

2017+ Raptor Rear Light Kit Install instructions

Baja Designs S1 or S2 REAR LIGHT KITS

Baja S1 Bracket Installation- (Skip to next page for S2)

The Silver U bracket included with the lights should install as shown below (Fig 1) with the angle down. You will install the included hardware as pictured.

Then attach the Raptor Specific bracket as shown (Fig 2) with the notched end facing UP. Notice the slot on the upward end. This allows you to adjust the light as tight under the bumper as you would like.

Figure 1:



Figure 2:

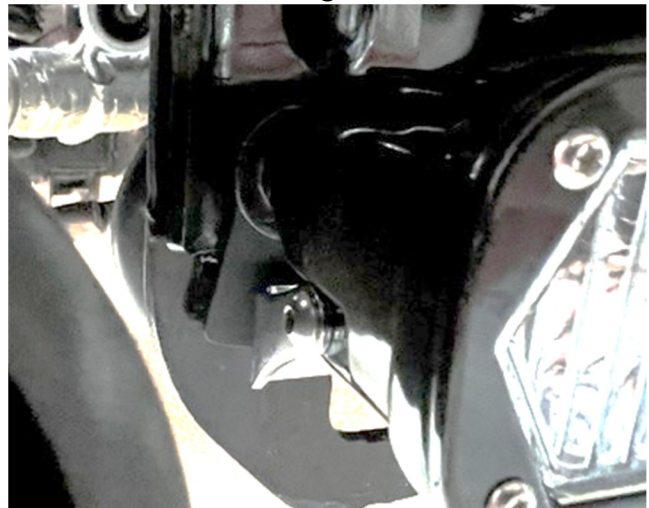


Notice the bolt under the bumper (Fig 3) on the end of the hitch receiver. You will remove the bolt and insert it into the bracket slot as shown (Fig 4). Notice the angle of the bracket turns OUT toward the exhaust tip. The driver side is shown in fig 4, however the driver side would mirror the passenger side. Notice the ELBOW angles OUT toward the tip. You will need to turn the light some where you can get to the star bolt on the bumper. If its fairly snug, you can turn it a little, tighten the bolt and then turn it back.

Figure 3:



Figure 4:



Baja Designs S2 Bracket Installation- (Skip to next section if you have S1's)

S2's require Spacers behind their OEM bracket as shown below (Fig 5). You will use 2 Washers/Spacers behind each bracket. These spacers are stainless steel.

You will notice the direction the OEM Baja brackets go on the S2 lights in Figures 6, 7 and 8. Notice the arch goes UP and the mount holes are at the bottom of the light.

Figure 5:

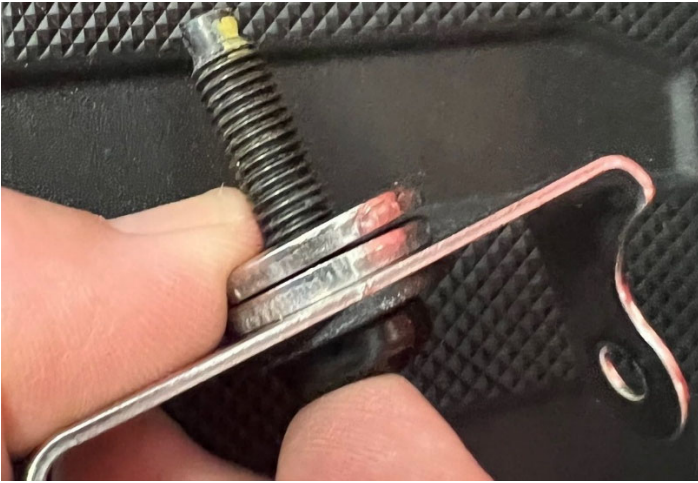


Figure 6:



Figure 7:



Figure 8:



Next, run your light wires through the hole and behind the hitch & bumper as seen in figures 9 and 10.

