

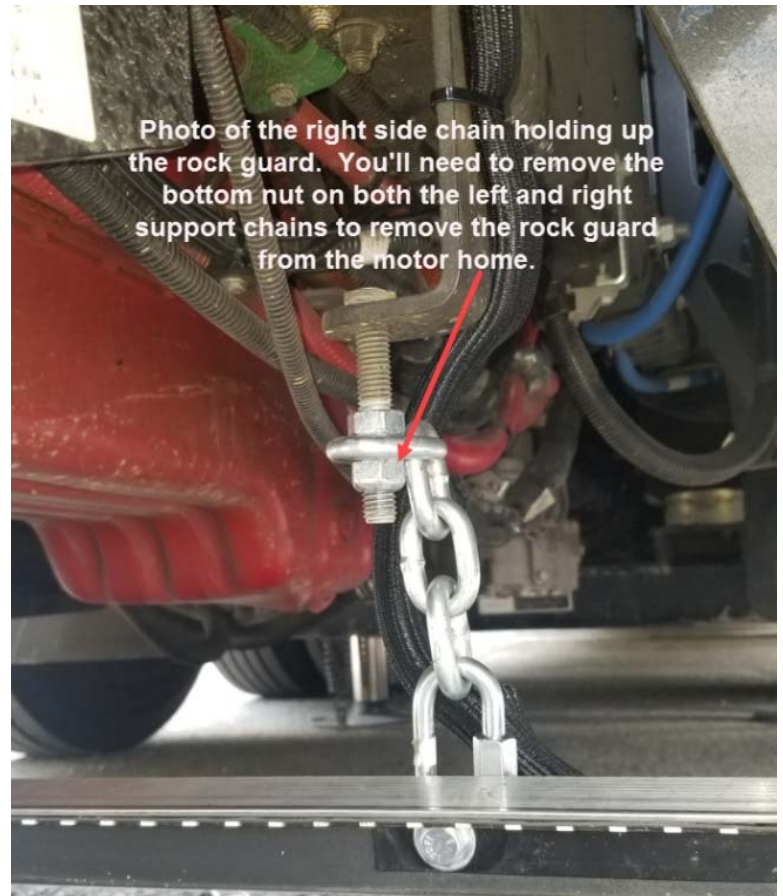
BOOGIE LIGHTS® ROCK GUARD LIGHT KIT INSTALLATION INFORMATION

Typical installation time for the Brake/Tail/Turn Light Bar is about 3 hours from start to finish. The Under-Glow interface will add about another hour if you're doing both. The Under-Glow interface needs to be wired into your existing Boogey Lights Under-Glow light system.

Installation supplies include the following items:

- 2 – 3M Adhesion Primer Tubes
- 2 – Alcohol Wipes
- 10 – Crimp on wire connectors
- 6 – Zip Tie mounts with Zip Ties
- 10 extra zip ties
- 2 – Chain links (may not be needed for all installations)

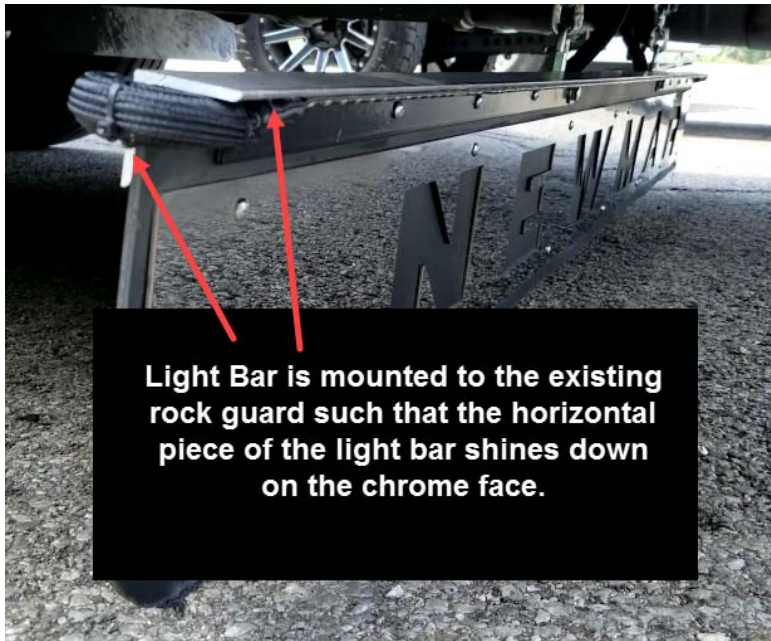
The first step is to remove the existing rock-guard from the motor home and place it on a table or other suitable work-surface. Most rock guards will be secured to the motor home by two chains. It's important to remove the chains too along with the rock guard itself. Remove the chains at the point at which they connect to the chassis; typically a bolt and nut configuration.



