INSTALLATION GUIDE

PETERBILT 579 / UNDER-GLOW LED LIGHT KIT

IMPORTANT! No two installation scenarios are the 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 goals. Our light kits provide the essential components needed for a high-quality, functioning lighting 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. We urge you to review this information before starting your install.

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. 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 12vdc battery to do this (e.g. car battery, motorcycle battery, lawn tractor battery or 12vdc power supply). 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 first?

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 document 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 vehicle. This is particularly the case with led strip mounting locations, 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.

MOUNTING SURFACE. How and where you mount your LED strips will for the most part determine the longevity of your lighting system. If you mount the LED strips to smooth, clean, continuous, straight, flat surfaces as we recommend, you can expect your lighting system to last for many years

SECURE THE POWER LEADS. Make sure the power lead wire that connects to one end of the LED strip is firmly secured to the boat. Do not allow that power lead to move or flex at the point where it attaches to the LED strip. If you do, it will fail prematurely and is not covered under warranty.

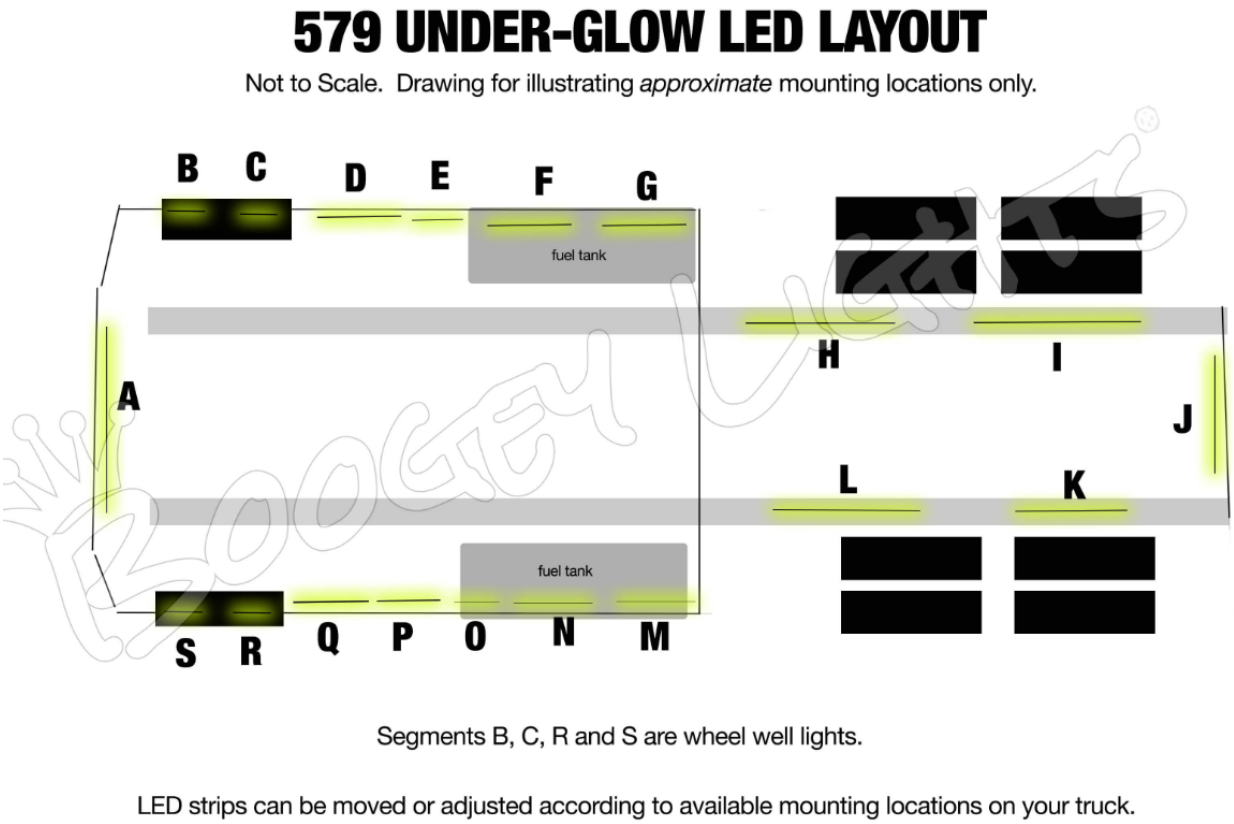
INSTALLATION TIME. We suggest allocating 6 to 8 hours to properly install this under-glow light kit.

POWER LEADS. All of the power leads coming from the LED strips will need to be routed back to your power source/switch/controller which is usually mounted near the battery bank. We typically will mount the led controller in the driver's side storage box (aka 'jockey box'). If you're installing this kit along with another one of our light kits, you can usually merge the wiring together. It's important these power lead be secured (especially at the point where the power lead attaches to the LED strip) and wrapped in split loom to prevent chafing.