Figure 9:

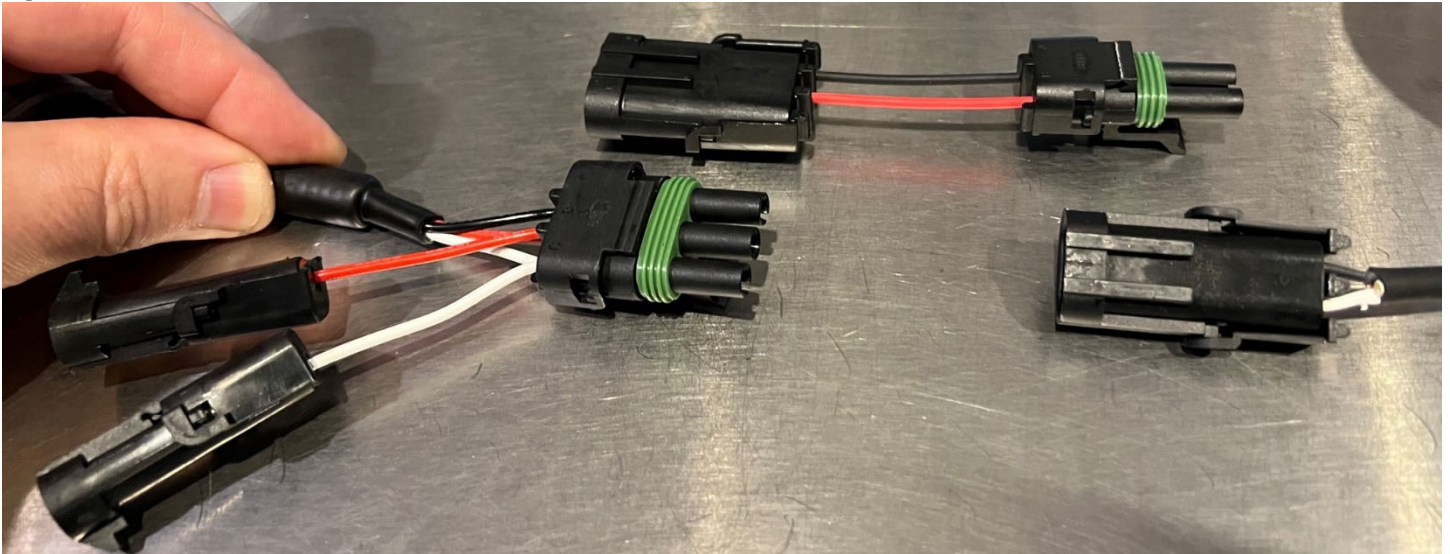


Figure 10:



The Adapters will plug into the lights to match the harnesses in fig 11. Notice the 2 single ports coming off of the one side (Driver Side) of the rear harness? That is where the tail light adapter will plug in if chosen. Otherwise, ignore them.

Fig 11:



Next run your harness. **THIS IS IMPORTANT.** Don't zip tie anything before it is run and connected.

If you have the short harness, it's simple to just connect each end to each light with the adapters shown in figure 11, and the tail light adapter on the last page. The only thing you need to reference here before skipping to the last page are the ground loop procedures in figures 12-14 below and the paragraph above that. If you have the long harness, keep going.

The Switch wires are on the PASSENGER side under the hood on the fire wall. The LONG harness (if selected) **MUST** be run along the PASSENGER side frame rail. The 2nd longest harness end will be connected on the drivers side light. Then go over to the passenger side light with the very short end. Then the LONG run will go all the way up the passenger side to the engine bay. Most prefer to run it through the inside of the frame rail (Fig 15 & 16) . It's pretty easy to push through and stick something in a hole to lift it if it gets stuck along the way.

