



**2013-2018 Ford Fusion BIG MOUTH  
LIT KIT Intake Installation Guide**

## Kit Contents (Full Kit)

Please review this entire document before attempting installation.

You will need basic hand tools and about 2 hours of installation time.

Please review the table below and make sure you have received the kit contents.

Kit Contents	Qty
#10-32 Countersunk Screws	2
Diode Dynamics RGBW Controller	1
Positive Cable w/ In-Line Fuse	1
Power Cable w/ Pigtail Connector	1
Switch	1
Switch Ground Cable w/ Pigtail Connector	1
8" Zip Ties	6
16" Zip Ties	1
Cable Clip	1
Assembled LIT KIT BIG MOUTH	1



## Kit Contents (LIT Flare Only)

Please review the table below and make sure you have received the kit contents.

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8" Zip Ties	6
16" Zip Ties	1
Cable Clips	1
Assembled LIT Flare	1



**If you already own the Velossa Tech GEN 4 Fusion BIG MOUTH, skip to slide 21 to see install and wiring instructions.**

## Recommended Tools

Flathead screwdriver  
or dental pick



3mm drive  
Allen wrench



8mm box wrench  
(ratcheting if possible)



Cut off wheel or flat head style  
wire cutters, either may work



**OR**



7mm, 8mm and  
10mm sockets  
and driver



## Stock Components Removal

Remove the clips and screws holding down the radiator cover. Use a flat head screwdriver or a dental pick.



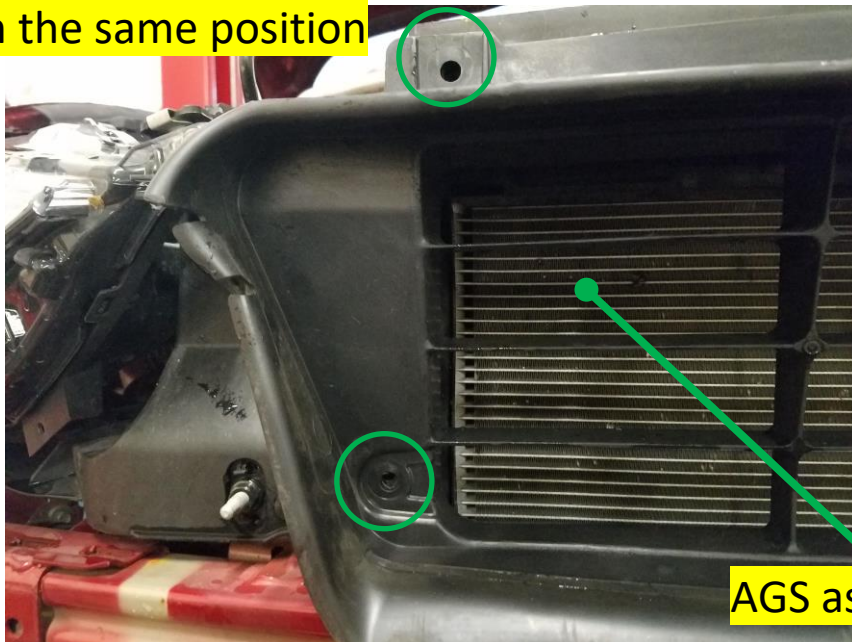
## AGS Removal

For best instruction on bumper removal, use YouTube videos or Forum guides to guide you on bumper removal.

Search the term “2017 Fusion Sport or Ford Fusion bumper removal”.

The AGS assembly will need to be removed prior to installation. The AGS system can be removed by unscrewing various fasteners and removing clips from both sides and underneath the assembly.

There are two more screws on the driver side in the same position



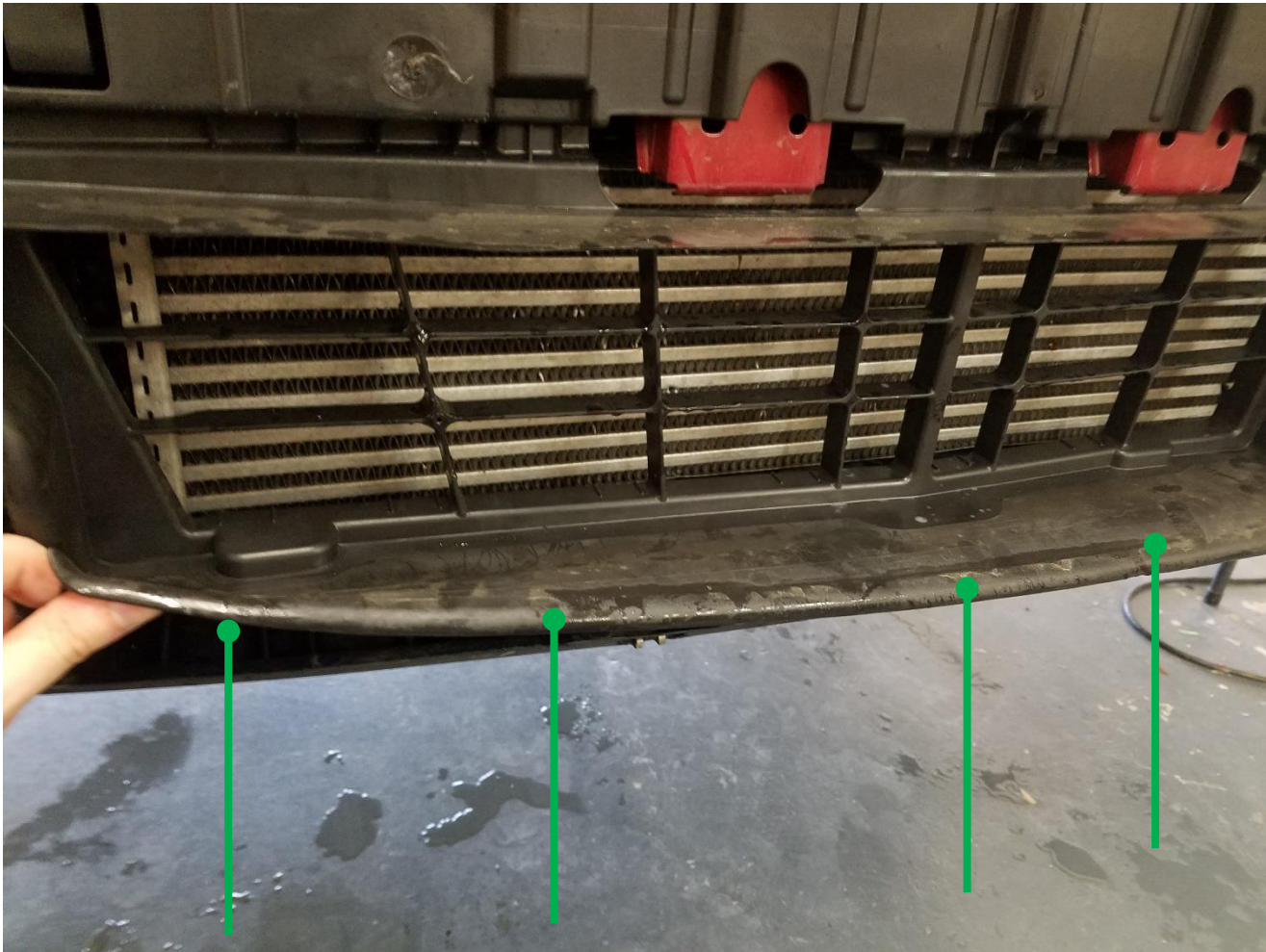
Remove the pull out clips from both sides



