60” Freedom Blade Tailgate Light Bar Installation Instructions

Congratulations on your purchase of a high quality PUTCO product. Should you need any application or technical assistance, feel free to call us at: 1-800-247-3974
Monday-Friday 8:00 a.m. - 5:00 p.m. (Central Standard Time)
Contact your PUTCO dealer for other quality accessories.

Please read all instructions before installation and to check to see that all parts are included.

KIT CONTENTS:	
DESCRIPTION	**QTY**
Blade Quick Connect Harness	1
LED Driver Box	1
LED Light Bar	1
Power Wire	1
Black Plastic Bracket	4
3M Tape Strips	4
Cable Ties	20
Heat Shrink Tube	1

Tools Required:

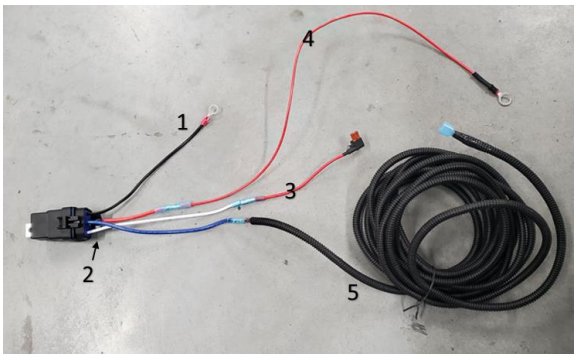
At Least 90% Isopropyl Alcohol
Clean Towel
Heat gun or Lighter

Find our latest electronic instructions via this QR code!



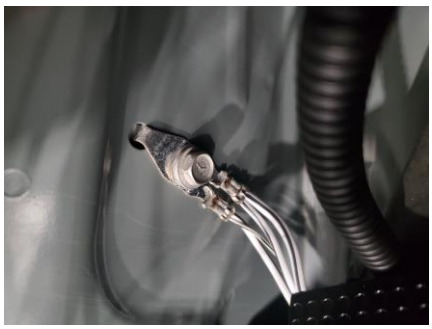
Caution: Failure to follow the installation process step-by-step may result in malfunctions in your Freedom blade or truck, potentially voiding the product warranty!

Power Wire Relay Installation



The power wire is a separate wire designed to power the freedom blade from battery. It uses a fuse tap style connector to tell the relay when to open or close, starting your Freedom Blade. This setup allows for maximum punch from the LED's. The power wire is packaged as a separate cable to allow easier wiring to the rear of the truck.



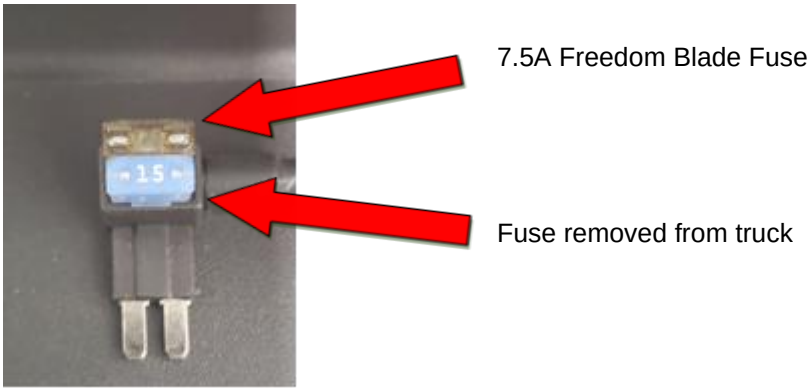




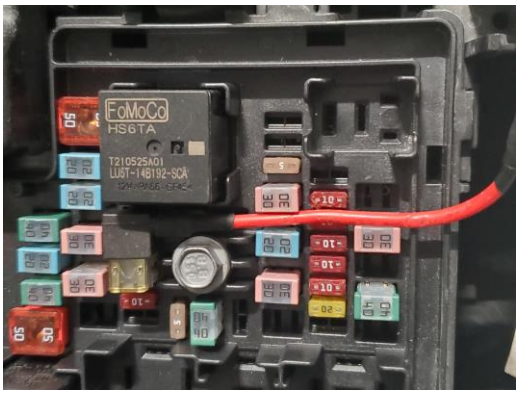
1. Find a convenient spot to mount the relay box. If you can find a bolt that is already attaching a wire from the trucks wiring harness to the sheet metal of the engine bay, this is usually a good mounting location which also doubles as a negative/ground termination. Place the #1 black ring terminal between the bolt and the relay flange. This location needs to be within two feet of the positive battery terminal and two feet of the fuse box. Another possible location is the battery negative terminal. This is often a 10-12mm bolt.

