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**Congratulations on your purchase from Rigid Industries!
Here are the instructions for installation of your new Rigid Lights.**

-20" E-Series LED Light Bar with Cradle for Lower Grill Mount. (page
-Dually Fog Lights w/Brackets.

Wiring Instructions for Auxiliary switches

****Always disconnect battery before servicing any fuses or electrical system****

Your Raptor is equipped with four factory "Upfitter" auxiliary switches, we need to get power to them. There are two locations that need to be addressed, inside the glove box and in the engine compartment under the hood. We will start with the glove box.

Open the glove box normally and empty out. On the rear right and left sides there are tabs holding the box in place. Inside of the glove box, reach into the left and right inside of the box, pull in the sides where there is a tab holding it in place, the box should swing downward and towards the floor of the truck.



Glove box tab released.

Inside of the glove box area there is an access panel, pull towards you to remove it and expose the wiring under the dashboard. After removing the access panel you will need to locate two bundles of 4 wires each. These wires are what you will need to mate to gain switch control to your lights.



Wiring bundles after access panel is removed.

The switches will be wired as follows:

- Aux switch 1 - 20" Lower grill LED Light(mate red to yellow)
- Aux switch 2 - pair of inner fog lights(mate green to green w/black stripe)
- Aux switch 3 - pair of outer fog lights(mate blue to purple)

If you would like switches set up differently, swap wiring where needed. Refer to your owners manual if you have any questions.



Mated wiring using butt connectors to show detail

Insert access panel and close glove box door.(pulling in on the tabs

Engine Compartment Wiring

Open the hood of the truck and disconnect the battery, locate the Power Distribution Box(page 365 in your owners manual). Open the box and notice the fuses are numbered, and switch fuses are as follows.(page 326-329 in owners manual)

Switch#	location	Stock fuse	Fuse needed for LED Light
1	18	30amp	10amp for 20" E-Series
2	19	30amp	5amp for pair of Dually's
3	44	15amp	5amp for pair of Dually's
4	28	10amp	

Your lights will operate normally with the stock fuse configuration, we highly recommend changing to the proper fuse noted to protect your lights against potential damage from being over fused.

Locating the under-hood wiring for accessory hookup, It is on the passenger side of the truck above the wheel well. There are 4 wires, Blue, Red, Green and Purple. Refer to your owners manual if you need help locating these.

Red wire is for the 20" Lower Grill LED(switch 1)

Green wire is for pair of inner Dually fog lights(switch 2)

Blue wire is for pair of outer Dually fog lights(switch 3)

These are the hot wires that will be connecting your lights to your switches.

The ground loops from your wiring harness will be secured using provided self drilling TEK screw installed next to the battery on the passenger side inner fender. There are also stock bolts on the fender well that can be used if needed. Standard grounding principles apply.



Engine compartment wiring connected to light harness.

Installing lower grill 20" LED lights, or pairs of smaller lights.

The lower grill assembly is located under the license plate holes in the front bumper, there are 5 hex screws, use a 7/32 hex driver to remove these, pull plastic grill forward to remove and expose inner bumper frame.



Lower grill removed.

Trimming your bumperettes(mini bumpers on either side of the lower grill)

We have found it easiest to remove both bumperettes(pull outward firmly) for this stage, just keep in mind that re-installing them can be tricky. There are four tabs on the backside of each bumperette, they are pliable, bend the lower tabs outward and slide them under the base. Using a skinny screwdriver or small pick, pry the upper tabs out and into the slot on the top of the bumperette base. Modifying the bumperettes can be done without removing them, it just makes tightening the light into the cradle a little tricky.

To modify bumperettes drill 1/2" hole(per drawing) and cut out plastic to the edge.