AGS assembly

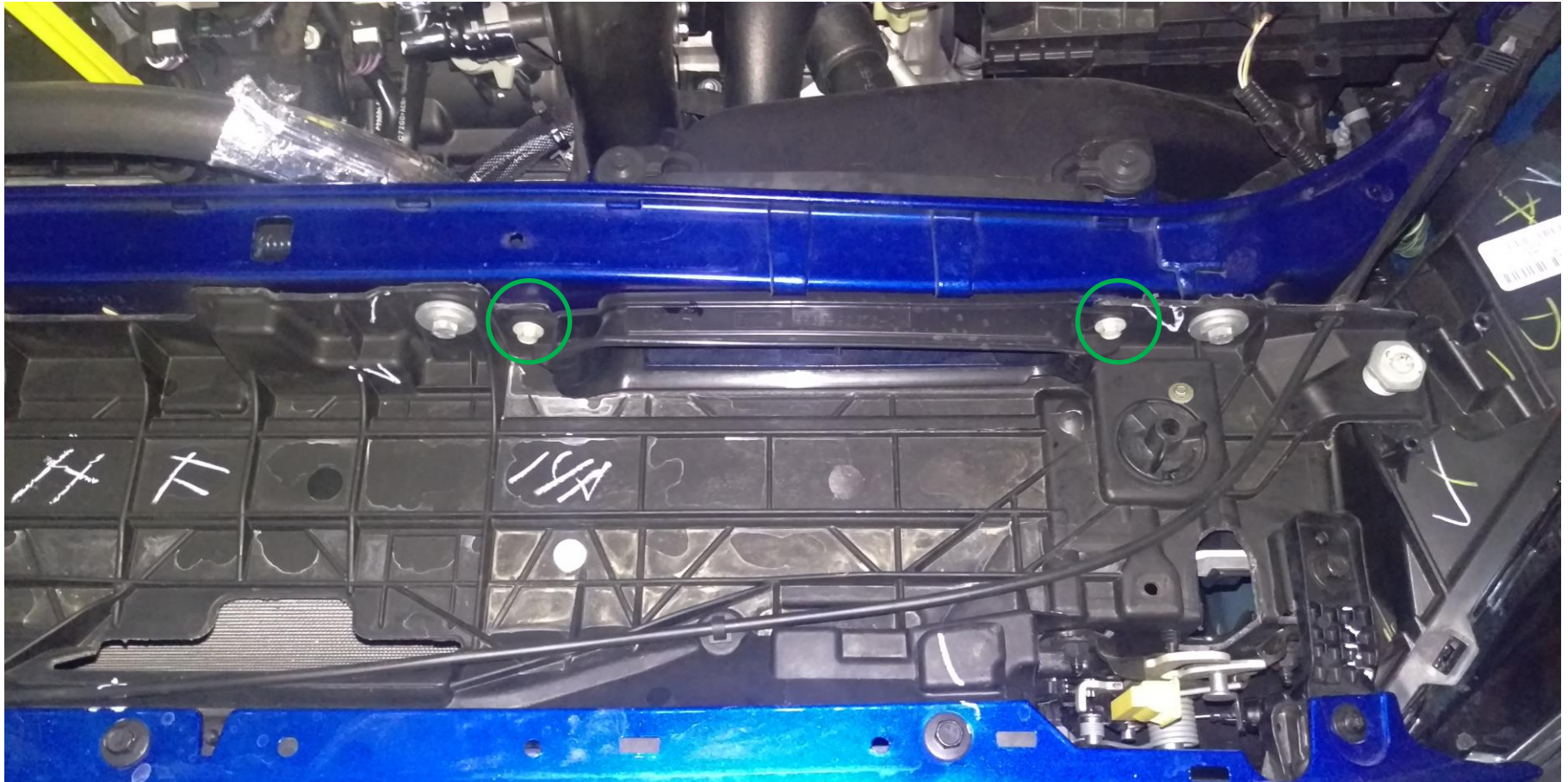
## AGS Removal

Underneath the AGS assembly flap are more fasteners, remove them.



## Stock Components Removal

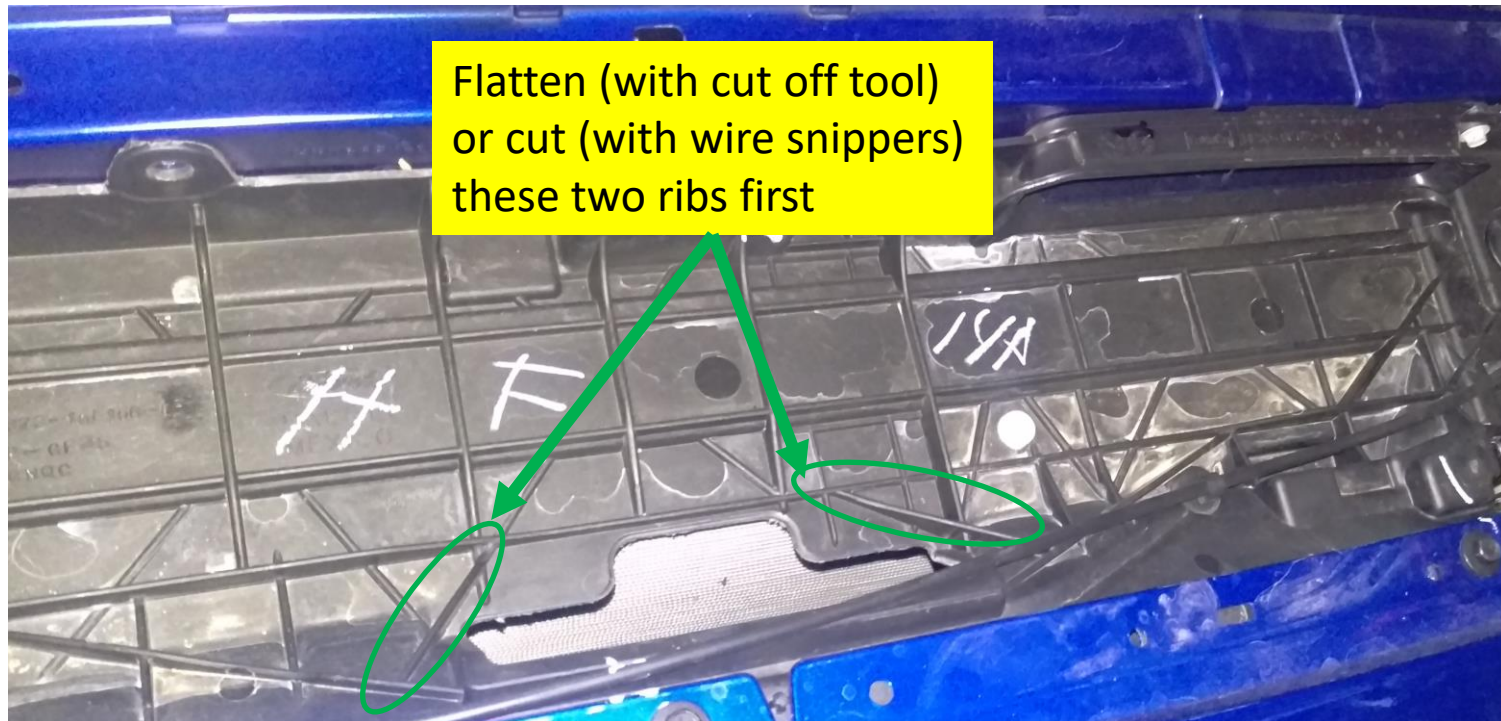
Remove the stock inlet tube by removing the fasteners here, using the 8mm box wrench. Do not discard these screws as they will be re-used for installation.





## Trimming

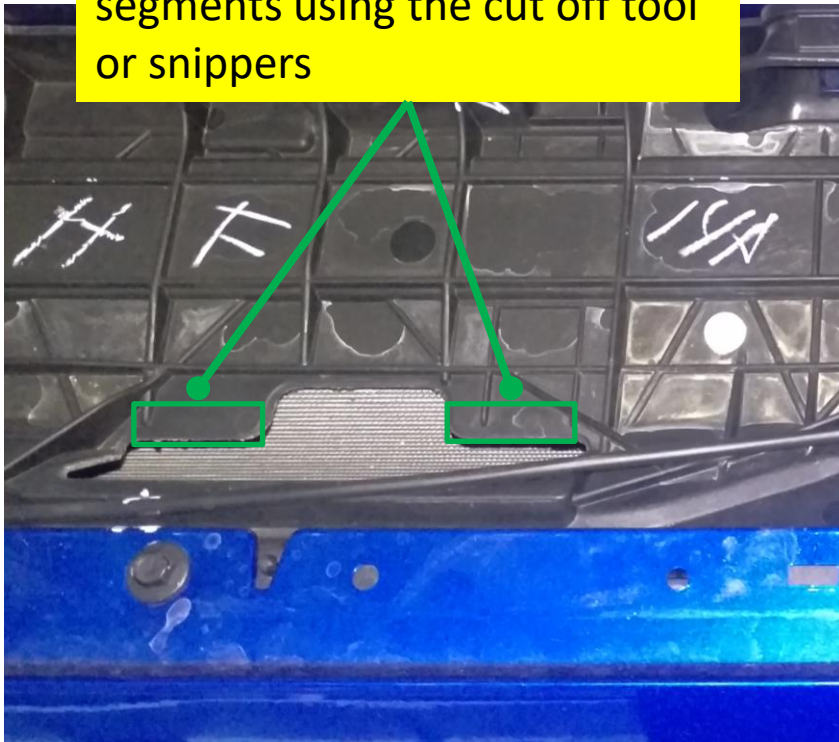
Trimming some of the ribs located on the radiator cover is required for proper fitment of the BIG MOUTH. It is best to use a Dremel or other cut off tool for this task, although the flat head snippers may work too. The ribs on top of the radiator support (we call this the egg-crate) must be shaved down in certain areas. The areas in the next few slides are highlighted to guide you.