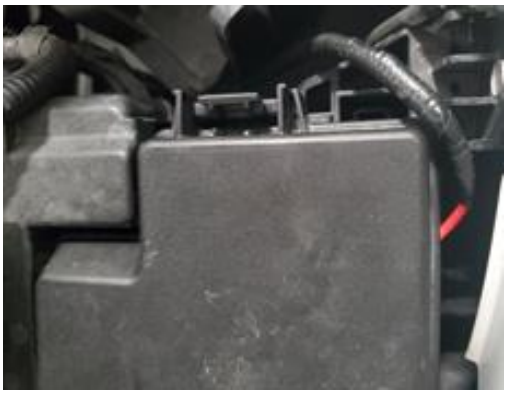


2. Attach the #4 (red wire) with a 3/8” ring terminal to the battery positive terminal.



3. Connect the #3 red wire that has the fuse connector on one end into the correct fuse location for your truck. We recommend using your truck’s accessory, ignition or interior fuse. Please see your trucks user manual for correct fuse location. **This fuse needs to be on a circuit that turns on with truck ignition.** See table at the end of the instructions for some possible fuses. If the fuse you select is always on, the Freedom Blade will slowly drain your battery. Place the fuse that was in the fuse box into the open slot on the connector.





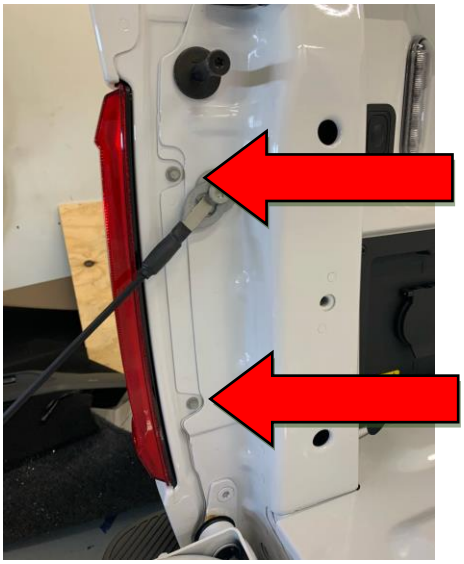
4. Carefully fish #5, the long bundle of wire with a spade connector down through the engine bay and away from any components that get hot or move such as the engine block and exhaust.

5. From underneath your truck, grab the power wire bundle and route it to the back of your truck directly behind the bumper.

6. A supplied cable tie should be used to attach the power wire to the frame of the truck every 12-18 inches.

Blade Quick Connect Harness Installation

1. Carefully remove both the passenger and driver side tail lamps by removing the two 8mm bolts using a socket wrench.



2. Fish the wire harness up from below the tailgate and out the tail light holes on each side of the truck.



3. Disconnect the factory harness from the tail light. Now plug the female end of the in the Putco quick disconnect harness into the tail lamp and the male harness into the factory harness. The tail light can be reattached to the truck.



Tailgate Light Bar Installation

1. Clean and dry the vehicle thoroughly in location where light bar is to be installed.
2. The vehicle surface temperature must be a minimum of 15°C (60°F).
3. Check the following before determining position:

    i. Will the tailgate interfere with the light bar when opened? If it does, the light bar will need to be repositioned.
    ii. Is the tailgate light bar visible from the rear when tailgate is closed?

Note: **Tailgate light bar is easier to install if tailgate is removed.**

Light Bar Clip Installation

1. Install 3M tape on back of black plastic brackets. Brackets are more useful if there are any obstructions on truck where light is to be installed. Brackets will hold light bar away from truck. Refer to **Figure 1**.