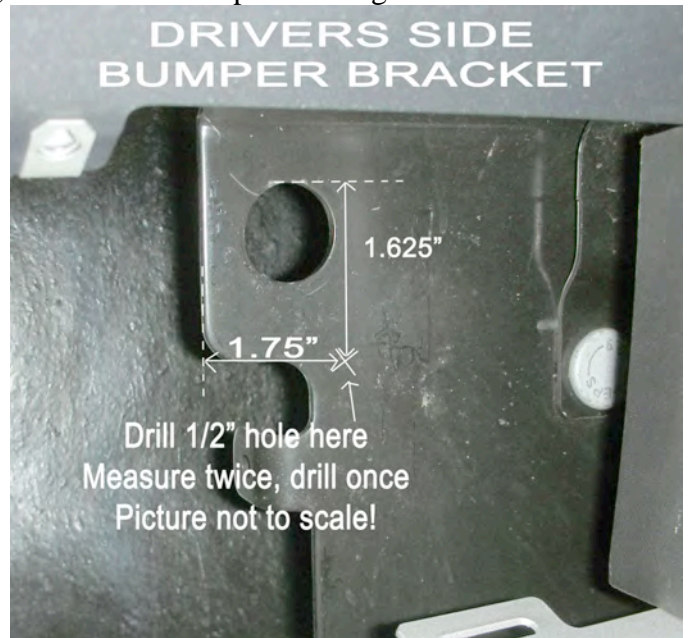
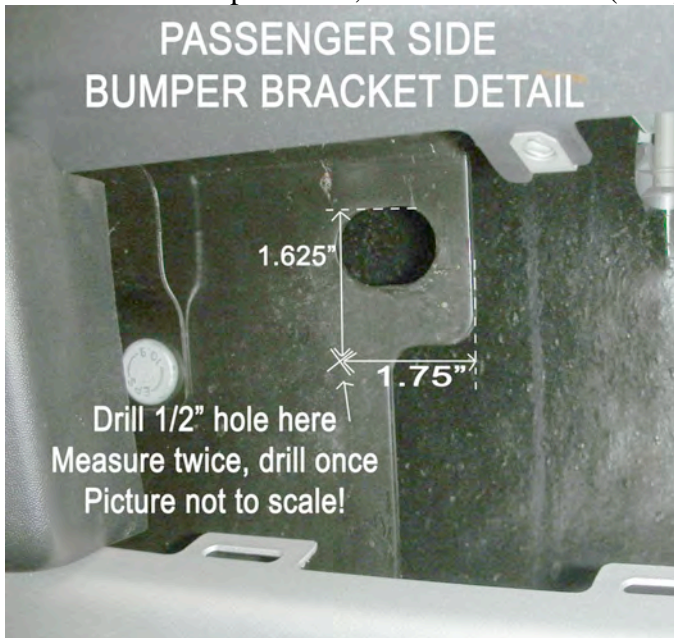
Hole drilled



Cutouts made

Installing the cradle for lower grill lights.

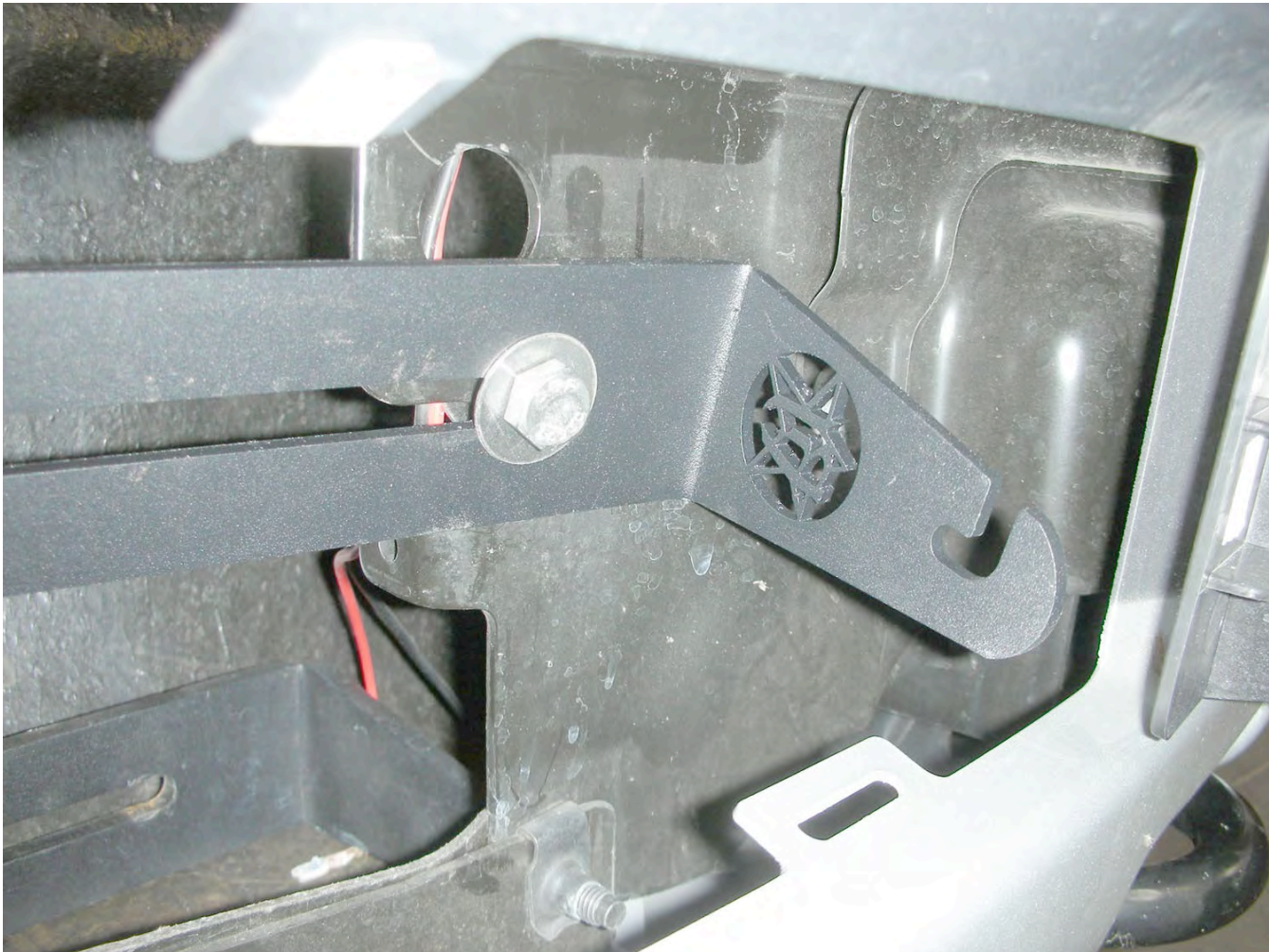
Locate inner bumper frame, mark and drill two(1/2")holes, one on each side per drawing.



