



For additional tips and tricks, watch the installation video by visiting our website or scanning the QR code with your smartphone!



2015-2021 Ford F-150 Underbody/ Puddle Lights Kit

<u>Parts List:</u>	<u>Quantity:</u>	<u>Tool List:</u>
LED Lamp Assemblies	2	• Power Drill
Aluminum Mounting Rails	4	• 8mm Hex Head Driver
Y-Adapter harness	1	• Pliers
20ft Power Extension Harness	1	• Safety Glasses
Parts Bag PB-4570	1	

Thank you for purchasing one of our products. Please familiarize yourself with the parts included as well as the instructions before attempting installation. Please seek the help of a certified technician if you feel unable to complete the installation safely and properly. Failure to read and follow the instructions below may result in personal injury or damage to property. Starkey Products, Inc. and our retailers assume no liability for failures to comply with guidelines and warnings outlined in this instruction manual.

Mounting Aluminum Rail System:

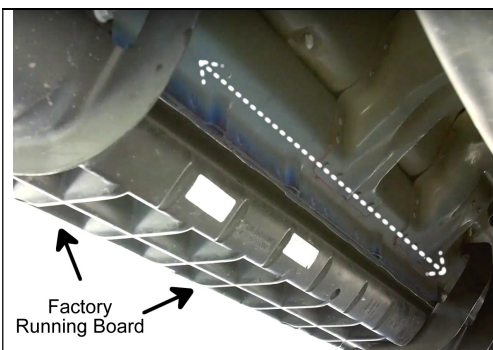
Driving the vehicle onto ramps or raising the truck with jack stands will greatly ease installation. Before beginning the steps below, turn off the truck, remove key, and engage the emergency brake.

Familiarize yourself with the parts included with the kit. There are a total of 4 aluminum rails – 2 for each side. You'll notice that they are angled to allow for more versatility.

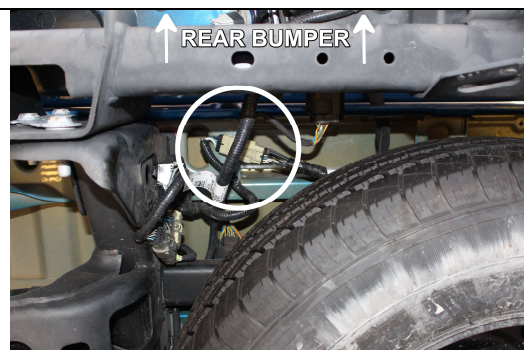
Generally, the best place to mount them is the angled surface above the pinch weld shown in picture 1. Depending on the bottom surface of your running boards (boards vary in length and shape), the running boards may be another possible mounting location. A few things to keep in mind:

- A. Center the rails between the 2 tires. Be sure to match both sides!
- B. The rails should be placed end-to-end (the ends should touch or be within 1/4" inch of each other).
- C. The rails can be bent slightly or shaped to meet the contour of the surface.
- D. There are approximately 4 mounting holes pre-drilled on each rail, but only the 2 outermost holes need to be used for each rail in most cases.

Using the self-tapping stainless steel screws, securely mount the aluminum rail system. Be sure to use safety glasses! Optionally, you can drill a 1/16" pilot hole.



Area with dashed line is great for rail mounting. **1**



Circled is the 12-pin connector located under rear bumper. **2**



Install retaining clips on either end of rail. **3**

Connecting the Y-Adapter:

1. Disconnect negative (black) battery cable from the battery. This is done by loosening the bolt located on the side of the battery cable terminal with a wrench. You may let the cable sit off to the side. Do NOT allow it to make contact with the +12v Red battery cable!
2. Locate the 12-Pin connector behind the bumper toward the driver side of the truck. This connector is up high and has a clip that keeps it attached to the truck. See picture 2.
3. Unplug the connector by depressing the tab on the side and separating the 2 connectors. Be sure to pull by the connector body, and not on the wiring.
4. Install the Starkey Y-Adapter inline to connect the 2 factory connectors. Note: This connector is keyed so you can't accidentally connect it to the wrong plug. There are several 12-pin connectors in this area of the truck, but only one will connect properly. If you find the connector isn't working, look for another 12-pin connector. The one you are looking for is mounted higher than most of the others.

Installing LED lamps and connecting to power:

The LED lamps have wiring coming out of one end. This wiring should be run toward the rear of the truck. The LED lamps install into the mounting rail by pressing the lamps into the channel that is molded into the rails. It does not matter which side you install each lamp on. You'll notice the cap on the end does not fit inside the channel. Therefore the LED lamps should extend beyond the channel on each side by about 1/2 inch.

