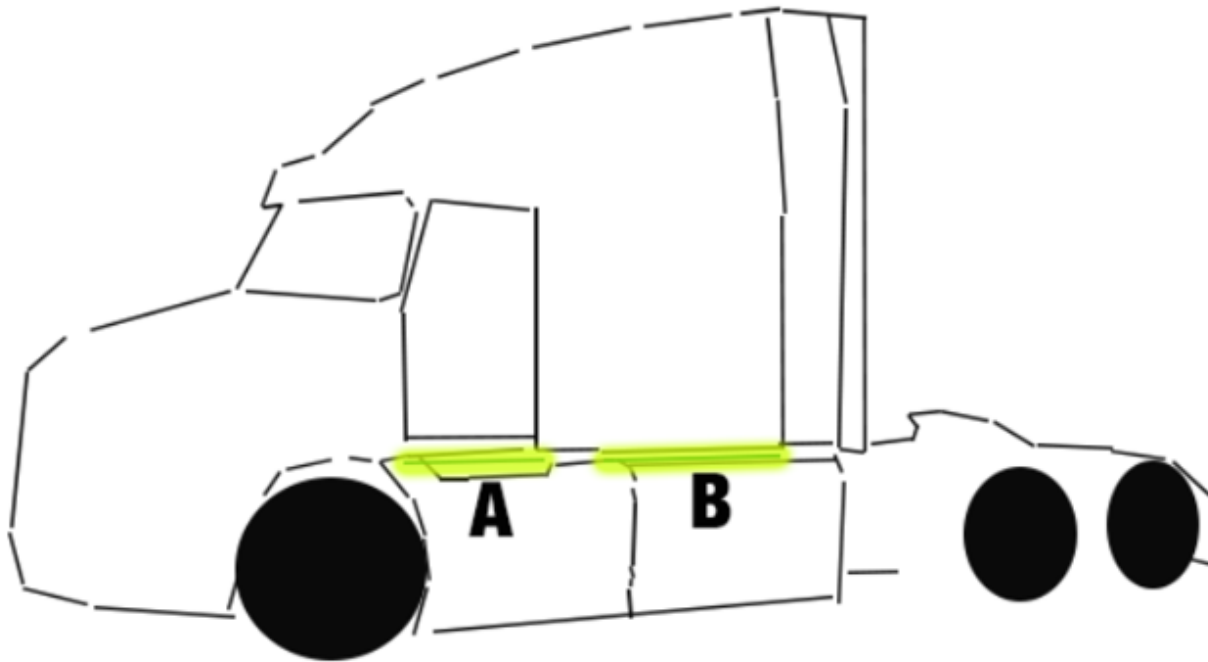
HI-INTENSITY SURFACE MOUNTED LED STRIPS



The LED strip can be cut one time on the copper solder pad where indicated; between the cluster of 3 LEDs. Important to cut in the center of the copper pads. Once cut, the end must be sealed using silicon, liquid electrical tape or even heat shrink to stop water intrusion from damaging the strip.

LED PLACEMENT

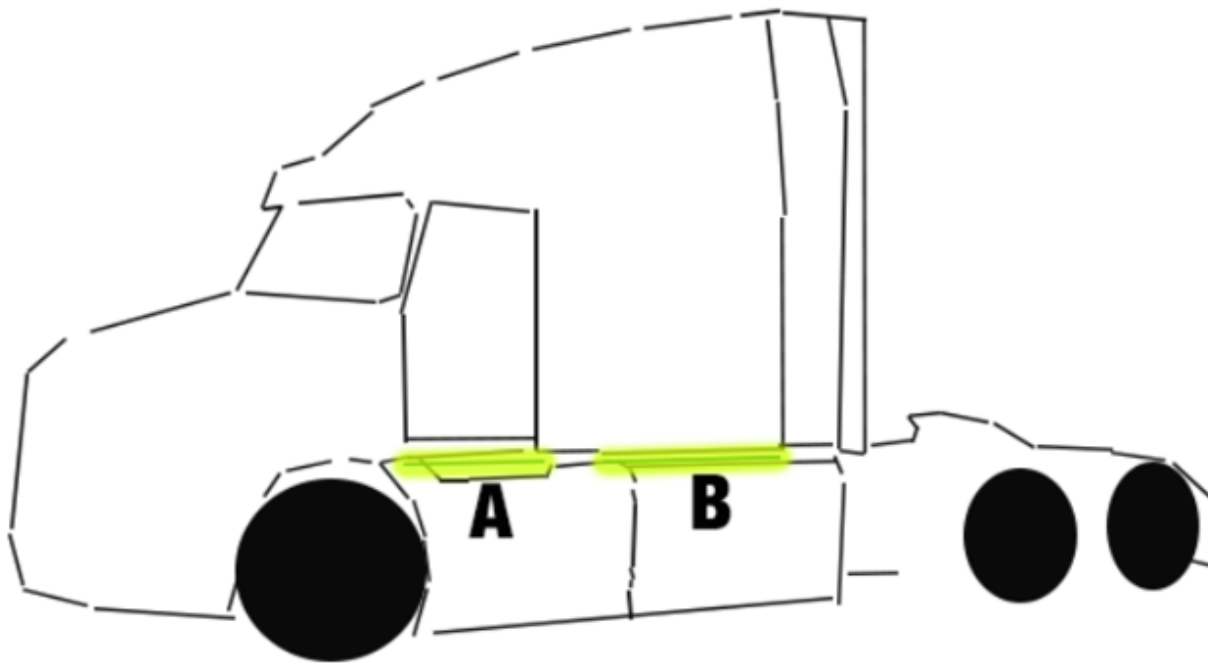
All the LED strips in this kit are built on our low profile hi-intensity surface mounted LED strips. In total there are 4 different mounting locations in this kit and all of the power leads need to be carefully run. There are two LED strips on each side of the truck as shown below.