Below in FIG 12, this is for the 17-20 models, you will notice on the Passenger side, behind the hitch. You will remove the bolt on the from the inner frame that grounds a wire already and put it through the ground loop here as well. If it's a Gen 3, you will find a different bolt to ground it. On gen 3, there are some bolts near the exhaust hangers shown in Figures 13 & 14. Any clean bolt will work for ground. If it isn't clean, get a wire brush and clean the surface where the bolt goes. It is important to connect your lights to the harness before tying it down so you have enough slack!

Fig 12:



Fig 13:

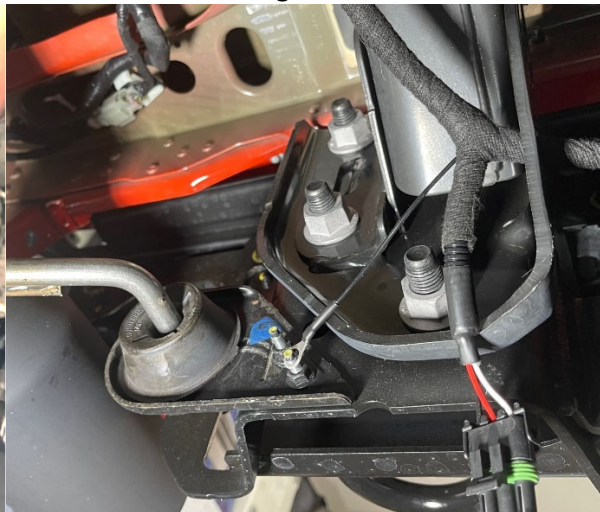


Fig 14:



In Figure 15, you can see one of many holes in the frame rail at the back where you can insert the long end of the harness and push it forward. In figure 16, you can see a hole in the frame at the passenger front wheel well where you can bring the harness out, then slide it up behind the plastic inner wheel well liner to the fire wall. Be sure it never rests on anything hot like the engine, transmission or exhaust! You can also run along the outside of the frame rail if you prefer. Figure 17 shows the harness run up behind the inner wheel liner. Figure 18 is coming out at the fire wall.

Fig 15:



Fig 16:



Figure 17:



Figure 18:

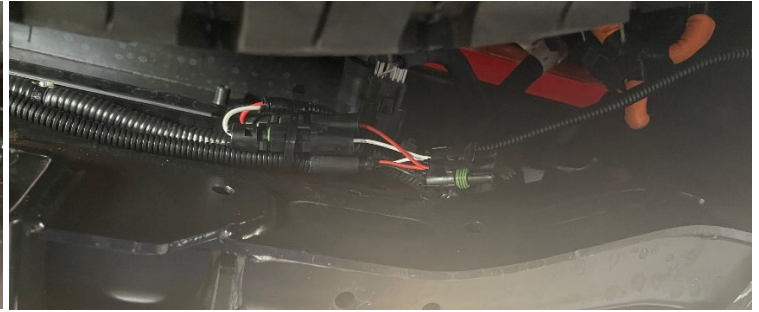


Next zip up the loose wires behind the bumper, and along the frame rail and engine bay. You can always find the existing wires harnesses on the truck & secure it to them as well as you go along. Be sure as you go, your harness isn't between any moving or flexing parts and not touching anything that will get hot! (Fig 17-18)

Figure 17:



Figure 18:



If you have a Gen 2 Raptor, the switch wires are at the fire wall by the large PCM (Computer) plugs. There are 2 bundles and both are the same color. However one has power, the other does not. Pay attention before you install your connectors. Generally the power set is closest to the fender. You may want to get a test light. Or simply touch the bare wire to the pin in the connector on your harness with the switch on to be sure you have power set. You don't want to waste your connectors on the dead wire set. Gen 2 see Fig 19.

The Gen 3 Raptor also has 2 bundles of wires. They are located between the battery and headlight up front as shown in Fig 20 and 21. They may be very hard to find and it may or may not be easier to simply remove the battery and its tray the first time. The live set should be wrapped in red tape and the dead set in white tape.