Figure 1

2. Use at least 90% Isopropyl Alcohol to prep surface on vehicle where light bar is going to be installed.

3. Install black plastic brackets with tape onto the back of tailgate light bar. One on each end, then evenly space out the middle two.

4. Remove tape release liner on all brackets. Place light bar in chosen position on the bed of truck. Do not stick tape to truck until light bar is in correct position. **Light bar wire should exit toward driver side of truck. Refer to Figure 2**



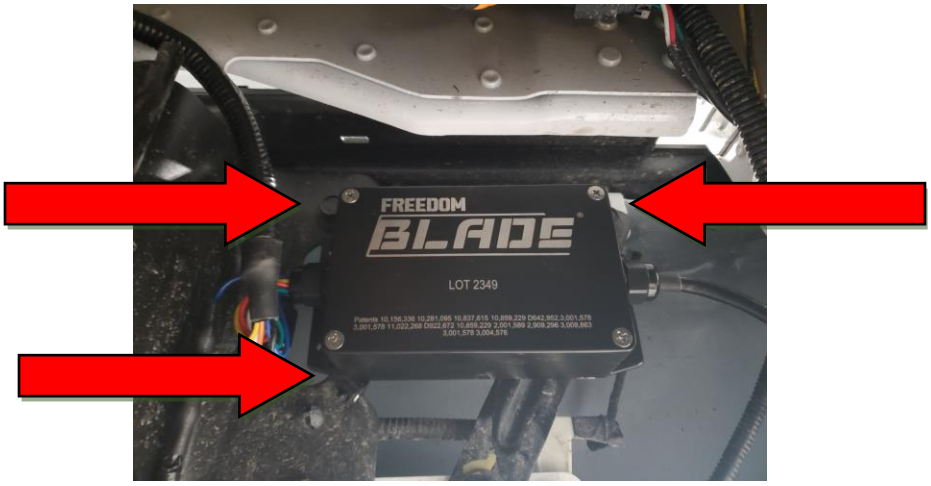
Figure 2

Note: **(Optional) Brackets may also be mounted with nuts and bolts (not included) by drilling into the truck. Use a #10 nut and bolt to attach to truck. The brackets will need to be attached to truck before light bar is installed.**

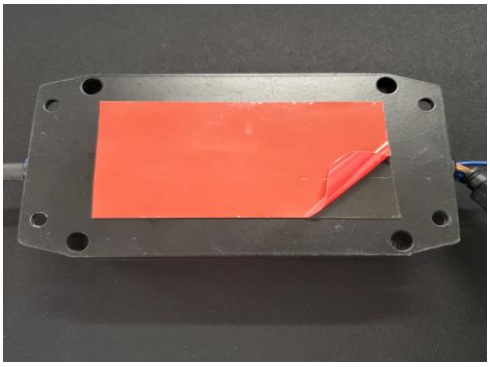
Mounting the Driver Box

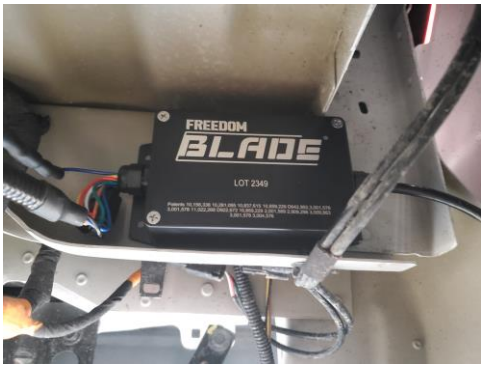


The Freedom Blade driver box comes with two predrilled holes on a flange on each side of the driver box. This allows the driver box to be mounted in many different orientations and places behind the bumper of your truck. Try to use at least three of the four mounting holes to secure the driver box.