Not Shown: LED strips C & D on passenger's side.
LED C = under passenger's door. LED D = under passenger's sleeper/side

For power, you'll need access to the driver's side steps to access the batteries. Also, if you're installing an LED controller, the LED controller can be mounted in either the driver's side storage box or the passenger's. We prefer to use the driver's side as it is closest to the battery bank. While either location will work, be aware if you mount the controller in the passenger's side, you'll need to extend the positive battery cable a little further than if you mounted the controller in the driver's side storage. The 12vdc + power going to the LED Controller should connect directly to the 12vdc+ terminal on your truck's battery bank. You can connect the ground wire on the LED controller to any metal part of the chassis. Regardless of which side bay you use, you will need to drill a hole in the floor of that box to connect power to the battery box, led wires and antenna.

We recommend planning out your install on paper first. Be sure to wrap all power leads in split-loom which is also included and then secure them to the truck using zip ties.



Not Shown: LED strips C & D on passenger's side.
LED C = under passenger's door. LED D = under passenger's sleeper/side

- A = 42 LED strip mounted under the driver's side door, shining downward.
- B = 72 LED strip mounted under the sleeper deck on the driver's side, shining downward.
- C = 42 LED strip mounted under the passenger's side door, shining downward.
- D = 72 LED strip mounted under the sleeper deck on the passenger's side, shining downward.

Mounting Info

We suggest mounting the LED strips such that the power leads for each LED strip meet in the middle. Doing so makes it possible for both power leads to enter the battery bank area under the truck at the same point. We recommend connecting both power leads together (on each side) and then using feeder cable to connect each pair to the LED controller (or switch if single color). This way there is only two power lead cables connecting to the LED controller instead of four. This is particularly helpful if you're adding this light kit to an existing Boogey Lights installation (e.g. Under-Glow Kit) where there are other power leads already connecting to the LED controller.

LED STRIP MOUNTING

Follow these steps for mounting your LED strips:

- The area where you are mounting the LEDs has to be clean: free of all dirt, oil or anything that might affect the LED from sticking. You only get one opportunity to mount the LEDs so it's critical the area be prepared properly.
- Use rubbing alcohol to clean the area where you are going to mount the LED strip. Be sure to let the alcohol dry completely before proceeding to the next step. (Note: Do not use acetone or similar cleaner).

If the area is especially greasy, you'll need to clean it with a degreaser or similar solvent. IF you do, be sure to use rubbing alcohol on the surface next to completely remove any left-over residue from the degreaser.

- Next, use the 3M Adhesion Promoter supplied with your kit to "paint" on the promoter where you are going to mount the LED strip. ***This is an important step. Do not bypass.*** Allow the promoter to dry for 60-90 seconds.
- Peel off the red backing tape that protects the 3M adhesive tape on your LED strip. Be careful not to let the tape touch anything. The 3M backing tape on these LED strips are one-use only. They cannot be reused. |
- Carefully push the LED strip to the area you have prepared. You will want to apply only enough pressure to the strip to make sure it is firmly mounted. *You only get one opportunity to do this.* Once the LED strip touches a properly prepared surface that has been promoted, that LED strip will be very difficult to remove. Moreover, if you do remove the LED strip, the strip cannot be used again without adding another layer of 3M adhesive tape to the back. **DO NOT press too hard as too much pressure can damage the LEDs and connecting wires in the strip. Also, do not pull, stretch or twist the LED strip. Too much tension on the strip will also damage the LEDs such that some of the LEDs in the strip will not illuminate. The strip must be mounted flat against a single continuous mounting surface, in a straight line. Really important that the ENTIRE STRIP be stuck to the mounting surface and that you NOT attempt to span across multiple mounting surfaces.**