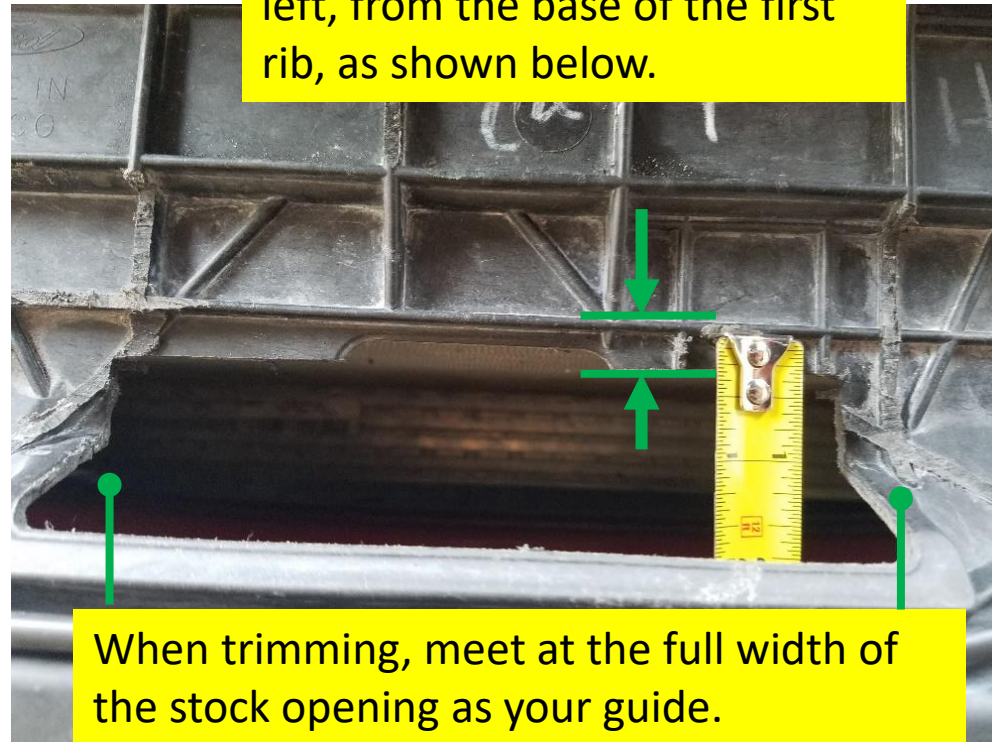
## Trimming

You will need to remove material from the stock opening, trim the green boxed out segments shown below.

Remove these rectangular segments using the cut off tool or snippers



There should be  $\frac{1}{4}$ " of material left, from the base of the first rib, as shown below.

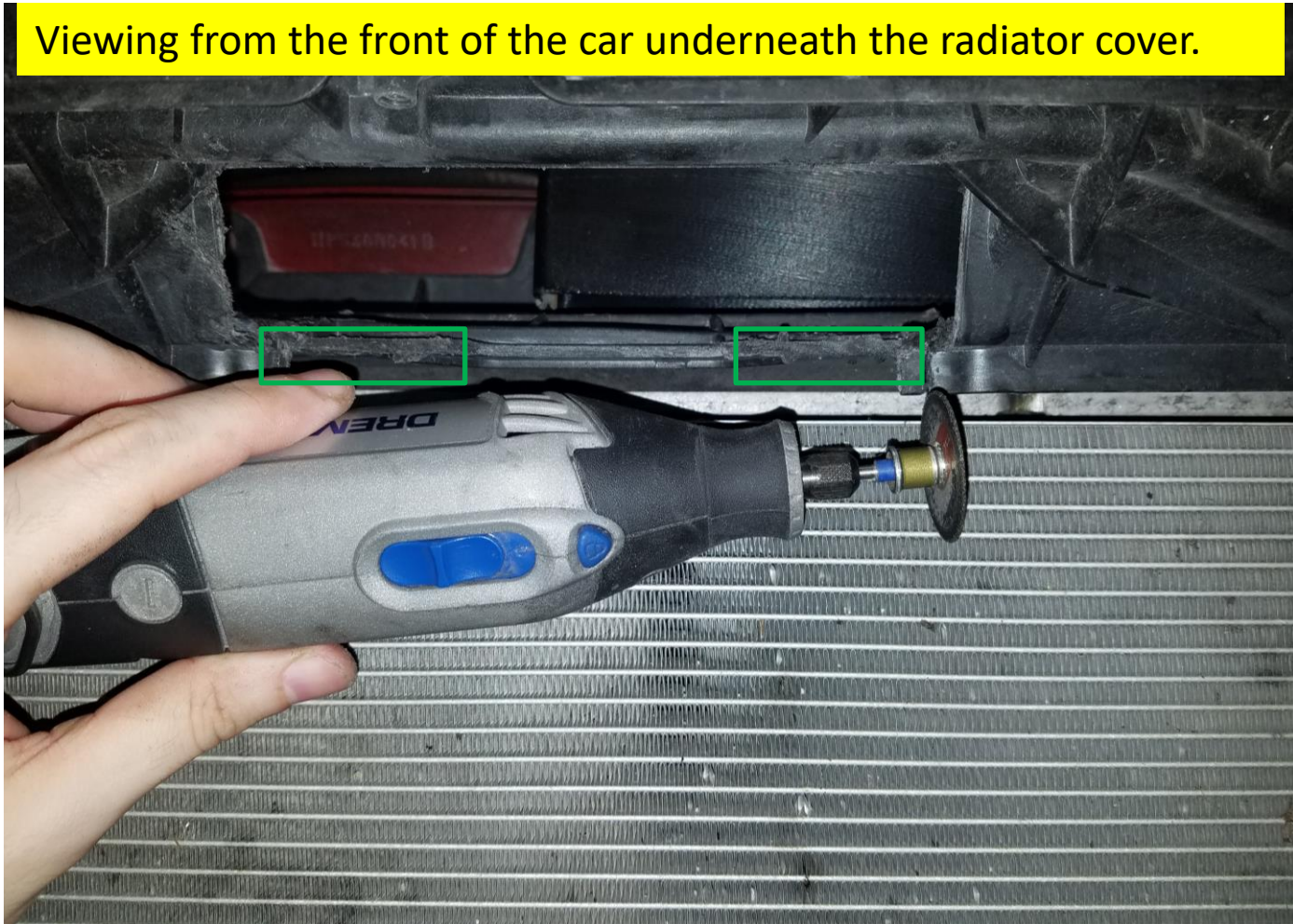


When trimming, meet at the full width of the stock opening as your guide.