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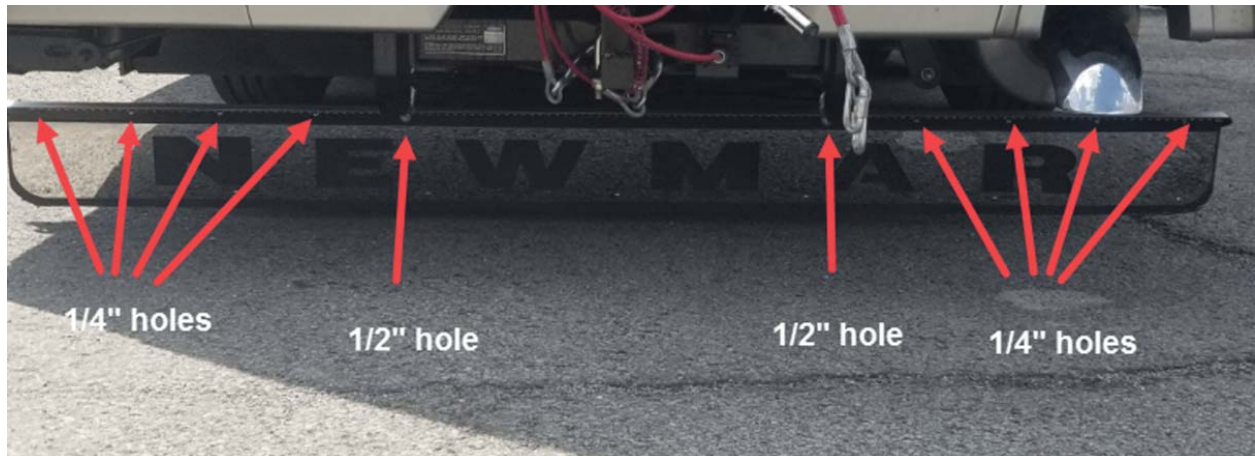


Light Bar is mounted to the existing rock guard such that the horizontal piece of the light bar shines down on the chrome face.

The Boogey Lights light bar angle mounts to the back of the rock guard with the LED strips facing down toward the front of the rock guard.

To do this, you'll need to remove the existing hardware that attaches the chain and support bars. For the NEWMAR Dutch Star, there are a total of 10 bolts. Two of them are where the chains attach to the rock guard. The remaining 8 are where the rigid support bars (2 of them) attach to the rock guard. There are two support bars on the front and two support bars on the rear of the rock guard. We will be reusing the two front support bars. The two rear support bars won't be needed since we'll have the Boogey Lights Light Bar running down the entire rear of the rock guard.

Here's a photo of the entire rock guard and the 10 bolt locations. You will need to remove all 10 of these bolts. The number of bolts on other models may vary but they'll be similar in concept.



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At this point it's a good idea to thoroughly clean the rock guard. Rock guards tend to get dirty from road grime. Also, the chrome can be polished too. The LEDs will shine brighter if it is.

Carefully lay the rock guard on top of the Boogey Lights Light Bar. Be careful to protect the LED strips and power leads from tension. Be sure to align the end of the Light Bar to the end of the rock guard. Also, make sure the rock guard is firmly pressed up against the top of the light bar. You're going to use the holes that are already in the rock guard as a template for the drill points in the Boogey Lights Light Bar angle. For the Newmar Dutch Star you'll need a ½" and a ¼" drill bit. The two points at which the chains attach to the rock guard require a ½" hole. The other 8 holes which connect the support bar to the rock guard are ¼".

CAUTION: When drilling the mounting holes in the Boogey Lights Light Bar, make sure the chuck of the drill DOES NOT touch the LED strips mounted to the perpendicular portion of the light bar. We strongly suggest using a long enough drill bit to avoid the potential of this occurring. The drill's chuck spinning drilling the holes will easily destroy the LED strips attached to that perpendicular portion of the light bar angle. Ask us how we know.

Once you have the mounting holes drilled in the Boogey Lights Light Bar you can reassemble the rock guard and tighten the bolts. For the Newmar Dutch Star we reused the front support bar to hold the rock guard to the Light Bar but we eliminated the rear support bar since the Boogey Lights Light Bar runs the entire length of the rock guard. If your rock guard has rear support bars, you can remove them too and just use the Boogey Lights Light Bar. It's up to you.