LOWER BUMPER OPENING



Once you have the holes drilled for the cradle, with supplied carriage bolts inserted into slots in light cradle,(making sure slots for light are facing up) loosely bolt it into place using supplied washers and nylon lock nuts.



Attaching the light to the cradle(make sure slots in bracket are facing up)

Rigid Industries E-Series lights mount using a black Delrin spacer/bushing and nylon lock nut on the end mount studs. The Delrin provides needed shock resistance, while the nut holds it in place.

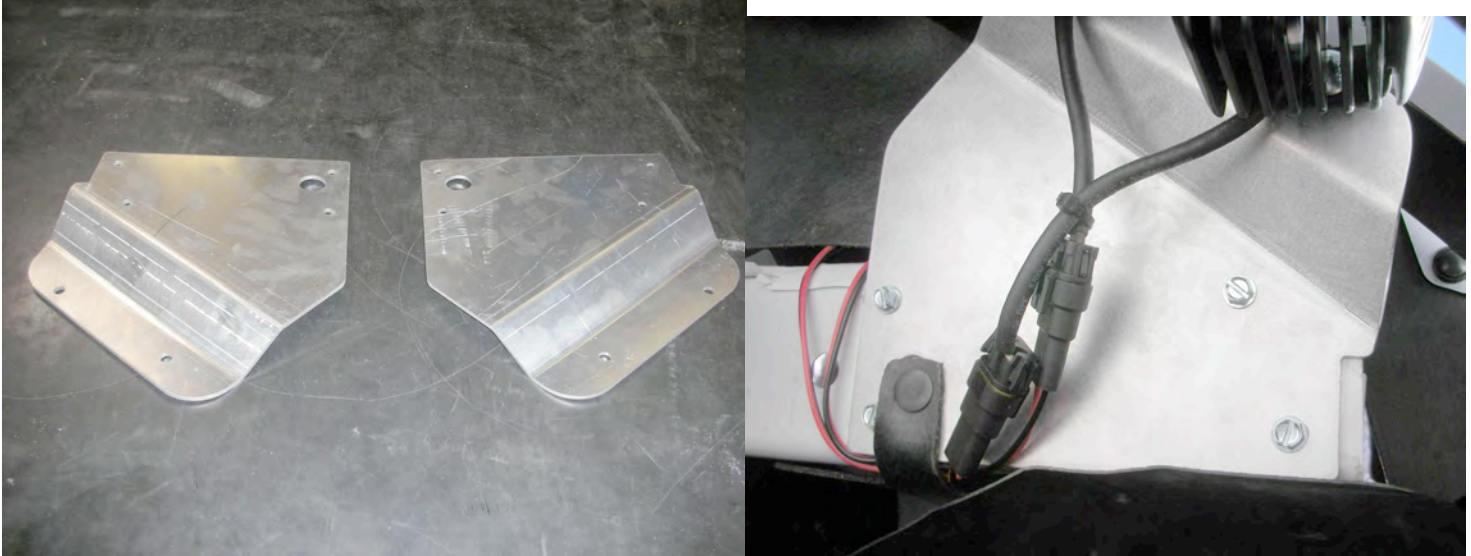
Insert supplied Delrin bushing onto end mount stud into endcap cavity of light, then loosely spin on nylon lock nut. Set light into cradle and tighten until light is snug in cradle. Center light/cradle assembly in grill opening and tighten cradle nylon lock nuts on backside of bumper frame. Make final adjustments, tighten end stud nylon lock nuts on light.