## Trimming

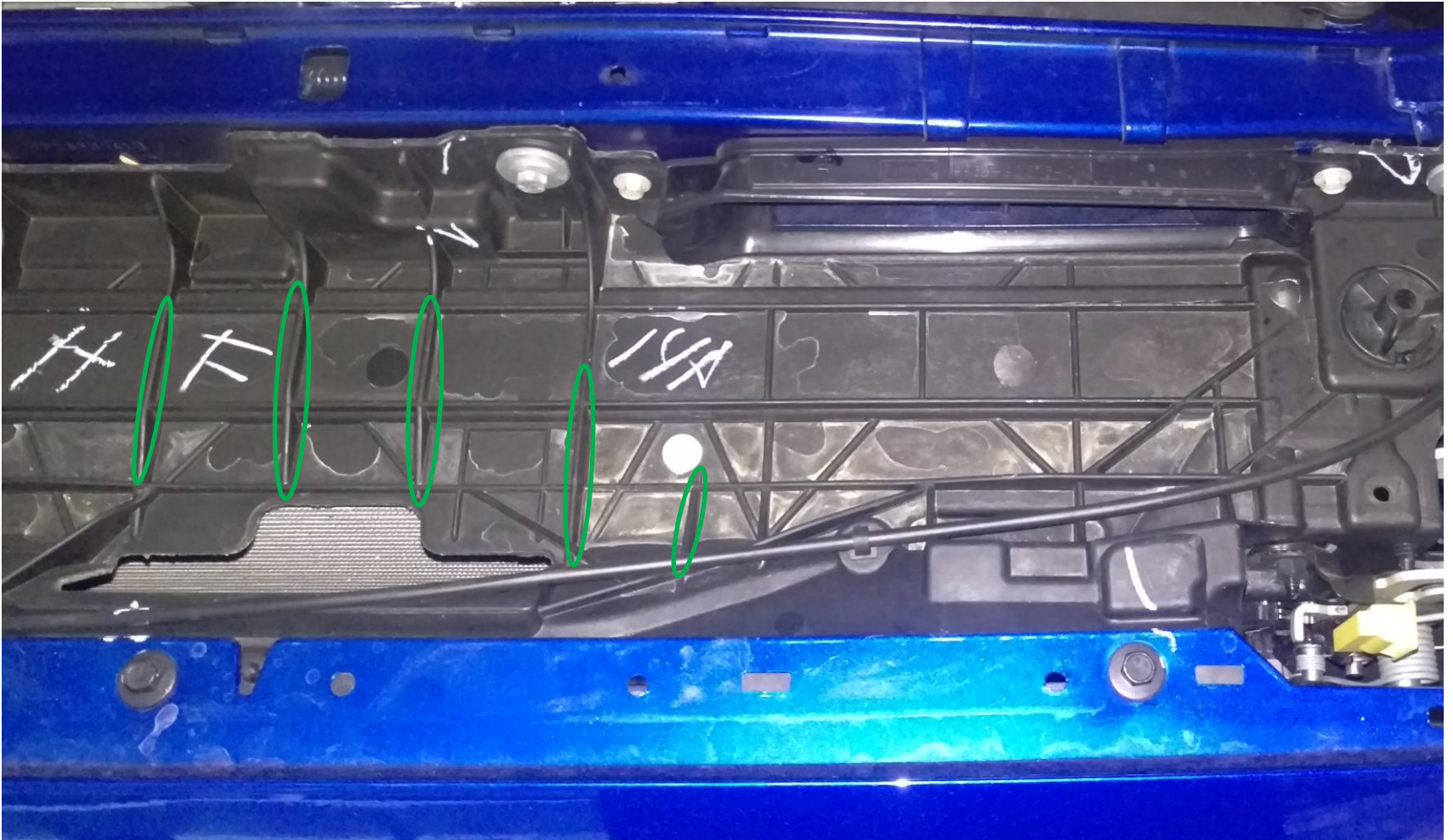
There are two more vertical tabs you need to trim using the cut off wheel or snippers.

Viewing from the front of the car underneath the radiator cover.



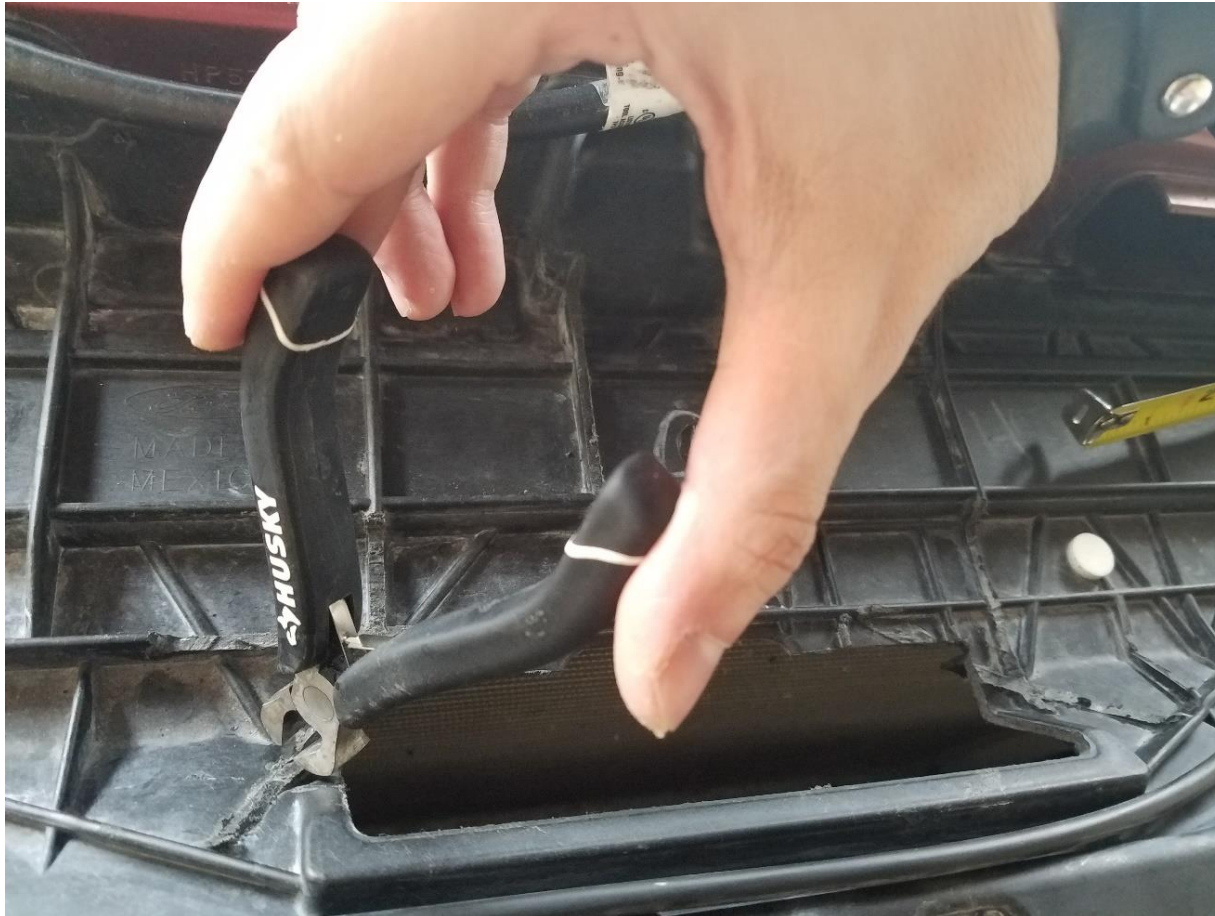
## Trimming

Flatten these ribs using the cut off tool or snippers.



## Trimming

An example shown below, uses the flat head snippers to remove the ribs, try to get them to be as flush as the base material as possible.



## Trimming

Once you have trimmed the ribs and the tabs, you should be left with an opening that is square (close to it) in shape. It doesn't have to be exact.



## Installation

Place the main body spacer over the cowl opening. Next step will be to seat the BIG MOUTH, keep the spacer over the cowl when performing the next step.

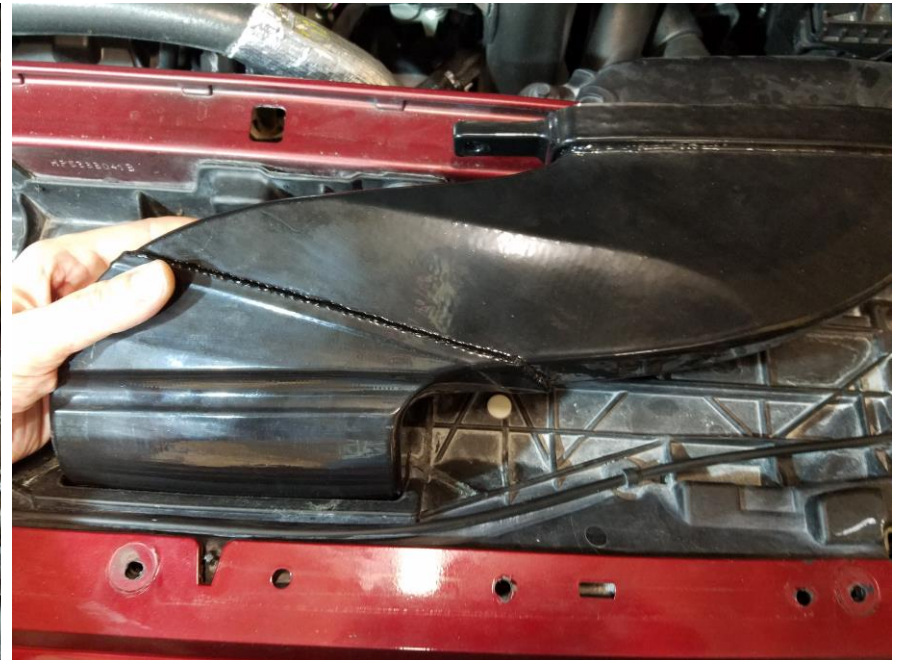


## Installation

Once you have completed trimming, you will be able to drop the BIG MOUTH in using the following method. **READ THIS CAREFULLY.**

Holding the BIG MOUTH main body in your left hand, you should be able to drop it into the trimmed opening you prepared. It should slide in, you might need to squeeze the BIG MOUTH with your left hand to finesse it through.