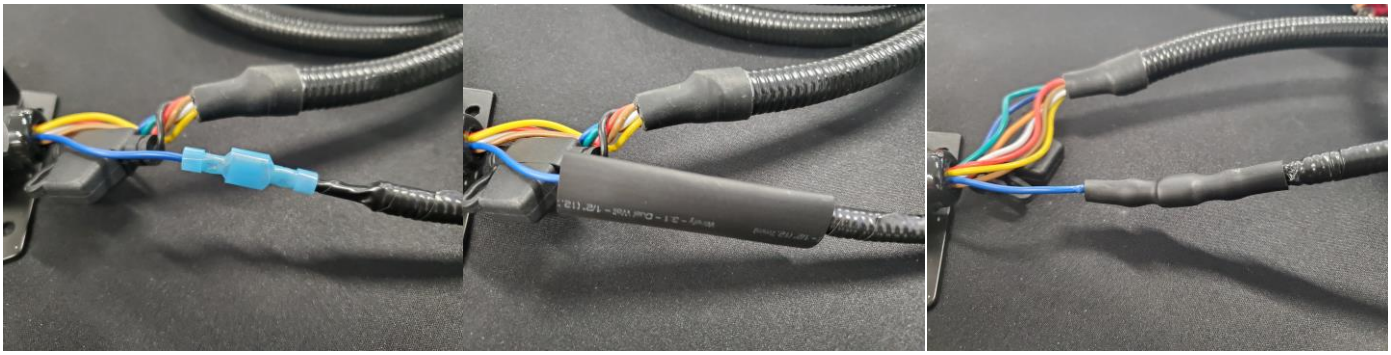
The Freedom Blade also comes with 3M automotive double sided sticky tape on the back of the driver box. If your truck has a suitable flat spot this can also be used for mounting. The 3M tape helps to reduce vibration.



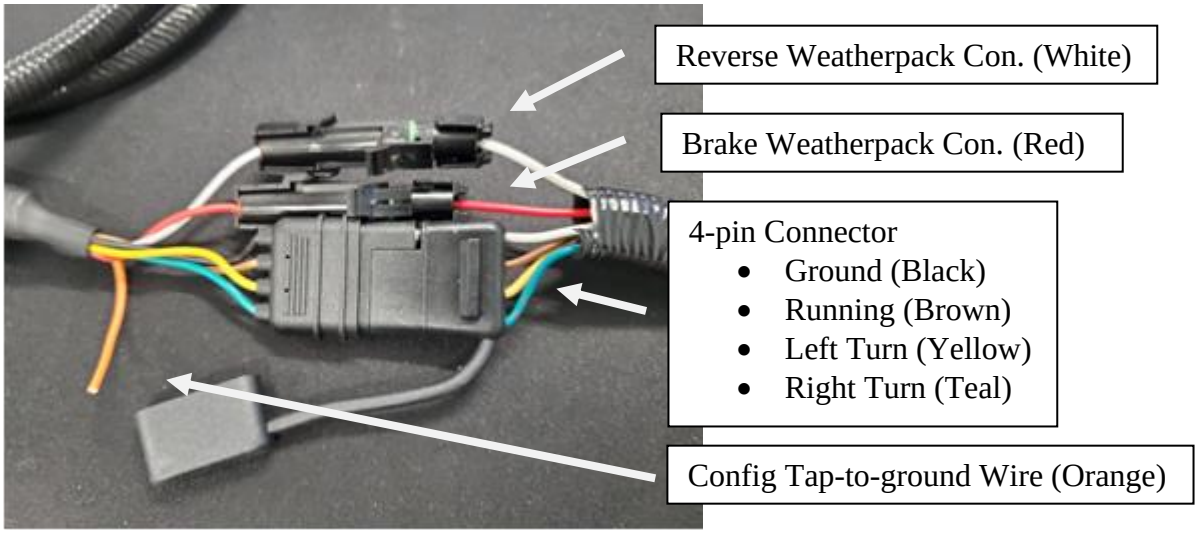


Connecting the Blade

Once the supplied harness has been connected to the truck and the power wire routed, you can connect the Freedom Blade driver box to the two harness. **Please connect the power wire first.**



1. The power wire connects to the freedom blade using a spade terminal. Once connected, slide the supplied heat shrink over the connection and use a heat gun or lighter to shrink the heat shrink onto the connector. This heat shrink has adhesive on the inside which will create a permanent, water tight seal.