MOUNTING LOCATIONS

All of the LED strips in this Under-Glow light kit are built on our Heavy Duty LED strip series. Each Heavy Duty LED strip is encased in rubber with a 36" power lead. Each LED strip will have to have it's power lead extended (using the included power lead cable) based on where the LED strip is located on the truck. In total there are 19 different mounting locations in this kit and all of the power leads need to be carefully run. The mounting locations are focused in the following areas:

- 1 - Heavy Duty LED strip under the front bumper (A)
- 1 – Heavy Duty LED strip under the rear frame rail (J)
- 8 - Heavy Duty LED strips under the passenger side (B – I)
- 9 - Heavy Duty LED strips under the drivers side (K – S)



The layout shown above are suggested layouts. Not all 579's are equipped the same way (e.g. fuel tanks may be moved further forward or aft, APU/no-APU, etc). And some 579's don't have the side skirts. You may need to adjust your mounting locations. The goal is to provide a smooth even glow all around the truck. And to avoid dead spots of light.

LED PLACEMENT SUGGESTIONS

Here are the lengths of the led strips we use that match the above layout.

- A = 75 LED strip
- B = 15 LED strip (in wheel well)
- C = 15 LED strip (in wheel well)
- D = 45 LED strip
- E = 15 LED strip
- F = 30 LED strip
- G = 15 LED strip
- H = 45 LED strip
- I = 45 LED strip
- J = 30 LED strip
- K = 45 LED strip
- L = 45 LED strip
- M = 15 LED strip
- N = 30 LED strip
- O = 15 LED strip
- P = 15 LED strip
- Q = 30 LED strip
- R = 15 LED strip (in wheel well)
- S = 15 LED strip (in wheel well)

POWER

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 storage box because it's closer to the truck's batteries. 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.

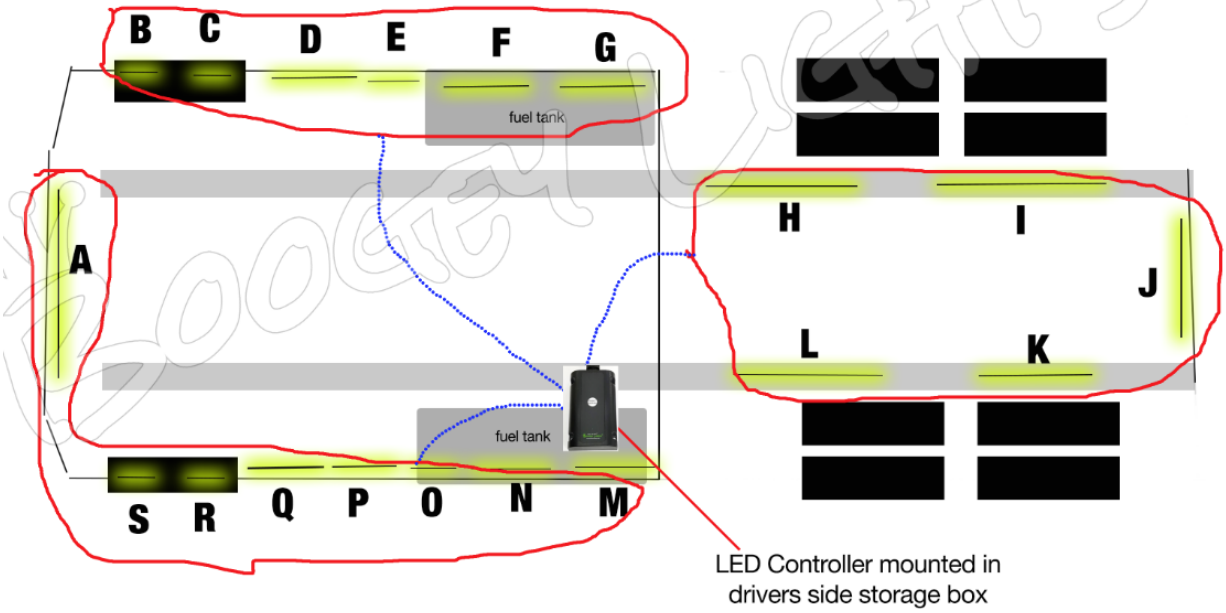
WIRING PLAN / ROUTING THE POWER LEADS

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. All of the Heavy Duty LED strips include a 3' power lead. Most of the strips will need to have additional power lead cable added which we include in the kit. Where possible, we recommend connecting all of LED strips in similar locations together and then running one feeder cable back to the LED controller. Doing so reduces the total number of power leads coming back to the LED controller. We will typically segment the truck into 3 or 4 sections and run one feeder cable to each location which connects to all of the LED strips in that area. Those segments are the Front, Passenger's Side (cab/sleeper area), Rear (all led strips behind the sleeper) and Driver's Side. Since this light kit only has one LED strip under the front bumper, you can combine that LED strip with the driver's side led strips which will make a total of 3 led group segments. See wiring plan diagram on the next page.