Insert the BIG MOUTH (inlet first) into this newly trimmed opening. It may be a little tight, but if there is too much resistance, you need to trim more. You shouldn't need to force it.





## Installation

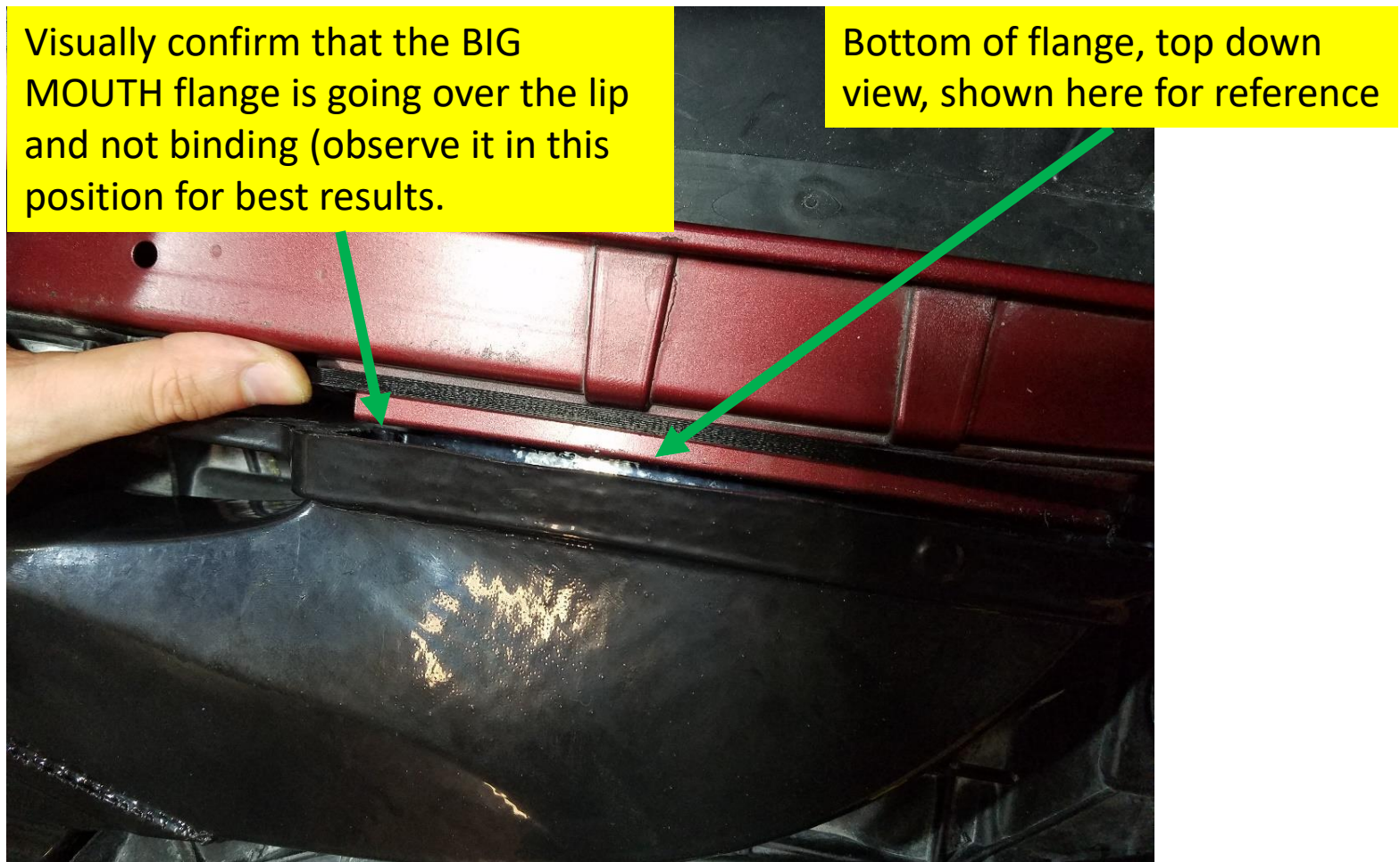
You should now have the body and spacer in place and LOOSE. The next step is to seat the BIG MOUTH over the cowl lip.

This is the cowl lip; you will need to seat the BIG MOUTH over it. PLEASE read the next slide carefully.



## Installation

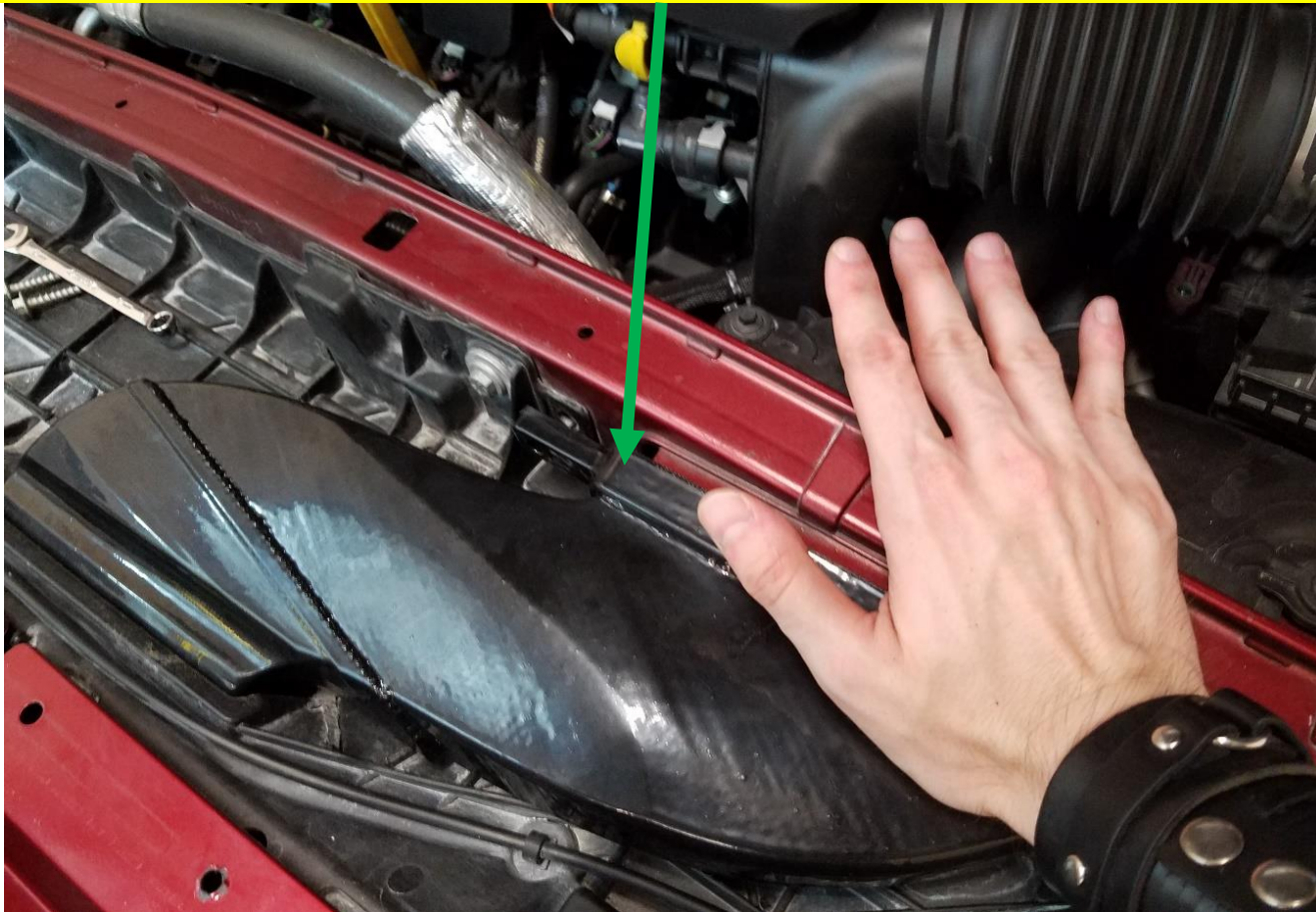
Seating the BIG MOUTH requires you to visually confirm this one thing. Visually observe that the BIG MOUTH flange is going OVER the cowl lip.



