



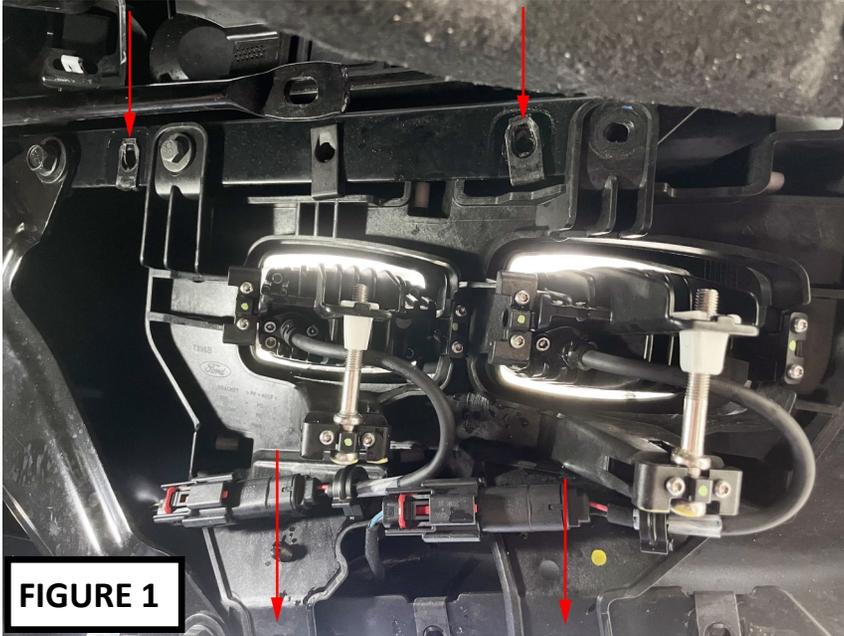
## FOG LIGHT KIT (2021+ FORD RAPTOR)



### KIT CONTENTS:

- (2) STAINLESS STEEL BRACKETS (DRIVER & PASSENGER)
- (1) INSTRUCTIONS
- (2) FACTORY FOG LIGHT PIGTAILS

# FOG LIGHT KIT (2021+ FORD RAPTOR)



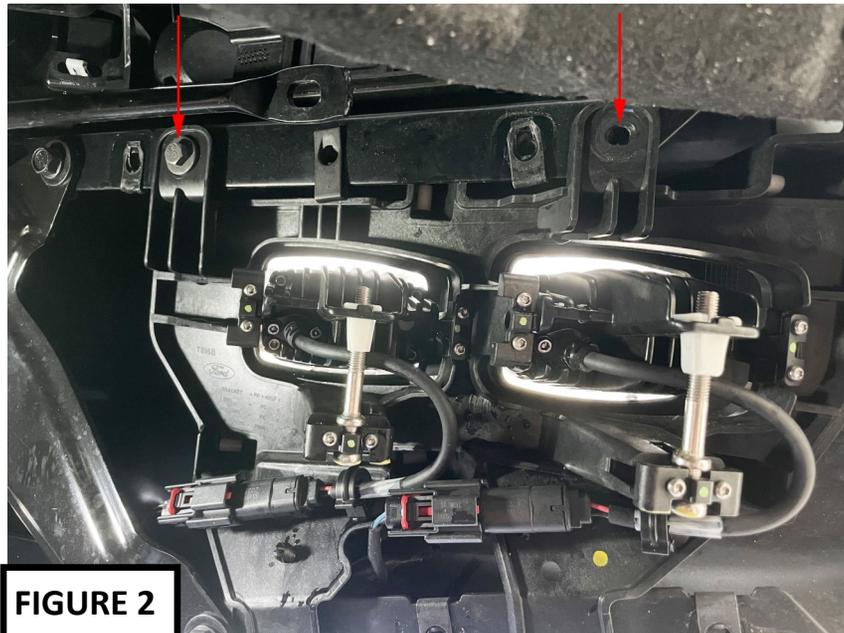
**FIGURE 1**

## 1. REMOVE FACTORY FOG LIGHTS COVER

If your truck has factory fog lights you'll want to remove the rear cover over the factory fog lights. There are 4 bolts that hold this cover on (Figure 1). If your truck does not have factory fogs, please skip to step 3.