Light and Bumperettes installed

Installing Fog Lights/Brackets.

Locate the two aluminum fog light bracket plates.



Passenger

Driver

Picture shows non powder coated aluminum to show detail
Locating and drilling holes

Laying under passenger side of fog light opening, locate painted steel support beam, it should be painted the same color as your truck.

Line up flat side of rear of bracket with backside of support beam and slide it inboard against the step down on the beam. The forward edge of the bracket (stepped down section with two holes) should be lining your fog light opening. Mark the 4 holes and drill using a 3/16" drill bit.

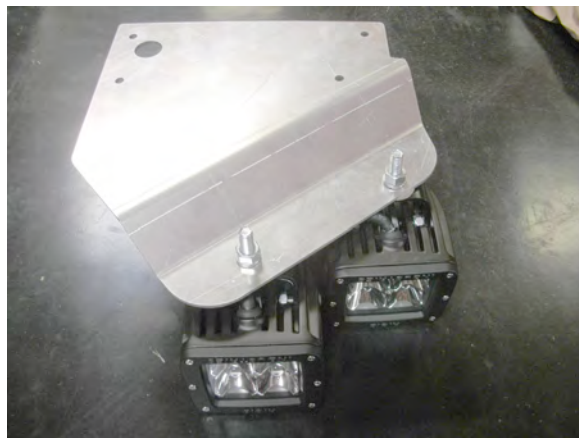
Bracket in correct position (do not mount brackets yet)

Repeat for driver side, remove black cap plug on beam, reinstall into larger hole in bracket after bracket is in place. Do not mount brackets yet, lights need to be installed onto them first.

Mounting Dually's to bracket. Noticing how brackets are mounted (stepped down section forward lining up with the fog opening) mount Dually lights on the bottom of the plate as they are suspended from the bracket. Tighten cradle screws (on side of each light) then tighten main cradle stud onto the bracket with supplied hardware. You will need to adjust these to line them up, hold the bracket in place on the vehicle to get an idea of where you want them placed. Take the time here as it gets more difficult once mounted on the truck.



Dually-Unmounted



Drivers Side with lights mounted.

Once adjusted hold bracket in place and install four supplied hex head screws per bracket with a 3/8" drive socket.

Installing the wiring harnesses

Lower Grill lights

With the truck prewired for accessories this truck is fairly simple to wire.

The 20" E-Series harness(hot wire is red) is soldered or if you prefer crimped with a butt connector to the red hot wire under the hood by the wheel well, the black wire is grounded with the supplied tek screw included(or grouped with the other grounds if installing fog light kit) Fish the plug end(male weatherpak connector) down behind the headlight bucket and over to the lower grill area, plug into the light.

Fog Lights

Repeat above. for inner fog lights, connect red wire to green wire on truck, for outer fog lights connect red wire to blue wire on truck. Fish the male connectors down and over to connect to female connectors on fog lights.

Make sure all of your grounds are tied together and grounded. Check that all hardware is tight.

Installing Upper grill 40" LED light

The upper grill light mounts behind the existing main grill. Open the hood and notice the two black bumpers, one on either side of the lower grill opening. Behind those bumpers are two Torx head screws, remove the screws, and remove the nut clips that the bolts thread into. This is where you will through-bolt the new L-brackets that attach the light to the truck. The L-brackets and hardware kit are included with your 40" light. Install the L-brackets onto the light using the supplied delrin bushing and 1/4-20 nylon lock nut. Then install the through bolt into the L-bracket on either side of the opening. Tighten all hardware. Wire according to wiring instructions, a 15amp fuse is recommended for the 40" E-Series.



**Thank you again for your purchase from Rigid Industries
480.655.0100**



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