## Installation

While you are positioning the flange with your left hand, you may begin to apply pressure to the pressure dot, once the flange clears the cowl, it should fall in easily.

Make sure to inspect that the flange clears the cowl lip during this process



## Installation

Insert the 8mm screws you removed from the stock inlet tube and ensure that everything lines up properly before tightening down. The body should not be under too much stress, torque just enough to close the gap between the space and flange.

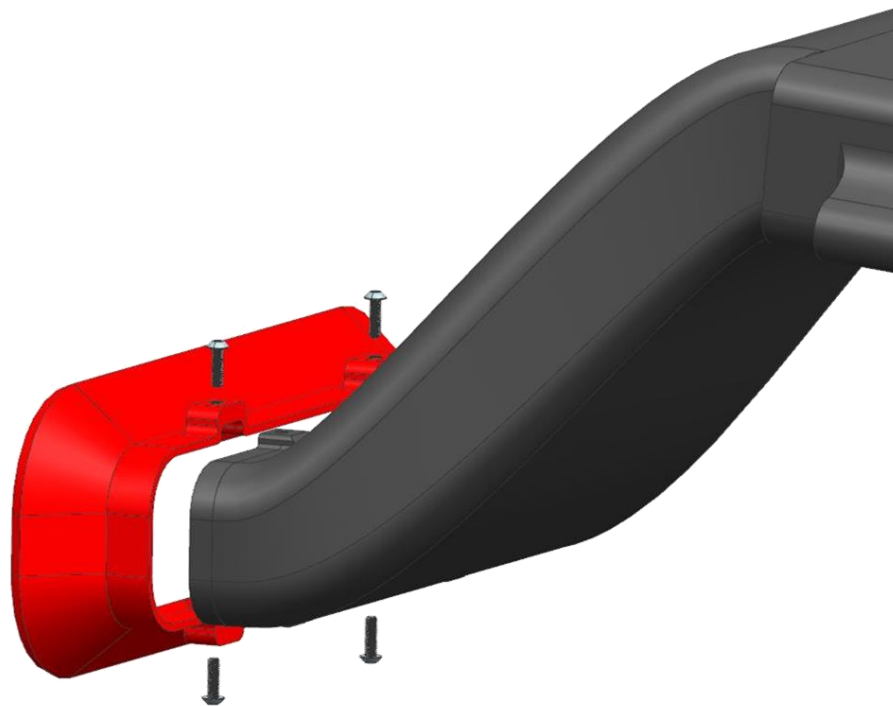




## Install the LIT BIG MOUTH Flare

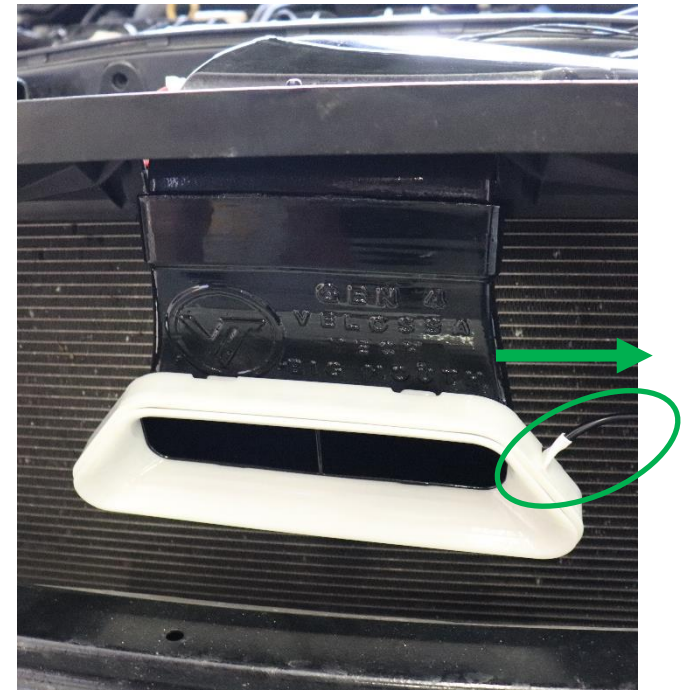
SKIP THIS SLIDE IF YOU PURCHASED A FULL LIT KIT

If you purchased a LIT flare-only and already have a Gen 4 BIG MOUTH. Remove old flare and install the LIT flare with the 4 screws as shown. Install with LED cable facing the driver side.



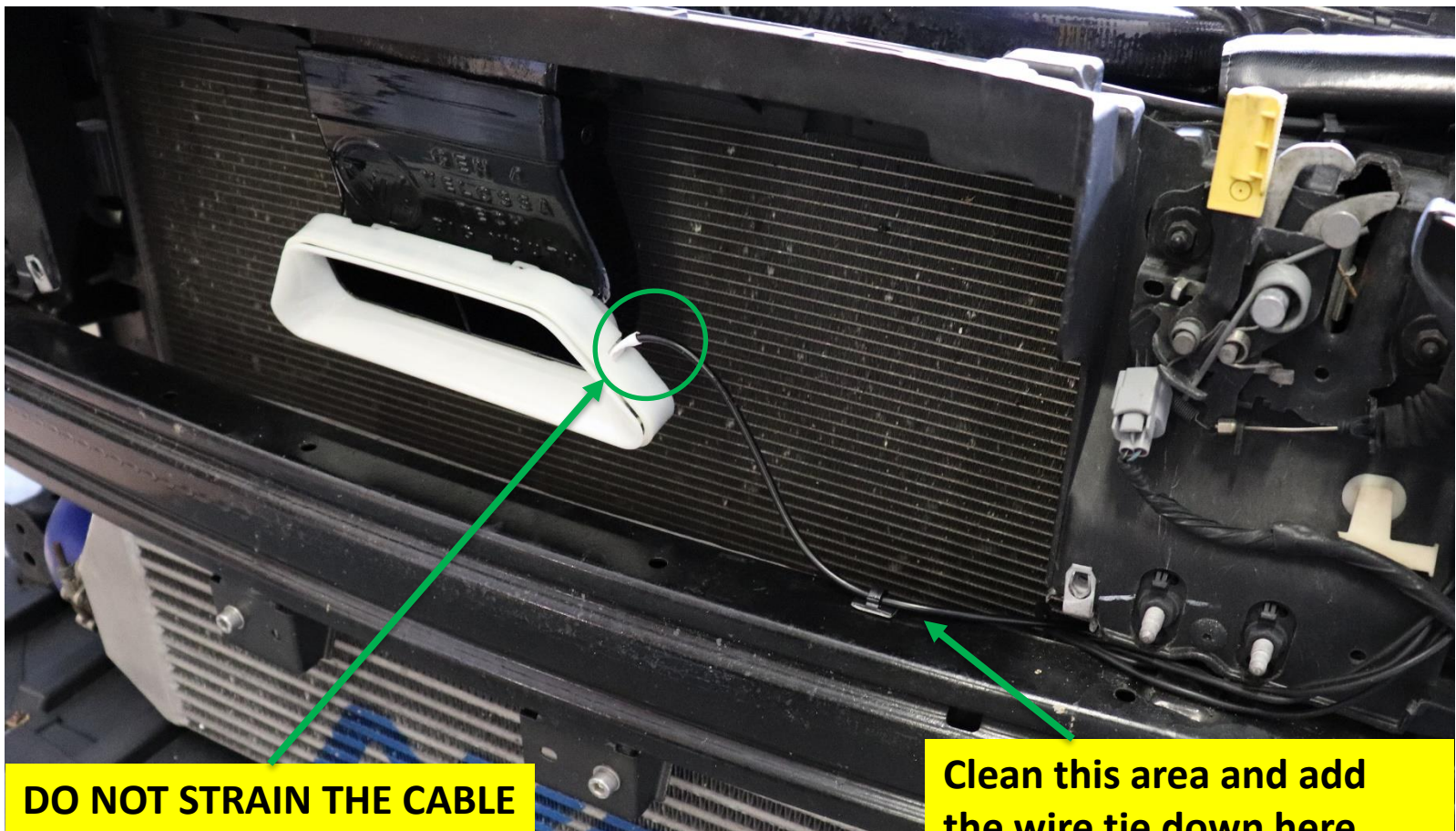
## Installation

Put the BIG MOUTH flare over the main body inlet and line up the holes on the sides, insert the screws and tighten until snug. **Install with LED cable exiting towards the driver side of the vehicle. Do not stress the LED power cable. Read next slides.**