1. Starting on one side, insert the LED lamp into the beginning of the rail toward the front of the truck. It is good to leave about 1/2 inch of the LED lamp cap extending beyond the rail.
2. Pushing a few inches in at a time, work your way down toward the rear of the truck. Make sure the LED lamps are completely depressed into the mounting rail. They should be flush with the edges of the aluminum channel.
3. Install the plastic retaining clips on each end of the mounting rail (2 per side). See Picture 3.
4. Route the remainder of the wiring to the rear of the vehicle. Caution should be exercised when mounting the wiring throughout this installation. You'll need to stay away from any significant sources of heat (like exhaust pipes) and any moving parts (like suspension). It follows that staying as high up as possible will avoid these things. Where possible, it is best to follow existing bundles of wiring that run along the frame of the vehicle. Use the supplied zip ties to secure all wiring.
5. Work your way to the Y-adapter you installed earlier. Plug the lamp connector into either of the connectors on the Y-adapter.
6. Repeat steps 1 through 5 with the other LED lamp.

If you have the Trailer Assist Lamp on your truck (the small LED mounted next to the tailgate handle), jump to the Final Installation section on page 4.

If you DO NOT have the Trailer Assist Lamp mentioned above, we STILL want you to test the system first. In many cases, your truck may be pre-wired and not require additional wiring to make the underbody lights work.

7. Re-connect the negative battery cable.
8. **Unlock the doors with the Key FOB. If the lights illuminate, jump to the Final Installation section on page 4. Otherwise, continue with the installation.**
9. Disconnect the negative battery cable again.
10. Locate the power extension wire (about 20 feet in length).
11. Locate the rectangular vent behind the passenger side rear wall of the cab. If you have rear seats, use the pull handle to lower the seat back. Pull back the insulation to gain access to the vent.

12. Insert the power extension wire (the side with 2 Red connectors) through any one of the square openings on the vent. The vent in that section will open.
13. Feed enough wire through so that you can route the power extension wire to the Y-Adapter behind the rear bumper you installed earlier. Follow the previously installed lamp wiring on the passenger side if possible – be sure to zip tie the power extension wire securely.
14. Connect the Red/Red and Black/Black wires on the Extension wiring/ Y-Adapter.
15. Return to the cab of the truck. Remove the front passenger side door sill plate. You will hear it unsnap. This is done by pulling straight up, starting at the front and working your way back. You will hear ‘popping’ noises when the clips come loose - this is normal. See picture 4.



