

17+ Raptor Fog Light Installation Instructions

STOP

Refer to Bracket installation instructions for mounting the brackets. Refer to wire harness instructions to Preassemble your wire harness unless you purchased the Custom Harness. Pro Kit customers, see that on page 8 at the end of this manual.

Step 1:

Once you have your Harness assembled, you need to lay it in place. First, starting from the PASSENGER side, under and behind the front bumper, take the LONG side of the wire harness that goes to the driver side lights, and feed it through to the driver side from BEHIND the bumper ABOVE the skid plate (Pics 1/2) or above the frame (Pic 3). There are several pockets. You can see in the photo below, you can see all the way across. When you get the end over to the driver side, it is a good idea to secure it to something temporarily so that it doesn't pull back.



Step 2:

Pull the other long end up into the engine bay along side the battery on the passenger side and toward the passenger side firewall, where the switch wires are located. (See Pics)



Step 3:

Next, take the BLACK ground wire with the ring connector on it and GROUND it to an existing ground bolt behind the battery. (See Pic) This will hold the harness in place so it won't fall back while your connecting the lights.



Step 4:

Install your lights on the MAIN brackets that you previously installed on the truck. Or if you have not done that yet, follow the instructions that came with the main brackets. Your POD lights come with a pair of standard brackets. You can use those to install the cubes to the main brackets, however, your "RIGID" name will be upside down. This isn't an issue unless it bothers you. There are 2 ways to fix this if it does.

Option 1:

You can take the 6 small screws out and turn the lens the other direction and reinstall the screws. The Bit size is H7/64. As long as you don't try to jam in the wrong side bit and strip the screw out, you should not have an issue with your warranty. Rigid will tell you otherwise, but it is just as easy to reverse the lens when sending it in for warranty. Now, if you do this and you don't properly tighten the lens cover and moisture get in it and damages something then you may have an issue. So do this only if your comfortable. Again, the functionality is no different regardless of the direction the words face.

Option 2:

You can purchase separately a set of 6 Reverse Brackets. The reverse long brackets allow you to mount the lights the other direction because they are longer. See pics below.



(OPTIONAL REVERSE BRACKETS SHOWN BELOW For PURCHASE on SPVPARTS.COM)



Step 5:

POSITION AND LAYOUT

Depending on which light set you purchased, or if you purchased your own custom kit, the location you put the lights can vary.

If you purchased the PRO kit with the SPOT, DRIVING, and SAE lights, it is Recommended to put the SPOT cubes at the very INNER location as the inner bumper may block some of the wider light output of the others. If you didn't get a spot, it again becomes personal choice. The location of the SAE and Driving light doesn't matter (See Pic)



If you purchased the Radiance or the Radiance SCENE kit, (Pictured Below) all the lights are the same, so it doesn't matter where you put them.



Once you have them all laid out where you want them, you can adjust your MAIN brackets, and your light individual brackets positioned straight and where you want them. Then tighten all your bolts down so they are secure.

Step 6:

CONNECTING THE LIGHTS TO THE HARNESS

Depending on if you purchased one of the PRO kits, or the Radiance kits, you may have a PLUG, or bare wire that you need to connect with a crimp tool to the harness. (Left Photo is for the PRO kit. Right Photo is for the Radiance Kit)

Note for Radiance Light connection ONLY: It doesn't matter which black wire goes to which light as long as ALL the lights are connected to one. All the black wires are combined together on the harness and grounded with the ring terminal you connected earlier. Also, that goes for the white wires as well. They are also combined. So it doesn't matter which one goes to which light as long as ALL the lights are connected to one.

The red wires. These will ONLY matter which light you connect to them if you did not decide to connect them to one switch. If you combine them all together at the end and put them on one switch, it doesn't matter. If you are connecting them individually (Like on switches 1, 2 and 3). In that case, connect #1 to the same position light on each side of the bumper (Driver Side/Passenger Side) and then #2, and then #3. You could then choose where to connect those numbered wires at the switch wires depending on which switch you want each pair on.



Step 7:


Once your lights are connected, secure your lower harness under the bumper area wherever you can. Use zip ties and you can tie them off on existing harnesses, the frame, other brackets, etc. Make sure it isn't loose or sloppy. If it is, it could vibrate and wear a hole in the insulation or get caught on something driving down the road (or Offroad).

Step 8:

Now connect your wire to the switches. You can use the diagram below for switch number and color.

AUXILIARY SWITCHES

The auxiliary switchboard on the overhead console makes aftermarket customization easier, with six prewired switches attached to the power distribution box for electrical accessories.



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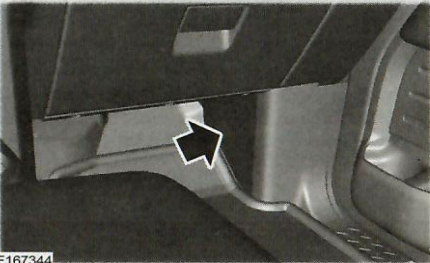
These switches are labeled **AUX 1, AUX 2, AUX 3, AUX 4, AUX 5** and **AUX 6**. They will only operate while the ignition is in the on position, whether the engine is running or not. It is, however, recommended that the engine remain running to maintain a battery charge when using the switches for an extended duration or higher current draws. When switched on by the operator they provide electrical battery power for a variety of uses.