## Wire Management

Thoroughly clean a small section of the crash bar and place the cable clip onto it to secure the cable. **Avoid wire strain and tight bends.**



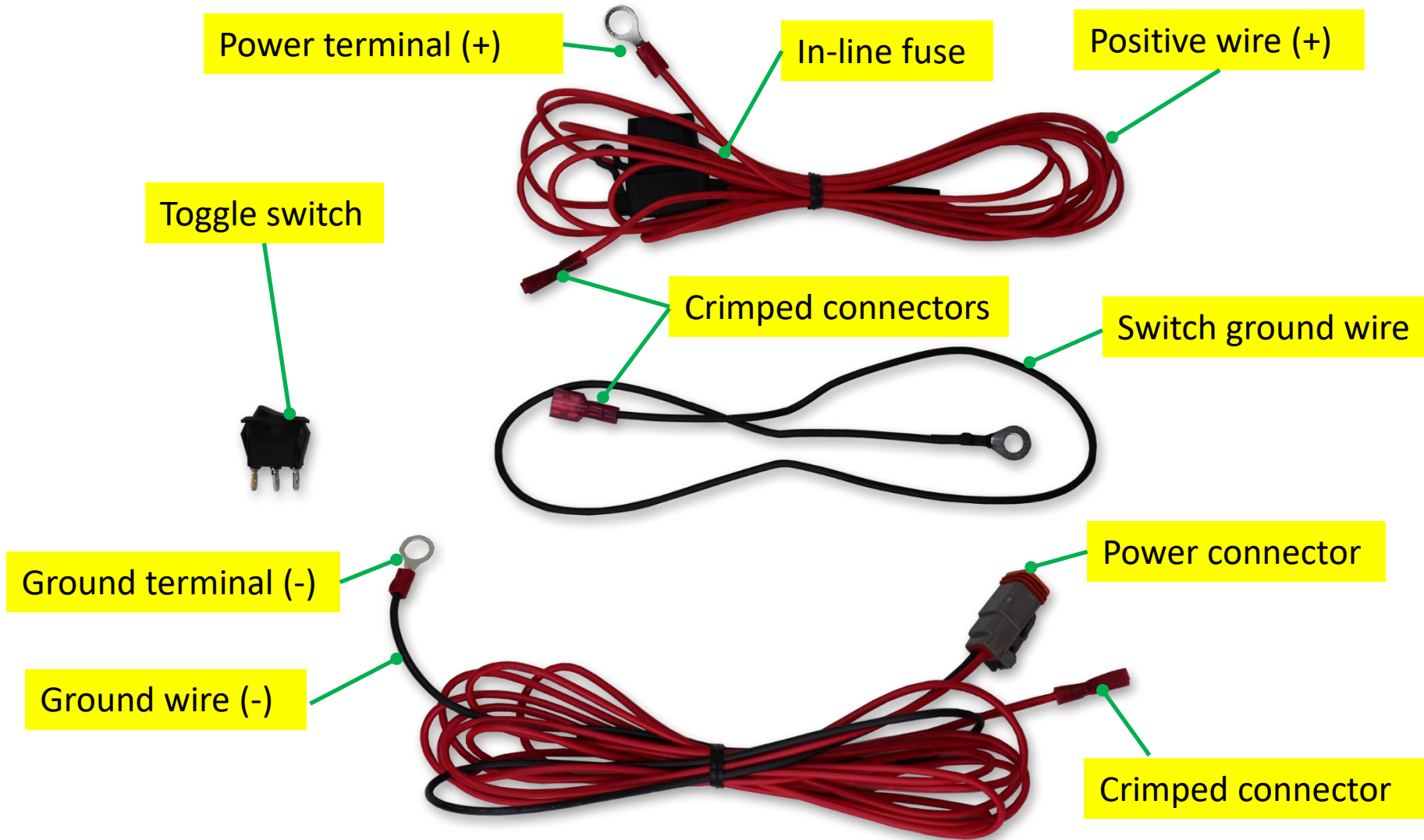
**DO NOT STRAIN THE CABLE**

**Clean this area and add the wire tie down here**



# VELOSSA TECH

## Wiring Harness

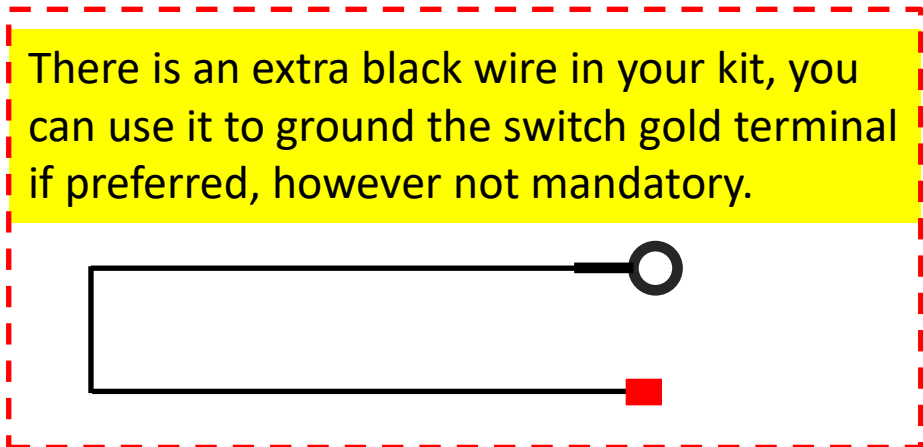
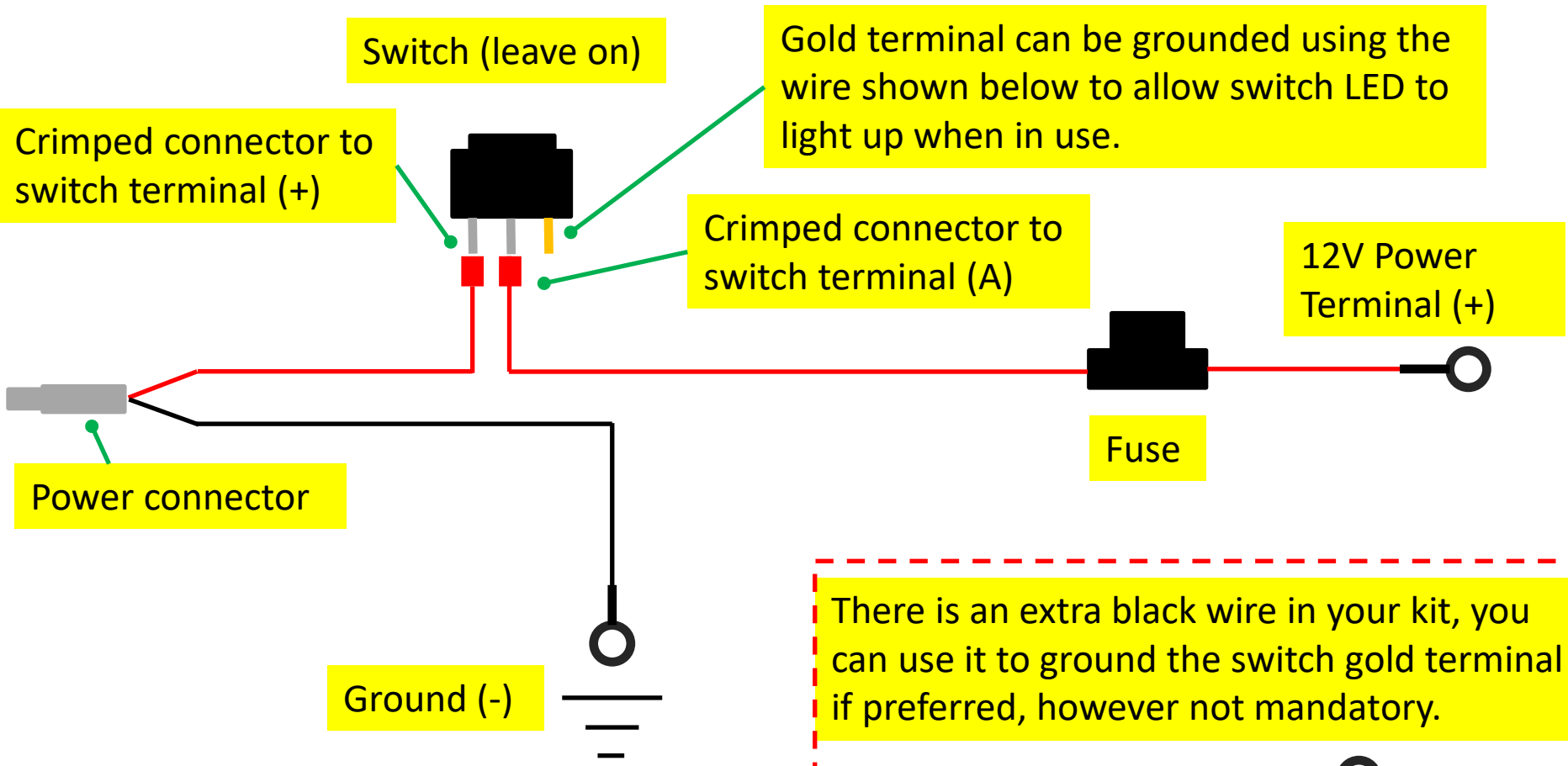