Remove passenger side door sill plate carefully. **4**

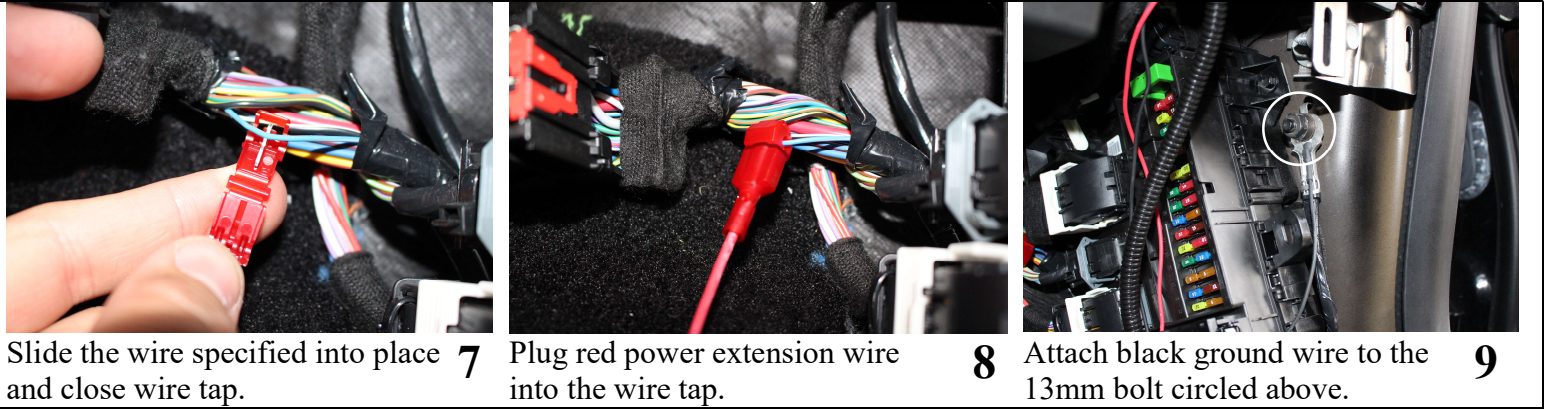


Remove kick panel. First pull upward, then backward, **5**



Press tab while sliding bar to the side to unplug connector. **6**

16. Locate the interior fuse box. It is located behind the passenger side kick panel directly in front of the door. If you have trouble finding it, refer to your vehicles user manual for the specific location.
17. Remove the fuse box access cover.
18. Remove the kick panel. It can be removed by first pulling upward where it attaches to the door sill plate - one clip holds it in place. Then pull backward where it attaches to the door frame to release the rest of the clips. See picture 5.
19. Route the power extension wire up to the fuse box you just uncovered, tucking it under the rear door sill plate as you go (for crew cab trucks).
20. Locate the large black 36 position connector shown in picture 6. It has a white bar running across it. It is the third connector from the bottom. It has 23-26 wires coming out of it.
21. Press the release tab on the top of the connector while sliding the white bar to the side to unplug it. It will ‘click’.
22. Unplug the connector and gently pull it out to gain better access to the wiring. Pull back a few inches of electrical tape wrapped around the connectors’ bundle of wiring. Do not use any tool to remove the electrical tape that could cut wires or otherwise cause damage.
23. **2015-2017 Model Years:** Using the supplied red wire tap, slide the **Purple** wire (Pin #26) onto the wire tap.
2018+ Model Years: Using the supplied red wire tap, slide the **White** wire with **Green** stripe (Pin #26) onto the wire tap.
See picture 7. The wire should sit in the middle of the two teeth. Squeeze down on the wire tap making sure it snaps closed. Do not cut Wire! The wire in question is a 22 gauge wire (the thinnest type of wire running into this connector).
24. Plug the **red** wire from the Starkey wiring into the back of the wire tap. See picture 8.
25. Re-connect the large black connector. Be certain to pull the white bar to the side to insure the connector snaps back into place.
26. Use a 13mm socket or wrench to attach the **black** ground wire to the bolt circled in picture 9. Re-attach the nut and tighten.



Slide the wire specified into place and close wire tap. **7**

Plug red power extension wire into the wire tap. **8**

Attach black ground wire to the 13mm bolt circled above. **9**

Final Installation:

1. Double check everything to make sure it was connected properly.
2. Re-connect the negative battery cable to the car battery. Remember to re-tighten the bolt.
3. Now open one of your doors – the lights should illuminate. If the lights do not power on, visit the trouble shooting section below. Otherwise proceed to the next step.
4. Using the supplied zip ties, secure the wiring under the rear of the bumper if not already done. Be sure to securely zip tie any components that may hang or move.
5. Enjoy your new Underbody/ Puddle Lights! The lights will activate when you open any door or unlock the doors with your Key FOB. Lights will dim automatically when you start the truck or lock the doors.

Trouble shooting guide:

LED Lamps won't turn ON –

- Check to make sure the Y-Adapter you connected earlier made a good connection – to do this, unplug the connectors, and re-connect them. You should hear an audible 'click' when the connector fully engages.
- Confirm you installed the extension harness (for trucks without the Trailer Assist LED).
- Close all doors. Disconnect negative battery cable for 5 minutes, then reconnect and re-test.

Some interior lights or door locks aren't functioning –

- Did your installation require the power extension harness? If so, the connector near the fuse box you unplugged on page 3 was not re-connected properly or completely. Plugging it back in will restore function. Be sure to pull the white bar back over until it clicks into place.

If you are still having trouble with your product, please contact us for technical assistance. Tech support is available via phone Monday through Friday 9am-5pm. Email tech support is available during regular business hours as well as weekends, holidays, and evenings.

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Limited Warranty:

This warranty covers defects in materials or workmanship in any component sold by Starkey Products, Inc. or its authorized dealers. Warranty is effective for five years from the date of purchase. Coverage terminates if you sell or transfer ownership of the product. Starkey Products will repair or replace the defective or malfunctioning product or any defective or malfunctioning part thereof at no charge. This warranty covers parts and labor only. This warranty does not cover any problem that is caused by abuse, misuse, acts of God, or improper installation. Any modification or alteration to any component will void the product warranty. Warranty does not cover wear that any components receive through the normal course of operation and use (including but not limited to bulbs). All warranty claims require proof of purchase.