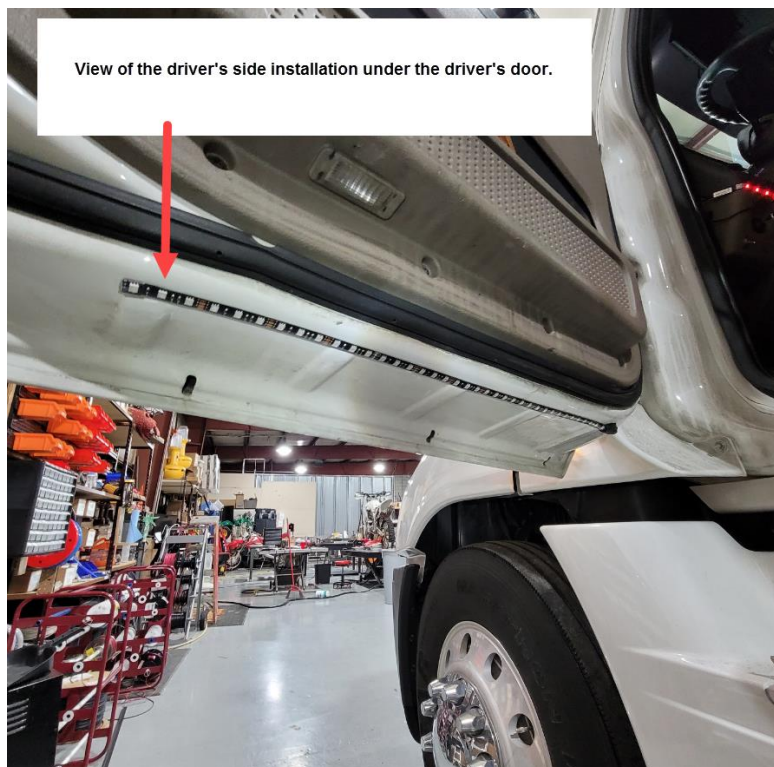
Do NOT bend the LED strip in a radius of less than 2 inches.