The dead set in either case runs into the passenger side floor board. They are essentially extension cords to have switch power there if you connect the dead and live set together. There are ground bolts all over. You can ground the 17+ with the ground ring easily to a bolt on the fender well near the hood lift cylinder. The 21+ you can see many bolts near the aux wires in figures 20 and 21 below.

Figure 19:



Figure 20:



Figure 21:



For the Gen 2 Raptor (17-20) you should have a supplement owners manual (Small Packet) that says raptor with your main owners manual. It will tell you which switch wires are which colors. The colors changed year over year so reference that so you know what is what. On the gen 3 Raptor (21+) they eliminated the owners manual. Instead, the owners manual is built into your vehicles center dash screen. The pictures below are examples of a 21 model. 22 may be different so you may need to reference your trucks screen.

Fig 22:

IDENTIFYING THE AUXILIARY SWITCH WIRING

The relays are coded as follows:

Power Distribution Box	Wire Color	Underhood Pass Through	Wire Color	Passenger Footwell	Wire Size	Fuse
AUX 1	Violet/Green	AUX 1	Violet/Green	AUX 1	1.0 mm ²	10A
AUX 2	Green/Brown	AUX 2	Green/Brown	AUX 2	1.0 mm ²	15A
AUX 3	Green/Blue	AUX 3	Green/Blue	AUX 3	1.0 mm ²	15A
AUX 4	Brown	AUX 4	Brown	AUX 4	1.0 mm ²	10A
AUX 5	Blue/Orange	AUX 5	Blue/Orange	AUX 5	1.0 mm ²	5A
AUX 6	Yellow/Orange	AUX 6	Yellow/Orange	AUX 6	1.0 mm ²	5A

NOTE: Gen 2 - Switches 1-2 use 15 amp fuses. Switches 3-4 uses 10 amp fuses. Switches 5-6 use 5 amp fuses.

Gen 3, Switches 1 and 4 are reversed as far as amps. So Switches 2 and 4 uses a 15 amp fuse. Switches 1 and 3 uses 10 amp fuses. Switches 5-6 use 5 amp fuses.

Always be sure your amp max on your switch can handle the amp max of your light or you will blow your fuse. Generally the rear lights work fine on the 5 amp switches with the exception of full size Rigid D-Series Pro, Radiance Scene (Regular Radiance is fine) and Squadron Pro)

Connectors and wiring-

Our rear light kits come with either our FULL rear harness with or without tail light adapter, or short harness with tail light adapter. These all allow quick and easy connections. If you get our full length harness to switches, your black wire with ring for ground was discussed earlier. There are 2 wires that come out at your switch wires. A white, and a red. The red wire is for the main light power. The white wire is ONLY for the red backlight in certain lights. Such as the Rigid SRL, Radiance/Scene or Diode Dynamics. If you are installing a Baja S1 or S2, there is NOT a backlight and you don't connect the white wire in the engine bay to ANYTHING.

Fig 23:



Installing the tail light adapter (if selected)

There are 2 bolts on the inner side with the tail gate folded down (fig 24). When you remove those, your tail light will not fall out. There are 2 clip pegs that hold it in place. From here, you will grasp the tail light with both hands and wiggle and pull back away from the truck and slightly out away from the truck and it will pop out. You will unplug it and disconnect the connector. Then, in figure 24, you should see how the adapter plugs into the OEM connector. You then plug it back into the tail light, drop the adapter cord down the hole, behind the bumper and reinstall the tail light.

From there, you can connect the red wire with connector to the red wire port on your short or long harness (fig 26) and the same with the white wire on the adapter to the white on the short or long harness. Again, the white wire is for the parking/marker light power for red backlights. It does nothing for lights that don't have the red backlight.