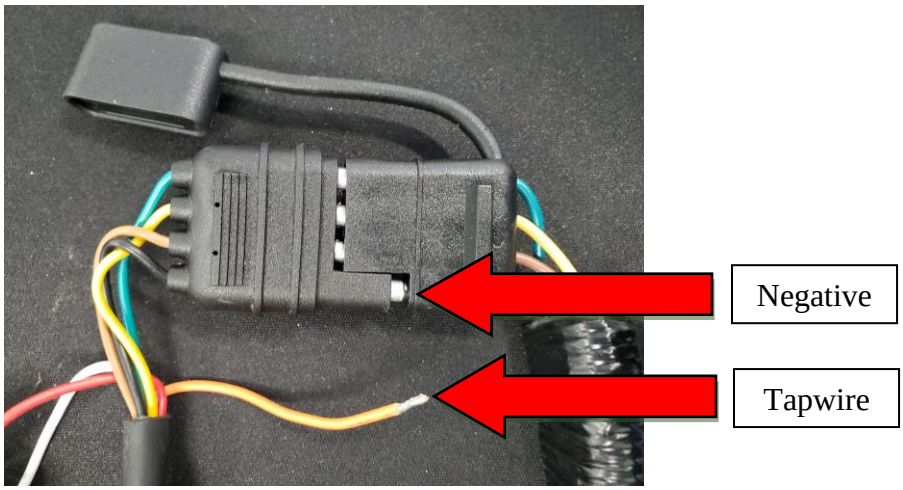
2. The Freedom Blade connects to the supplied harness using a 4-pin connector as well as one or two weatherpack connectors. Make sure the connectors are completely pushed together. Dielectric grease can be used. The weatherpack connector will click when properly connected. DO NOT CONNECT the black weatherpack connector from the 04 harness to the red weatherpack from the Freedom Blade, your freedom Blade will malfunction.

3. Make sure to bundle any extra length of wire harness tucked away and tightly bundled so it does not come loose when the truck is in motion.

Configuring the Freedom Blade

#	Start-Up Sequence	Turn Signal	Brake Style
1	White Helix	Red Scanning	Standard
2	Red KR	Amber Scanning	Triple-Pulse
3	White Breathing	Red Solid	
4	Red Heart Beat	Amber Solid	
5	White Afterlife	Red Continuous	
6	Red Quantum Bounce	Amber Continuous	
7	Meteor	Red Segmented	
8		Amber Segmented	

Configuration mode is a special mode which allows the user to select the turn signal style, brake style and the ending of the start-up sequence. This allows you the freedom to choose and personalize your freedom blade appearance between 84 different combinations. The signature white and green boot up sequence is not user adjustable. **DO NOT TURN YOUR TRUCK OFF WHILE IN CONFIGURATION MODE. THIS CAN CORRUPT THE FREEDOM BLADE.**



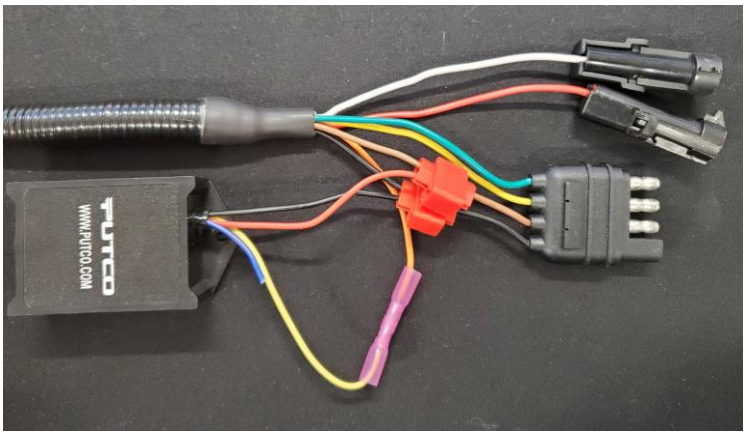
1. To access configuration mode, the user will need to momentarily touch the orange tapwire to a grounded surface of the truck or the negative of the 4-pin connector where the harness and the freedom blade driver connect.

2. When you enter the configuration mode, you will be shown the first start-up sequence. If you do not like this start up sequence touch the tapwire again, this will move to the second start up sequence. Once you get to the last selection, it will cycle back to the first selection. When you are happy with the startup sequence being shown, wait 5 seconds without touching the tapwire to ground. This will make your selection.