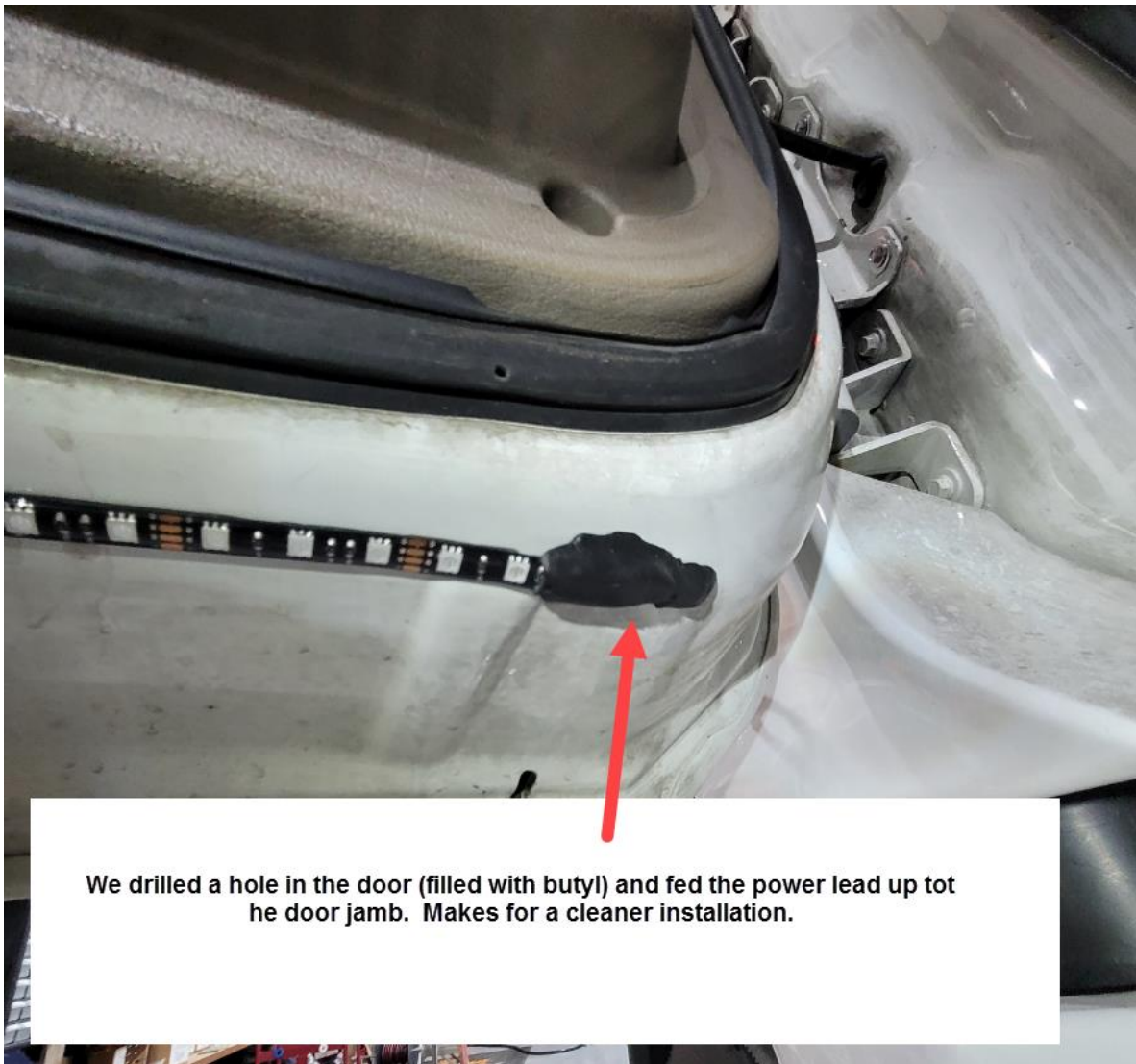
Do NOT bend the LED strip on a horizontal plane.