## 2. REMOVE FACTORY FOG LIGHTS

Disconnect the factory lights. To do this pull back on the red clip to unlock the connector, press the release button on the connector and pull apart. Do this for both fog lights on each side of the truck. Once disconnected you can remove the top 2 bolts (Figure 2) which hold the factory fog light assembly to the truck (the bottom 2 bolts were already removed in Step 1). You may also need to remove the top center bolt that holds the factory support arm to the front bumper (move this out of your way, you'll re-connect this later).



**FIGURE 2**

## 3. INSTALL LIGHTS ON SMALL BRACKETS

Each pair of lights will include smaller brackets (from their respected manufacturer). Following the light manufacturer's instructions, mount your lights to the smaller brackets. These smaller brackets hold the light to the KR Off-Road brackets.

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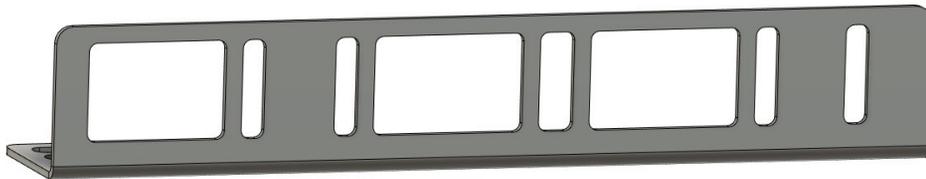
## 4. MOUNT LIGHTS TO KR OFF-ROAD BRACKET

You'll now mount your lights to the KR Off-Road brackets. Use the supplied hardware that came with your lights. There are numerous ways to mount your lights (by design) so you'll want to experiment with what works best for you. Make sure whichever channel on the bracket you use, allows for the up/down rotation of the light (you don't want the light to hit the front of the bumper either). You'll also want to experiment with where you install the lights in relation to each other. Try as best as you can to create an equal distance between the lights. Tighten the lights to the bracket just enough that you can still slide the lights around but not loose enough where they slide freely. You'll tighten these all the way down later when you align the lights.

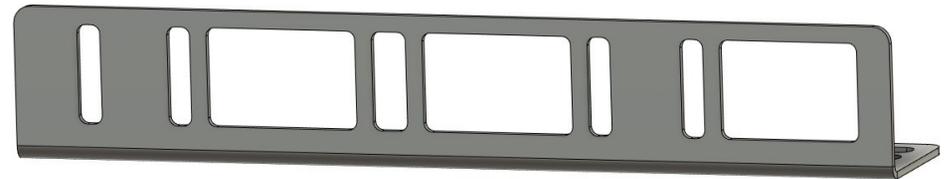
Each light has 2 bolts (1 on each side) that keep the light from tilting up/down. Tighten these just enough that you can still tilt the lights up/down once the entire assembly is installed on the truck. You'll tighten these all the way down later when you align the lights.

The lights will hang underneath the KR Off-Road bracket. The bracket will hang as pictured (Figure 3 on the next page).

**NOTE:** If using lock nuts (provided with the Baja Designs lights) it is recommended by the manufacturer to use some anti seize lubricant on the bolts to avoid the stainless bolt from binding on the lock nut.