3. The configuration mode will now show you the first turn signal selection, touch the tapwire again to see the second turn signal selection. When you are happy with the turn signal displayed, wait 5 seconds and your preferred turn signal will be selected.

4. Lastly, the configuration mode will show you brake selections, standard brakes are shown first. If you touch the tapwire, the triple pulse brake will be shown. Triple pulse brake momentarily pulses the brake light to increase visibility and reduce rear end collisions. If you wait 5 seconds without touching the tapwire to ground, the freedom blade will record your selection and exit configuration mode. Your selections should now be saved going forward. This process can be repeated any anytime.

OPTIONAL ACCESSORY: WIRELESS REMOTE



WIRELESS REMOTE WIRING	
WIRE COLOR	**FUNCTION**
BLUE	12V OUTPUT
YELLOW	NEGATIVE/GROUND- MOMENTARY
BLACK	NEGATIVE/GROUND INPUT
RED	12V INPUT

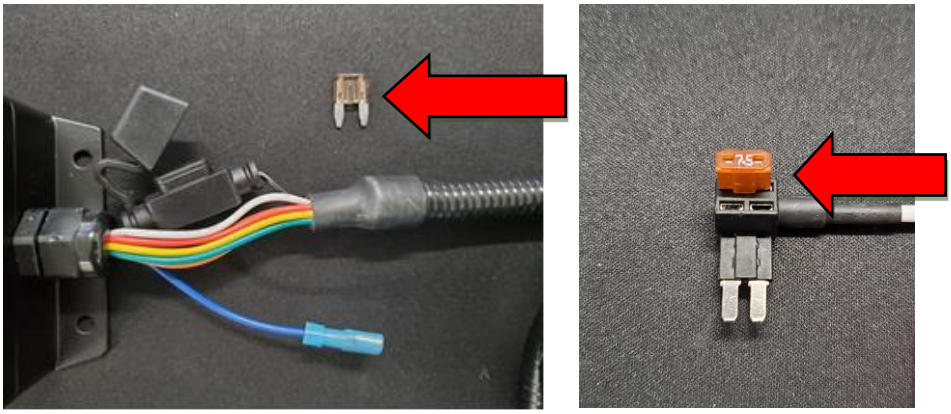
Putco also offers a wireless remote that allows you to easily change your Freedom Blade remotely. To connect a wireless remote (not included), use a scotch lock to connect the black wire of the remote box to the black wire of the 4-pin connector. Next use a scotch lock to connect the red wire from the remote box to the brown wire on the 4-pin. Lastly, use a butt splice crimp connector to connect the yellow wire to the orange wire on the Freedom Blade. Do not connect the blue wire.

Testing the Freedom Blade

1. Once your Freedom Blade is installed it is a good idea to test the functionality before driving.
2. With the help of an assistant, test the functionality of the Blade (brake, turn signals and reverse).
3. Enjoy!

Troubleshooting

If your Freedom Work Blade stops working for any reason, nothing on the unit is customer serviceable besides two 7.5 amp (brown) automotive fuses. This fuse can be purchased at most automotive stores. If your unit is not powering on and this fuse is blown and subsequently blows when replaced, make sure no water is present in any of the connections. If replacing the fuse does not fix the issue please check the troubleshooting chart on the next page or contact Putco customer service for further support.