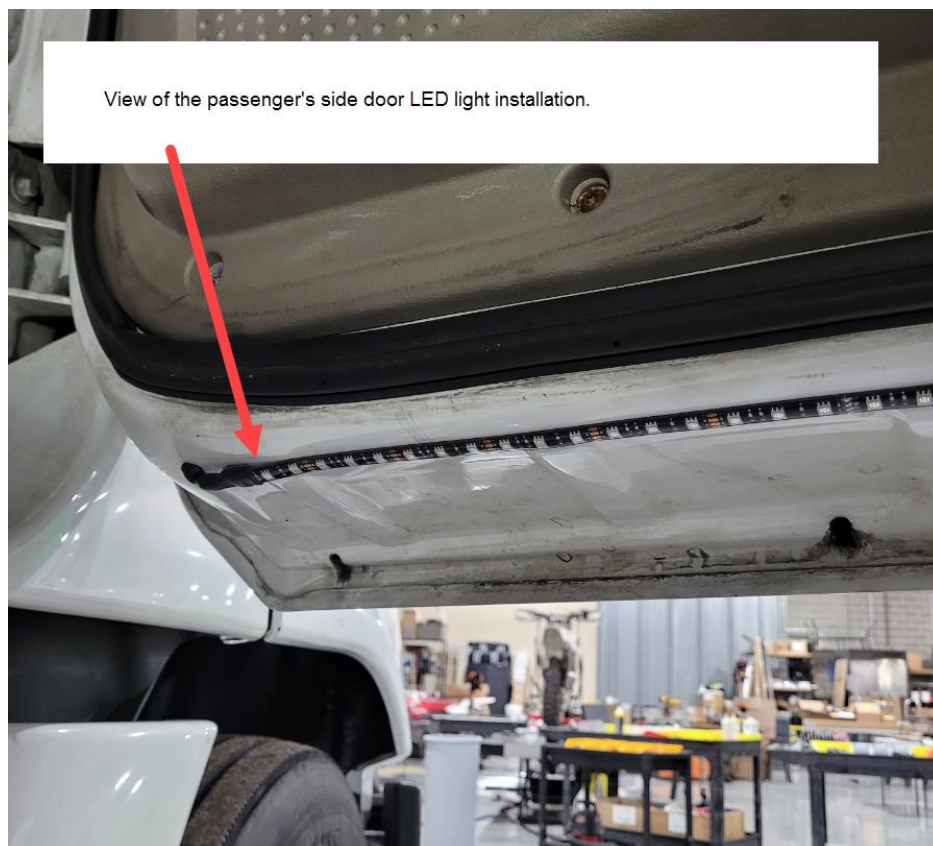
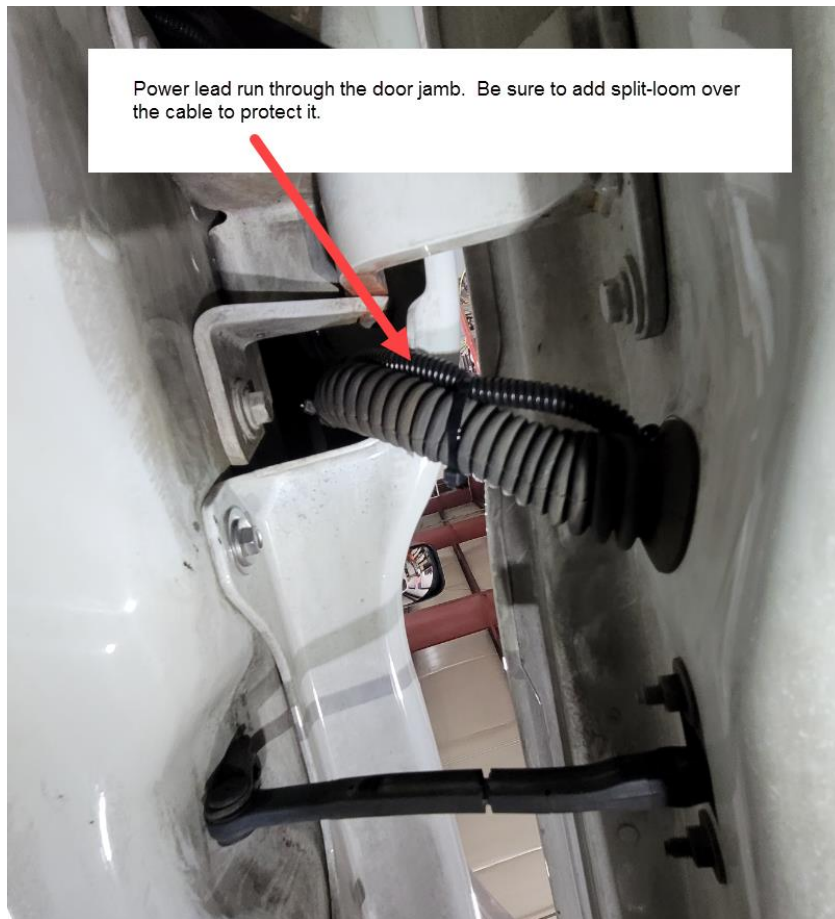
PHOTOS OF INSTALLATION



BL-FLCUCG1-071525



We drilled a hole in the door (filled with butyl) and fed the power lead up to the door jamb. Makes for a cleaner installation.



Additional Resources

- How to Videos: <https://www.boogeylights.com/how-to-videos/>
- Freightliner Cascadia Light Kit Page: <https://www.boogeylights.com/freightliner-cascadia-led-accent-light-kit/>
- Troubleshooting: <https://www.boogeylights.com/trouble-shooting-guide/>
- Installation Resources: <https://www.boogeylights.com/installation-resources/>
- How to Bench Test: <https://docs.boogeylights.net/?wpdmdl=1305>
- GEN2 LED Controller Wiring Diagrams + Operating Info: <https://docs.boogeylights.net/?wpdmdl=1163>
- GEN2 RF Wireless Remote Operating Info: <https://docs.boogeylights.net/?wpdmdl=1164>
- GEN2 Bluetooth APP Operating Info: <https://docs.boogeylights.net/?wpdmdl=1169>
- GEN2 Bluetooth APP Quick-Start: <https://docs.boogeylights.net/?wpdmdl=1167>
- Amperage Data: <https://docs.boogeylights.net/?wpdmdl=1137>

Support

- Phone: 800.847.1359 (M-F, 9-6 Eastern)
- Text: 859.955.8155
- Open a Support Ticket: <https://www.boogeylights.com/email-us/>
- Online: 24/7 resources at <https://www.boogeylights.com/installation-resources/>
- How to Make a Warranty Claim: <https://www.boogeylights.com/make-a-warranty-claim/>

Warranty

The Boogey Lights® warranty requires an original sales receipt from Boogey Lights or an authorized dealer. It covers product replacement only, not labor or other costs. Register your purchase at: <https://www.boogeylights.com/warranty-registration/>. Full details: <https://www.boogeylights.com/warranty/>.