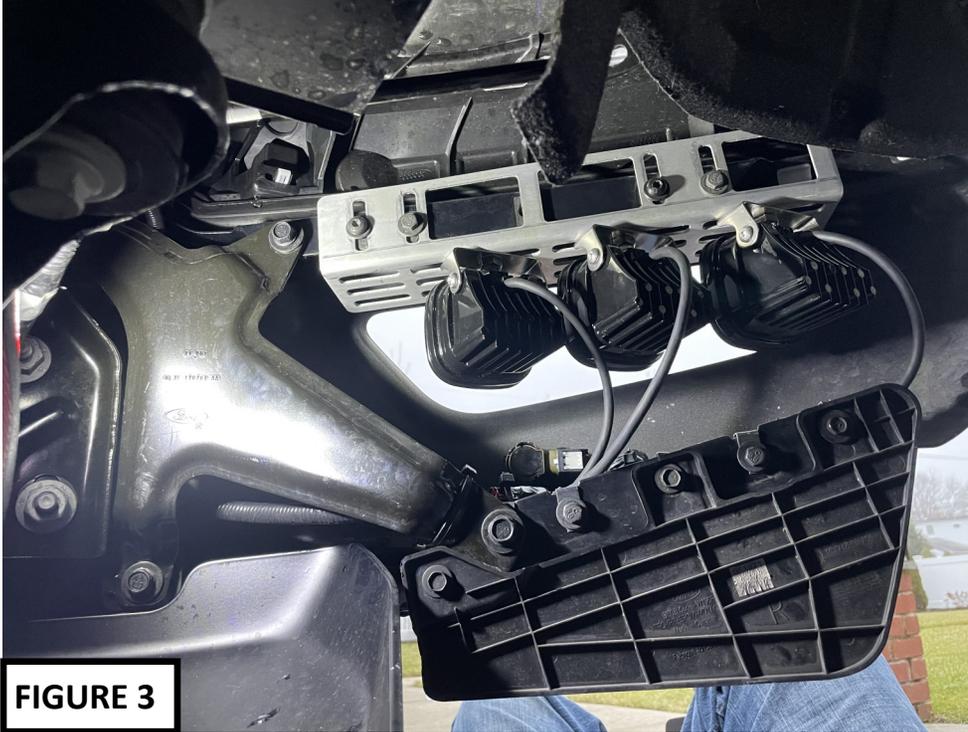


**DRIVER SIDE**



**PASSENGER SIDE**

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### 5. INSTALL ASSEMBLY INTO TRUCK

With the lights mounted to the KR Off-Road brackets, mount the entire assembly into the fog pocket opening on your truck. You will re-use the top 4 bolts that you removed in Step 1 & 2 (if your truck did not include factory fog lights, use the included nuts/bolts to mount the bracket to your truck, keeping in mind you will only need 2 nuts/bolts per side). At this point you can tighten the bolts just enough so that you are able to slide the entire assembly up into the opening to check for alignment on the lights. If you need to make adjustments lower the assembly and loosen/tighten the bolts on the lights to evenly space the lights out/align them as needed. Once everything is aligned you can tighten the bolts securing the bracket to the bumper. It's recommended to re-install the bottom 2 bolts in case you need them in the future. Re-attach the support bar (if necessary) as well.

### 6. CONNECT WIRING HARNESS

If included in your kit, route your harness to your lights and plug in the connectors. Your harness may be labeled (A, B, C) to help you identify which pairs of lights connect together. Match the pairs to each other (inside together, outside together, center together). Route your wire harness as you see fit through the vehicle. The most popular method is to route the harness over the skid plate and place a zip tie on the drivers side and passenger side to keep the harness from moving. Then route the other end of the harness up past the headlight and into the engine bay. Finally route the harness to your upfitters (or switch system) and connect the wires according to the diagram on the next page.

Please note, that there may be 3 or 4 power leads for your lights. In the case of Baja Designs lights, there will be 3 power leads (A/B/C) and a ground wire. In the case of Diode Dynamics or Rigid Industries Radiance you may have 4 power leads (A/B/C/BL). The 4th wire is your back-light control wire. When this control wire is powered the back-light feature of your lights will activate.

You may have extra leads on your harness depending on the kit you have. We recommend placing tape over the extra connectors should you decide to use them later.

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## 7. UPFITTER SWITCH WIRING

You will find two sets of wires inside your engine bay (behind the battery tray) for your upfitters. You may find it easier to access these wires by removing the battery completely. One set are **hot** (Figure 4, labeled A which has a red spot tape mark) while the other side are passthrough wires (Figure 4, labeled B which has a white spot tape mark) which go into the cabin for future use. The **hot** set are the wires you want to connect to.

You'll want to strip back a portion of the desired upfitter wire and crimp it onto the desired wire connector on the fog light harness.

The ground cable can be secured to a grounding point within the engine bay (there are various nuts you can utilize).

Refer to the chart on the following page to determine the amperage loads for each upfitter.