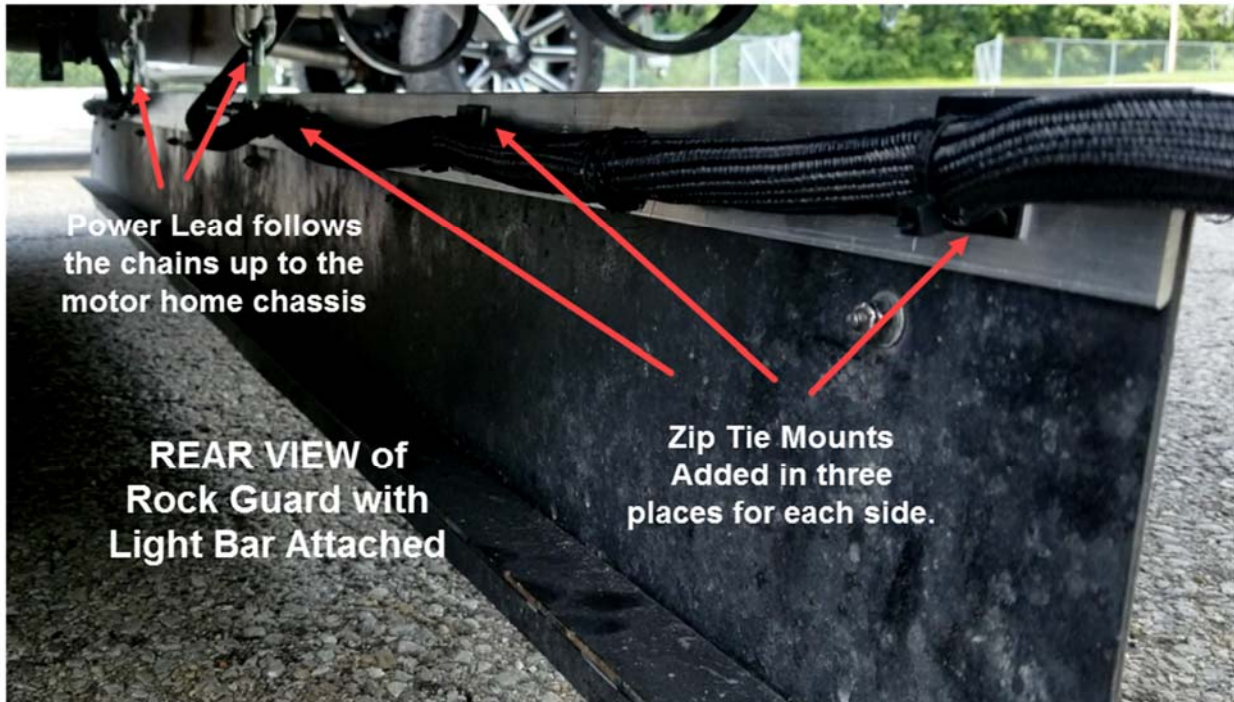
If you're installing our Light Bar with the Brake/Tail/Turn LED lights, you'll notice there are two power leads. One comes off the left side of the Light Bar (attaches to the left brake/tail/turn light cluster). The other comes off the right side of the Light Bar (attaches to the right brake/tail/turn light cluster). If you have the Under-Glow, there is only one power lead and it comes off the left side (attaches to the LED controller usually mounted at the front of the rv). In all cases, these power leads are in a protective wire loom which are wire tied to the back of the Light Bar itself. Because we cannot predict where the mounting holes will be on every model, four of the six zip tie mounts cannot be pre-attached to the light bar. You'll need to do this yourself. Be sure to prime the surface of the light bar using the included Alcohol wipes AND 3M Primer and then affix the zip tie mounts in appropriate locations on the back side of the light bar. Wipe the aluminum surface first with alcohol (needs to be free of oil, dirt, grease) and then prime it using the 3M Adhesion Primer (2 tubes included). This is an important step. Do NOT skip it. You want to make sure these LED power lead cables remain firmly attached to the Boogey Lights Light Bar.

Once you have the zip tie mounts affixed to the light bar, you can use the included zip ties to secure each power lead to the back of the light bar. Note that these power leads will follow the two mounting chains up from the back of the rock guard to the motor home chassis. See photo.