579 UNDER-GLOW LED LAYOUT

Typical Wiring Plan with 3 Group Segments

Blue lines = Feeder Cable connecting the 3 Group Segments of LED strips to the LED Controller.
Red Lines = Groups of LED strips that connect to one feeder cable.



Regardless of how you decide to connect the LED strips back to the LED controller (or switching mechanism if you're installing a single color system), we strongly recommend planning out your install on paper first similar to what you see here. Be sure to wrap all power leads in split-loom which is also included and then secure them to the truck using the included zip ties.

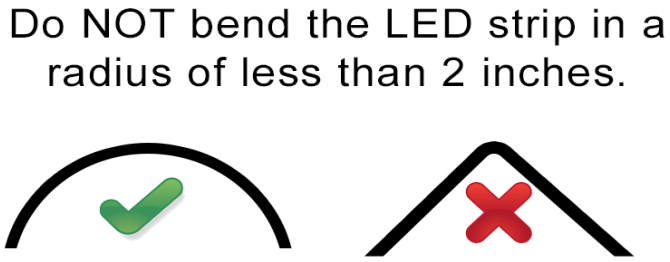
CUTTING YOUR LEDS

If you need to cut your LED strip you can do so as long as you cut in the proper location – which is every three LEDs as shown in the photo. Cutting incorrectly could damage your lights and is not covered by the warranty. If you cut the strip, be sure to seal the cut end. You can also use silicone found at your local hardware store. If you do need to cut your LED strip, we strongly suggest doing so BEFORE you mount the strip to your car. **NOTE: Heavy Duty LED strips CANNOT be cut. LOW PROFILE only.**

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.

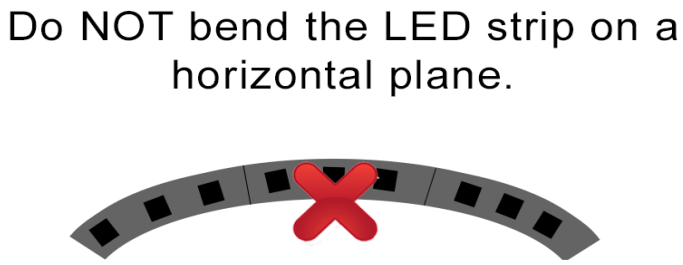
MOUNTING THE LED STRIPS

Once you have your LED strips cut (if necessary) and you know where you are going to attach them, follow these steps:



- 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 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 without reading the section "A Word About 3M Tape & 3M Promoter" further on in this document).



- Next, use the 3M Adhesion Promoter supplied with your kit to "paint" on the promoter where you are going to mount the LED strip. See the note below (on page 6) about the proper way to use promoter. ***This is an important step. Do not bypass.*** Allow the promoter to dry for 30-60 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.

- Secure all power leads. Do not leave the power lead cable hanging. Doing so will place too much stress on the LED strip itself causing it to fall off or fail where the power lead connects to the LED strip. Be sure to wrap all power leads in split loom to avoid chaffing.

WIRING DIAGRAMS & POWER CONSIDERATIONS

This kit includes the wiring diagrams for the configuration you purchased. **Please review carefully.** An essential skill with installation of any Boogey Lights LED product 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.

Be mindful of the amount of amperage you're drawing through your lighting circuit and to not exceed the circuit component limitations. We have included an amperage chart to give you a general idea of amperage draw but be aware that the amount of power (amps) you're pulling through the circuit will vary based on a combination of three factors: 1) The number of LEDs in the circuit, 2) the amount of copper wire in the circuit and 3) the input voltage to the circuit. The amperage ratings for our switches, controllers and LEDs assume 12.5 vdc input or less. If you're going to be driving with your Boogey Lights on, be aware that the input voltage will absolutely increase when the engine is on as RPMs increase. It's not unusual for an alternator to charge the batteries at a rate of 13.5 to 14.5 vdc depending upon the vehicle. Increasing the input voltage to the LED Controller/LEDs will also increase the amperage draw of those LEDs because they'll burn brighter. For example, we've seen circuits that draw 17 amps when the engine is off and the input voltage is 12.5vdc but jump up to drawing 24 amps when the engine is on and RPMs increased. This is because the input voltage jumps to 14vdc when the engine is running. If your circuit is only sized for 20 amps but the system requires 24 amps while running, you're going to have a problem.