If your truck is equipped with factory fog lights and you'd like to utilize the existing fog switch for 1 pair of lights, you'll use the included pigtails. One side will connect to one of your lights and the other side will connect to the factory fog light wiring. The 2nd factory connector is actually the connection for Auxiliary Switch #1. Ford has moved this upfitter wire to the fog opening (as it controlled the 2nd pair of factory fog lights). Apply take over this connector for future use. A connector with bare wires is available (sold separately) should you wish to use this Auxiliary Switch #1 in the future without having to cut the factory connector off.

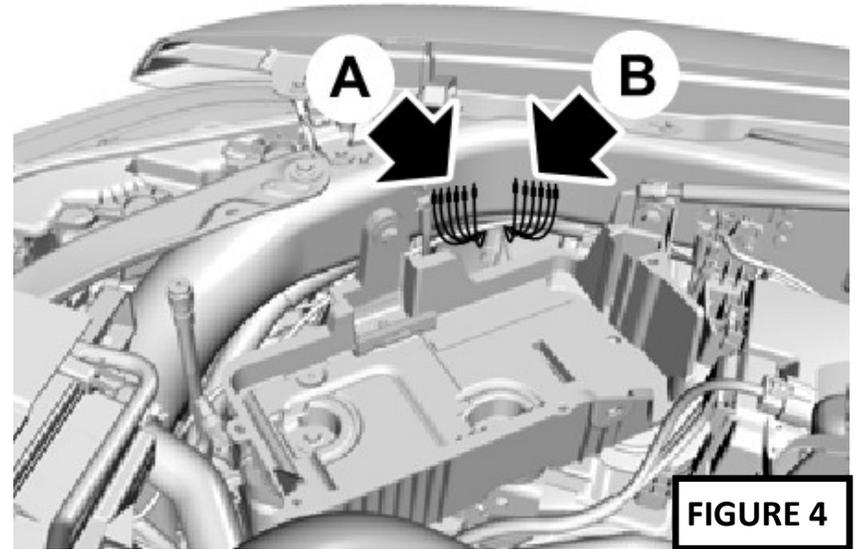


FIGURE 4



# FOG LIGHT KIT (2021+ FORD RAPTOR)

<u>SWITCH</u>	<u>MAX AMPERAGE</u>	<u>WIRE COLOR</u>
Aux 1	10 Amp	Violet/Green
Aux 2	15 Amp	Green/Brown
Aux 3	15 Amp	Green/Blue
Aux 4	10 Amp	Brown
Aux 5	5 Amp	Blue/Orange
Aux 6	5 Amp	Yellow/Orange

## DO NOT EXCEED THE MAXIMUM AMPERAGE LOADS FOR AN UPFITTER

Baja Designs S2 Sport (Pair): 1.8 Amps Max

Baja Designs S2 Pro (Pair): 3.32 Amps Max

Baja Designs Squadron Sport (Pair): 4.0 Amps Max

Baja Designs Squadron Pro/Racer (Pair): 6.66 Amps Max

Diode Dynamics SS3 Sport (Pairs): 2.2 Amps Max

Diode Dynamics SS3 Pro (Pairs): 5.4 Amps Max

Diode Dynamics SS3 Max (Pairs): 6 Amps Max

Diode Dynamics SSC2 Sport (Pairs): 1.2 Amps Max (1.2 Amps Max for Back Light)

Diode Dynamics SSC2 Pro (Pairs): 4 Amps Max (1.2 Amps Max for Back Light)

Morimoto 4Banger NCS (Pair): 3 Amps Max

Morimoto 4Banger HXB (Pair): 6.6 Amps Max

## 8. FINAL ALIGNMENT

Finally park your vehicle about 25' (on level ground) from a clear wall. Turn your headlights on and adjust your fog lights based on what works for your driving needs. Fog Lights and Wide Cornering should be aimed low and below the headlight's low beams to cover the ground in front of your vehicle. Driving & Combo lights should be centered with the headlight's low beams. Flood lights work best when slightly angled off to the side to light up ditches. Spot lights work best when aimed just above the headlight's low beams. Once everything is aligned, tighten all of the bolts down to prevent the lights from moving.