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Power Lead follows the chains up to the motor home chassis

REAR VIEW of Rock Guard with Light Bar Attached

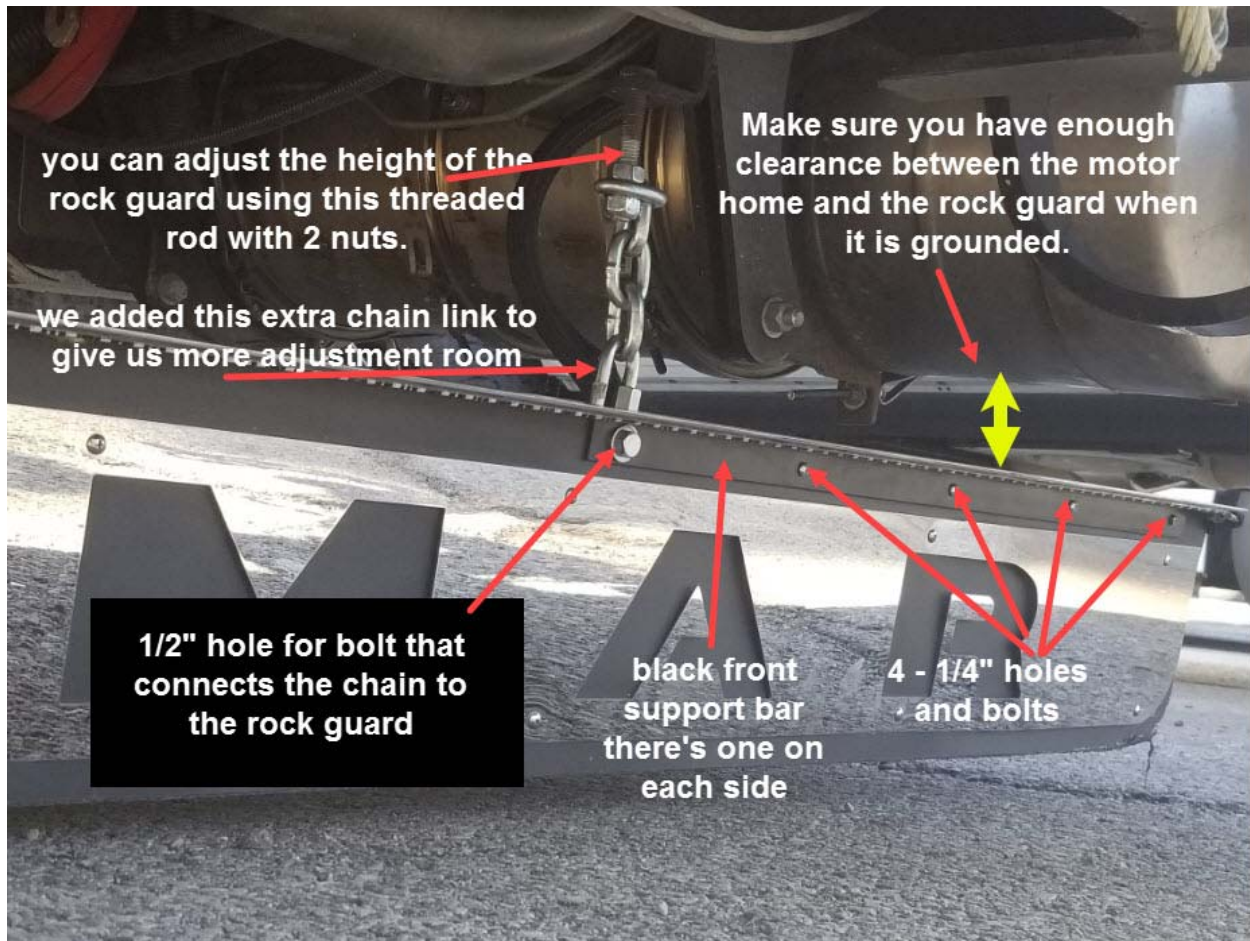
Zip Tie Mounts Added in three places for each side.