Generally speaking, you don't have to be concerned about this issue if you're not within 60% or more of the collective max amperage rating for the components in your circuit. If however you're at or above that 60% rated load, we strongly suggest measuring actual amperage drawn for your installation to make sure it's fused and wired appropriately given the highest possible amperage draw when the alternator is charging the system at typical operating RPMs. If you have an over-voltage situation, there are a couple of solutions:

1) install a voltage regulator that will limit the input voltage going to the lights to 12.5 vdc regardless of the alternator output voltage. We sell them. They can also be purchased on Amazon/EBay.

2) install a second fuse/relay circuit and balance the LED load between those two circuits. Doing so will effectively cut the load by 50% per circuit. This is our preferred solution when possible.

The following pages have photos of a recent installation we did on a 579.

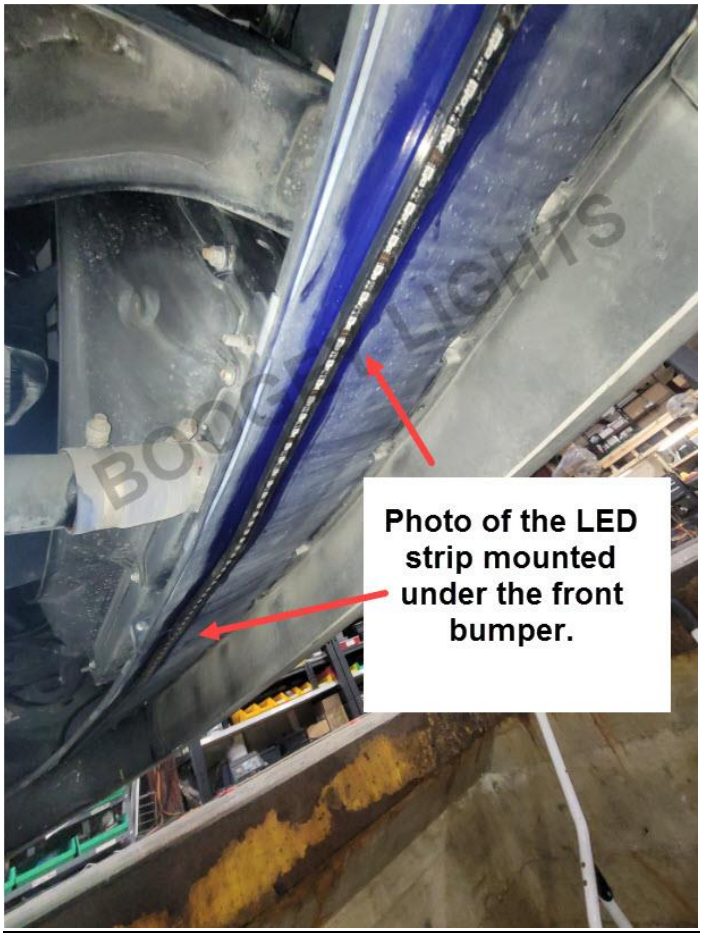
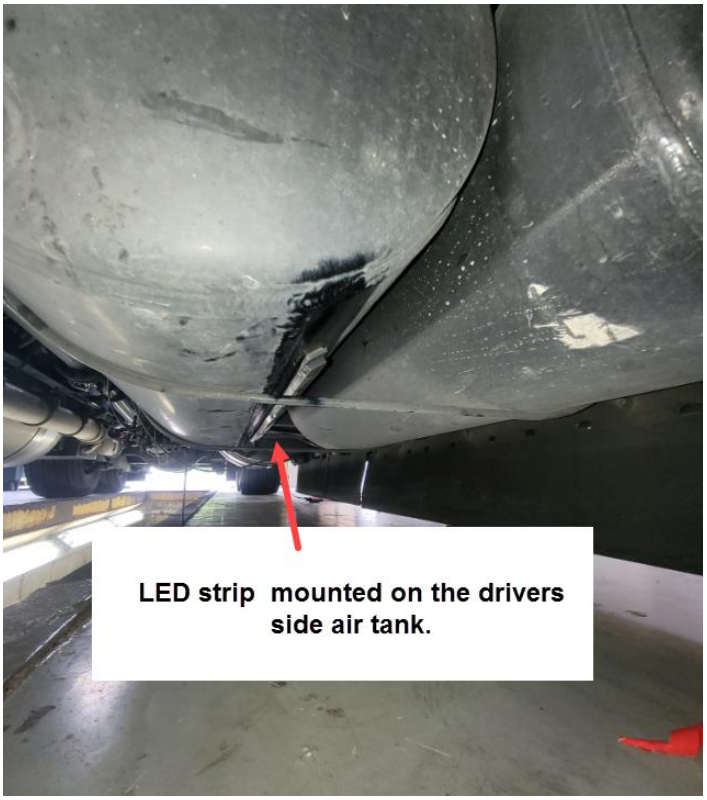


Photo of the LED strip mounted under the front bumper.


LED strips mounted inside the wheel wells
PRIME inc.
751022


LED strip mounted on the drivers side air tank.