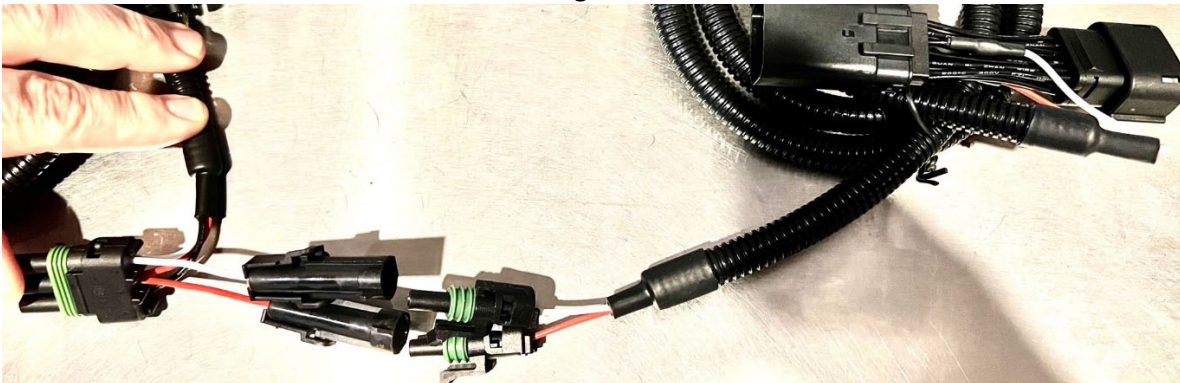
Fig 24:



Fig 25:



Fig 26:



Installing connectors on your switch wires

PAY VERY CLOSE ATTENTION TO THESE DIRECTIONS! The pins are **SPECIFIC** for each connector.

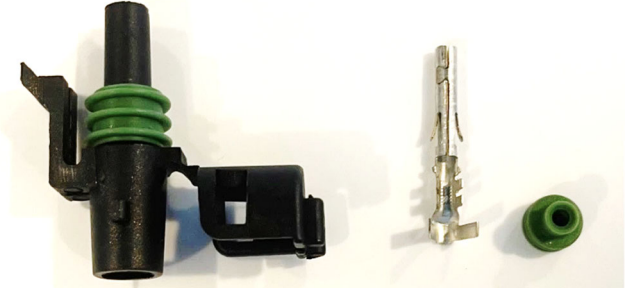
These connectors and pins go on the **LIGHTS** bare wires.
(You won't use these for lights that have adapters)

Pointed Pins on these!!!



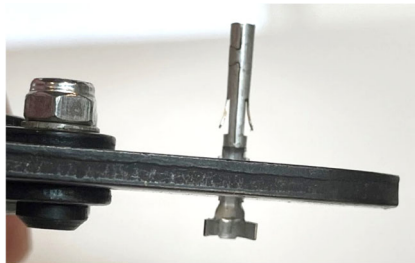
These go on the **SWITCH WIRES**, on the truck.
(You will use these in any case)

Tubular open end pins on these!!!



INSTALLATION OF TERMINALS AND PINS.

Use Crimping Pliers to crimp pins on wires (Don't use generic pliers). Be sure to strip off insulation on wire so you crimp OVER the wire, not the insulation. In the below left/middle photo, you crimp over the BARE WIRE in the center where the tabs are. You slide the rubber seal (Shown below) on the wire before crimping the pin on the wire. Then crimp the outer wings over it. **DO NOT INSERT THE BARE WIRE INTO THE PIN TUBE!** The Wings on the PIN are to be crimped on bare wire like a staple. It won't get connection if you put the wire in the tube and crimp on the insulation



If you need crimpers and don't know what to get,
here is a QR Code for a cheap set on Amazon (**Right QR Code**)



If you mess up.

You will need a PIN RELEASE TOOL. To the **left is a QR Code**
For a CHEAP set on Amazon. These are only examples for
your convenience.

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If you are unfamiliar with how to use these QR codes, you simply open the camera on your phone like you are going to take a photo. Aim it at the code and focus. A window will pop up with a link. You touch it, it will take you there.