At this point you can reinstall the rock guard (now with the Boogey Lights Light Bar attached) to the motor home. This is where you may (or may not) require the use of those 2 extra chain links we include with the light kit. When you reconnect your rock guard to the motor home, take a close look at how the rock guard swings when grounded. **Be sure to observe how the rock guard behaves when swinging both ways (forward and reverse).** On the Newmar Dutch Star without the extra chain link the horizontal portion of the Boogey Lights Light Bar would hit the muffler (right side under the coach) when grounded (forward motion due to unlevel pavement). Doing so would either damage the Light Bar or the muffler or both. We had to lower the rock guard about one inch to get the additional clearance. Not all motor homes will be like this though. And, in many cases you might be able to adjust the height of the rock guard using the existing nut/bolt that attach the rock guard to the bottom of the motor home. Regardless of how you do it, it will be important to look at this carefully to make sure the rock guard with the Boogey Lights Light Bar attached can swing back and forth without damaging the light bar or any components on the bottom of the motor home. If you don't look at this closely, it won't take but one grounding of that rock guard for you to find out you didn't allow enough clearance between the rock guard and the bottom of the motor home. Just sayin'.

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Ok. Now that you have the rock guard and Boogey Lights Light Bar attached to the motor home, it's time to do the wiring. This is the fun part.

First, if you're wiring the Brake/Turn/Tail lights to the Light Bar, you'll need to run the power lead wires coming from the Boogey Lights Light Bar up to the light cluster on both the left and right sides of the motor home. Be sure to keep these wires away from extreme heat or other moving parts. We have provided additional zip ties for you to do this. If you're wiring the RGB Under-Glow lights, run that wire up to your Boogey Lights LED controller.

Tying into the motor-home brake, tail and turning indicators is straight forward. The Boogey Lights® Rock-Guard LED Light Bar has two RED LED strip power leads. Each LED power lead contains four wires: Black, Red, Green, Blue. The left side LED strip power lead connects to the motor home's left light cluster. The right side LED strip power lead connects to the motor home's right light cluster. Use the crimp-on connectors to make these connections. These light clusters are relatively easy to reach from the rear engine compartment. We recommend cutting the existing wires – be sure to give yourself enough room to work – and then reconnect them **ALONG WITH** the Boogey Lights Light Bar wires using the included crimp-on connectors. If necessary, seal the connections with electrical tape.

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Most vehicle manufacturers adhere to these common wire color designations. They're listed below. If you're in doubt, you can easily confirm them using a 12vdc volt meter. These are 12vdc lights.

MOTORHOME

WHITE = Ground
BROWN = Running
RED = Brake
YELLOW = LEFT TURN
GREEN = RIGHT TURN

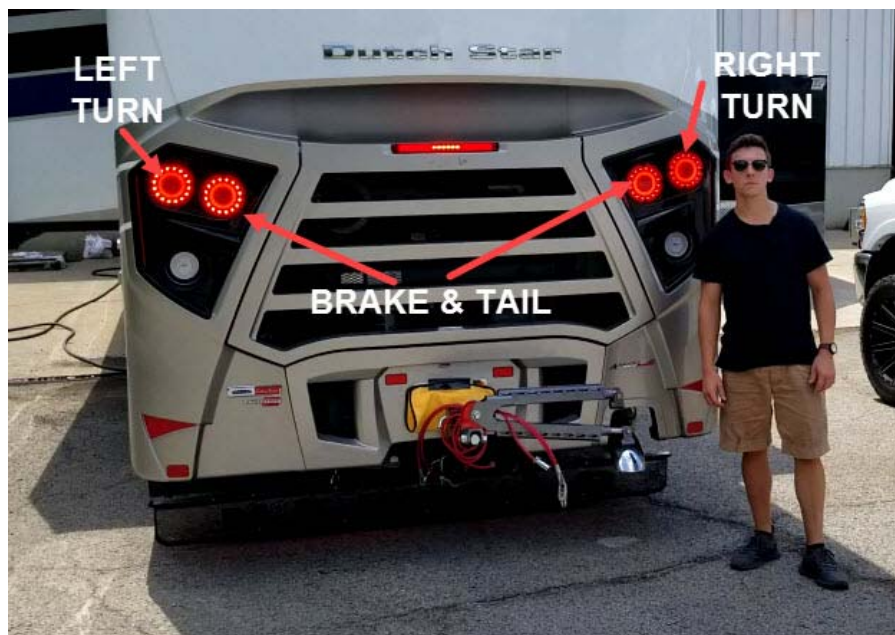
**BOOGIE LIGHTS
ROCK-GUARD LIGHT BAR**

Black = Ground
Green = Running
Red = Brake
Blue = Turn

MOTORHOME to ROCK-GUARD LIGHT BAR

WHITE = Black
BROWN = Green
RED = Red
YELLOW = Blue (left side LED strip)
GREEN = Blue (right side LED strip)

In the event your motor home doesn't have a separate brake light, connect the YELLOW and GREEN wires on the motor home turning indicators to the RED wire coming from the Rock-Guard Light Bar.



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