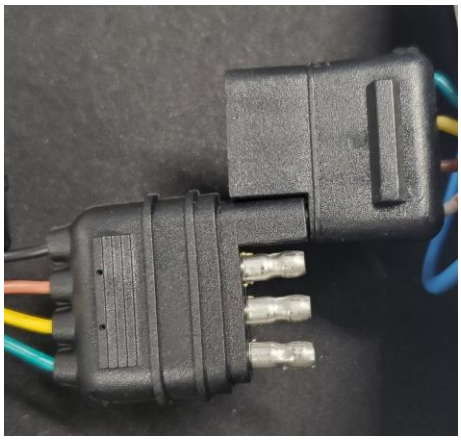
Troubleshooting Guide

PROBLEM	POSSIBLE CAUSE	SOLUTION
Light bar will not turn on.	Power wire and quick connect harness not installed correctly.	Double check the wiring is installed correctly (pages 3-6).
Light bar will not turn on.	Light bar connector not oreinted correctly.	Make sure the indexing pin is lined up when connecting the two connectors. Do not force it if there is resistance.
Light bar will not turn on.	Fuse is missing or blown.	Check fuses, replace if missing or damaged.
Light bar will not turn on.	Incorrect harness packaged with light bar.	Check to make sure the last two digits of your harness part number match the last two digits of the light bar. (Example: 760060-**17** and 5290**17)**
Start-up sequence not working.	Light bar power is staying on.	Use a volt meter or multimeter to check that the spade connector on the power wire has +12VDC when the truck is running. See power wire test below if voltmeter is not available.
Truck turn signals aren't working.	Tail lights not plugged in.	Double check the tail light connectors are fully inserted.
Trucks turn signals are hyperflashing.	Tail lights not plugged in.	Double check the tail light connectors are fully inserted.
Drivers side tail lamp turns off.	Power wire not installed correctly.	Use a volt meter or multimeter to check that the spade connector on the power wire has +12VDC when the truck is running. See power wire test below if voltmeter is not available.
Check engine light came on.	Fuse is missing from bottom of the add-a-fuse connector.	Fuse needs put back into bottom add-a-fuse fuse slot.
Light bar flickering.	Moisture could have gotten into the 4-pin connector.	Try drying off the 4 pin connector, applying dielectric grease and applying electrical tape around the connector.
A section of the lightbar isn't lighting up.	The light bar may have been damaged during shipping.	Contact customer support. Support@Putco.com. 1-800-247-3972
Only 30 green LED's light up on the light bar.	The driver was most likely turned off during programming mode and corrupted.	Contact customer support. Support@Putco.com. 1-800-247-3973
Package is missing a component.	Misboxed	Contact customer support. Support@Putco.com. 1-800-247-3974
Wireless remote is not working.	Remote relay box must be turned on.	Push the A button to turn on the wireless relay box before pushing the B button to configur freedom blade.
Wireless remote is not working.	Too far from relay box reciever.	Move closer to the relay box and try again.
Reverse or brake connector doesn't fit.	Pin is bent, not centered.	Carefully bend the pin back to center using a small screw driver and try again.

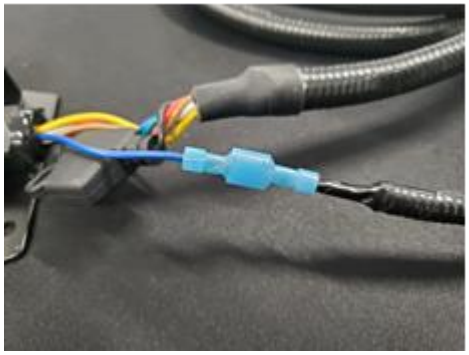
Power Wire Test

If you do not have a volt meter or digital multimeter to make sure the power wire is working properly there is a simple test you can perform to check functionality.

1. With the power wire and quick connect harness installed, connect the 4-pin from the harness to the light bar with only the ground (black wire) connected.



2. Now connect the power wire to the driver box.



3. Now if you start the truck you should see the light bar turn on (white momentarily and then show a start-up sequence, after which it will turn off). If it does not turn on, most likely your power wire is not providing +12 VDC or your harness is not providing ground. If it does work, please reconnect your 4-pin correctly.

Power Wire Fuse Location

Make	Model	Year	Fuse #
Ford	F150	2020-2023	18, 100, 101
Ford	F250	2017-2019	17
Ford	F250	2020-2023	41
Ford	Ranger	2019-2022	22, 27
GM	Silverado 1500	2017-2022	92
GM	Silverado 2500	2017-2022	42
GMC	Sierra 1500	2020-2023	92
GMC	Canyon	2023	40
Hyundai	Santa Cruz	2022	2
Nissan	Frontier	2022	34, 35
Toyota	Tundra	2022	Active Aero

NOTE: This table should be used as a guide and is not exhaustive. Fuses change often, and with the number of trim levels, packages and model refreshes, please confirm your trucks fuse circuit turns on and off with ignition.

For other quality lights and lighting accessories, visit
www.Putco.com