The switches control relays and fuses that are under the hood in the power distribution box. The Aux switch powered circuits are found as blunt-cut sealed wires, located by the power distribution box.



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There will also be one Aux Switch pass through circuit for each switch found as a wire located to the right of the glove box door and just above the passenger-side kick panel.



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You may need to pull down the auxiliary cords to access them.

Refer to the **Fuses** chapter of your **Owner's Manual** for information on fuse and relay locations. See your authorized dealer for service.

Additional pass through circuits that run through the dash panel and under the hood, are located in the same location.

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The relays are coded as follows:

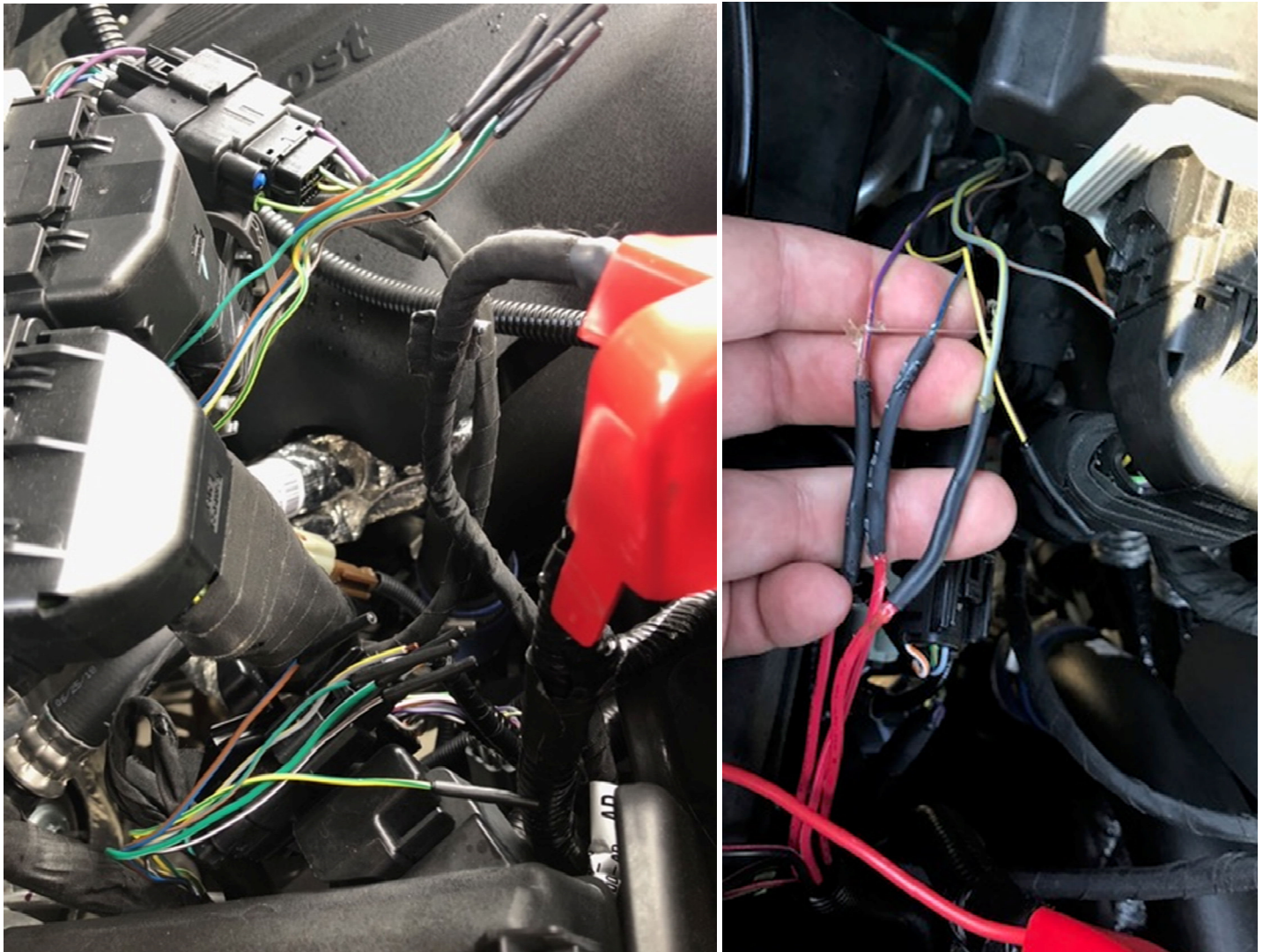
Power Distribution Box	Wire Color	Under-hood Pass Through	Wire Color	Passenger Footwell	Wire Size	Fuse
AUX 1	Green/White	AUX 1	Green/White	AUX 1	1.0 mm ²	15A
AUX 2	Brown/Blue	AUX 2	Brown/Blue	AUX 2	1.0 mm ²	15A
AUX 3	Gray/Yellow	AUX 3	Gray/Yellow	AUX 3	0.50 mm ²	10A
AUX 4	Green/Brown	AUX 4	Green/Brown	AUX 4	0.50 mm ²	10A
AUX 5	Brown/White	AUX 5	Brown/White	AUX 5	0.35 mm ²	5A
AUX 6	Green/Orange	AUX 6	Green/Orange	AUX 6	0.35 mm ²	5A

The relays are coded as follows:

Switch	Circuit number	Wire color	Fuse
AUX 1	CBB47A	Green/Blue	15A
AUX 2	CBB48A	Gray/Yellow	15A
AUX 3	CBB94	Violet/Orange	10A
AUX 4	CBB96	Brown/Blue	10A
AUX 5	CBB98A	Gray/Orange	5A
AUX 6	CBBA0B	Yellow/Violet	5A

Now, you may run into some issues. And get stuck because you pulled out a set of wires that have no power. Ford installed 2 sets of wires. One set is powered by the switches. The other set is a PASS THROUGH set. There is no power. These are just a jumper set that are run into the passenger side fuse panel area on the floorboard in case you wanted to connect something interior wise to a switch. If that were the case, you would connect the two of the same color together.

If you grab the wrong group of wires and don't have power to your lights, don't fret. Just find the second set. All will be good. See picture below showing BOTH sets and how close they are to each other. GENERALLY, the powered set is toward the fender. HOWEVER there have been SEVERAL cases that they are reversed. So.... Pick a set and hopefully you get it right the first time... GOOD LUCK! Crimp your Red wires to your preferred switch (Right)



Step 9:

Finally, make sure to secure the rest of your wire harness! You don't want it to get caught in the engine or belt. That would be a mess. Zip tie the slack out of the way using zip ties to existing harnesses and factory locations.

YOU'RE DONE!!!

*For liability purposes, these instructions are intended to help you install your lights. However, SPV cannot be held responsible for faulty installation issues done by the consumer.

FOR PRO FOG KITS THAT COME WITH GENERIC HARNESSSES.... **(SUPPLEMENT)**

If you want to make your own custom harness and get rid of the bulk from the long generic harnesses, you can follow these instructions and cut yours down. Be sure you have enough wire. Measure it all out so you cut the long sections from the right areas. You will have some sections you need to get your longer wire from. The relays and fuses are NOT needed. Just the gray connectors. You will need to get some LOOM though at an auto parts store for a clean harness.

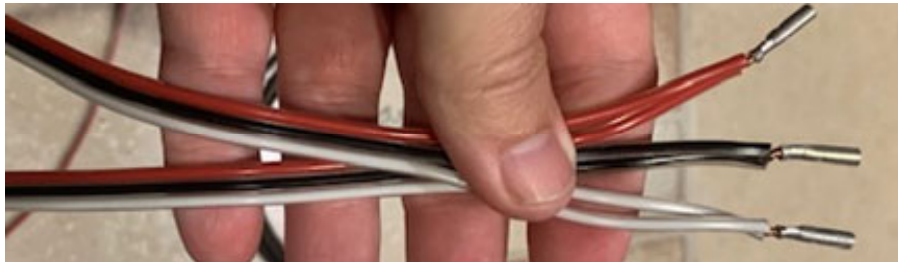
You will need to cut 3 sections 55" long

You will need to cut 3 sections 63" long (With the gray connector attached)

You will need to cut 3 sections 13" long (With the Gray Connector Attached)

Now, the fist group you want to combine are the LONGEST 63" with connector, and the SHORTEST 13" with connector. (You will combine them SIDE BY SIDE using a butt connector and heat shrink)

Line them up SIDE BY SIDE, twist them together and insert them in a butt (crimp) connector as seen in the pic below and crimp it down TIGHT. Again, notice that these 2 groups are SIDE BY SIDE, not end on end. That leaves the other end OPEN for the last wire group. You will connect all 3 colors like this for ONE harness for ONE pair of lights. So you will need to do this 3 TIMES in all... *(Disregard the white wire if you have the pro kit. That is used for RADIANCE version)*



Now you can crimp down your 63" Wire. Then slide the heat shrink over the exposed connectors and wire so that it is completely covered. Then use a small touch or electric heat gun to shrink it over the wires. If you use a torch, be careful. You can melt both the wire insullation, and the heat shrink tubing if you just HOLD the flame in one spot. You want to wave the flame around close to it. Don't touch the flame to the material. Keep it back a little. If you use an electric gun like on the right, it is easier to control and hard to burn or melt the material.



You connect one of each section together for ONE pair of lights. When you make all 3, you can loom them all together for ease and protection. At the very end, you will need to crimp a ring connector to the black wires for your ground. You can cut one off the generic harnesses and use it.