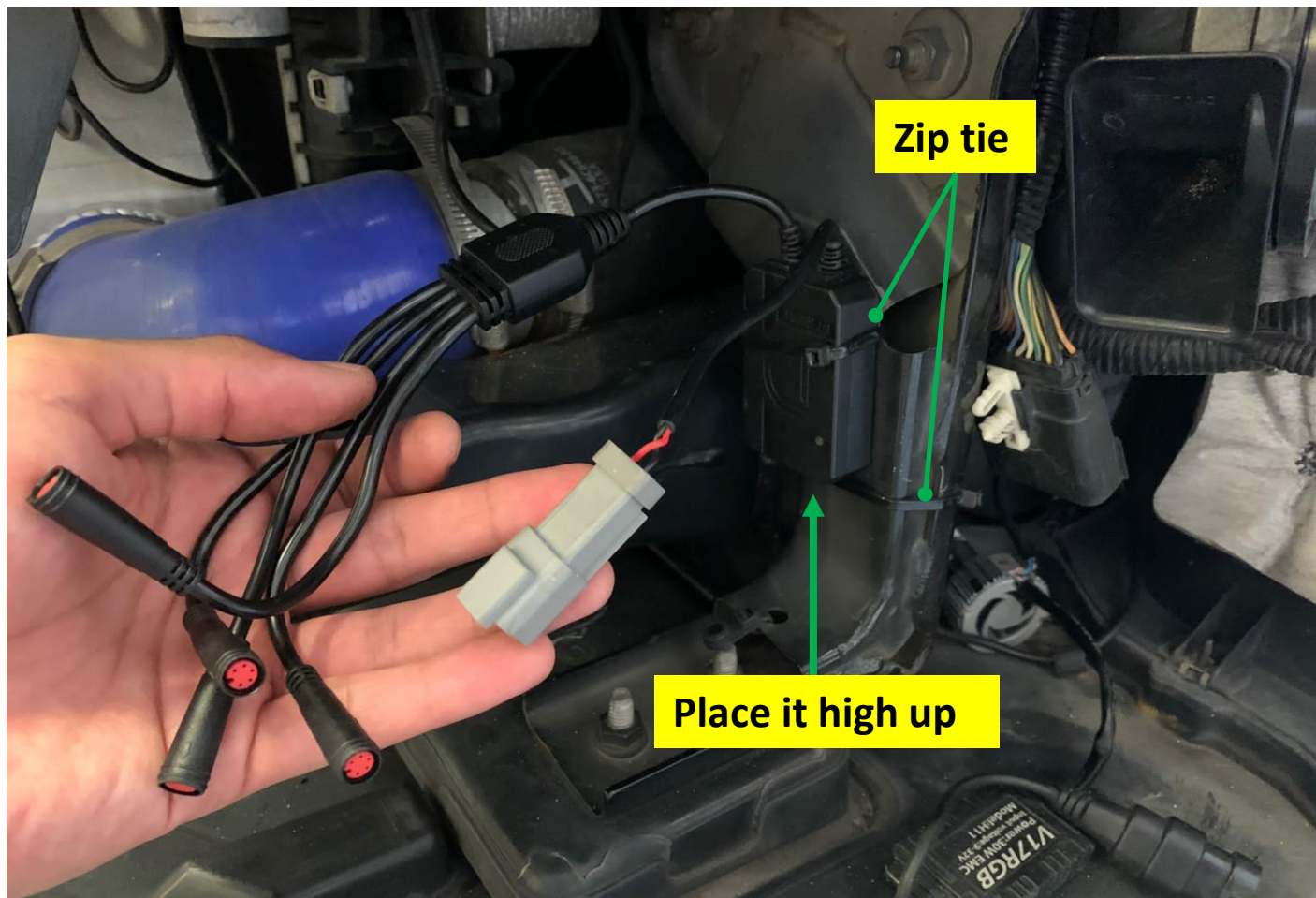
# VELOSSA TECH

## Wiring Harness Schematic



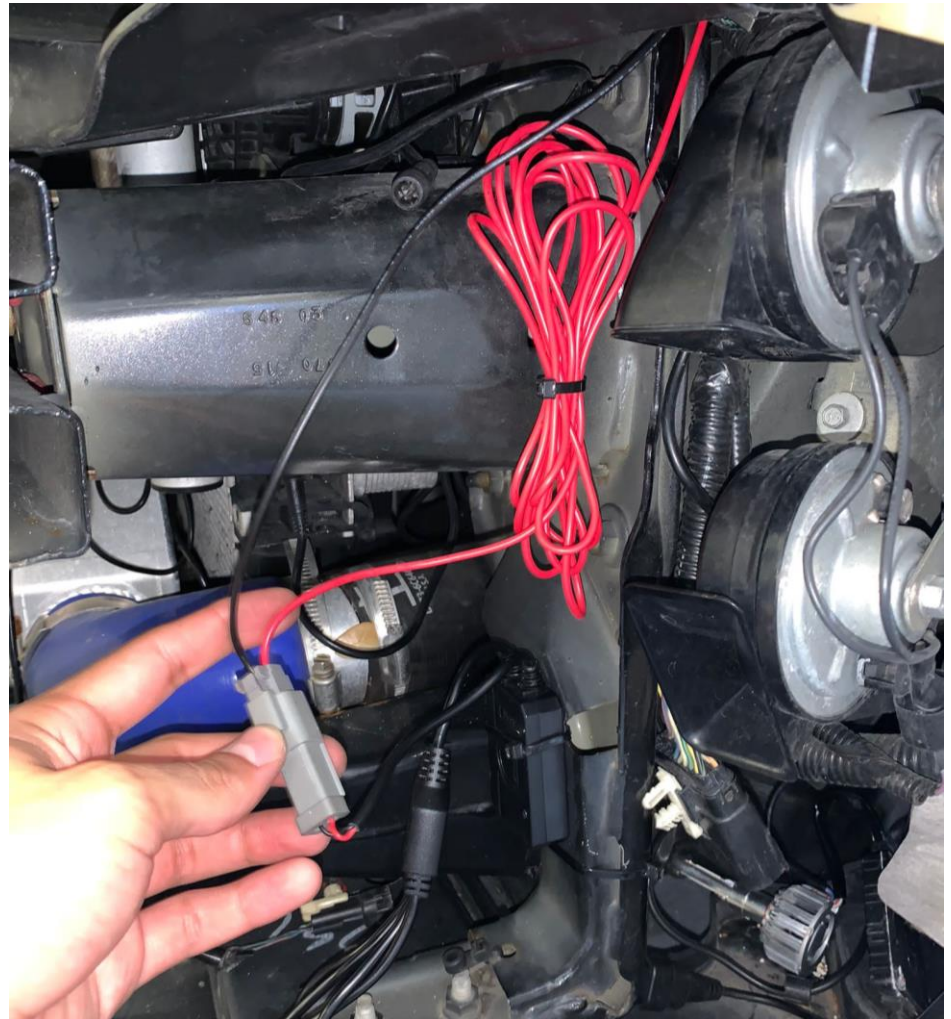
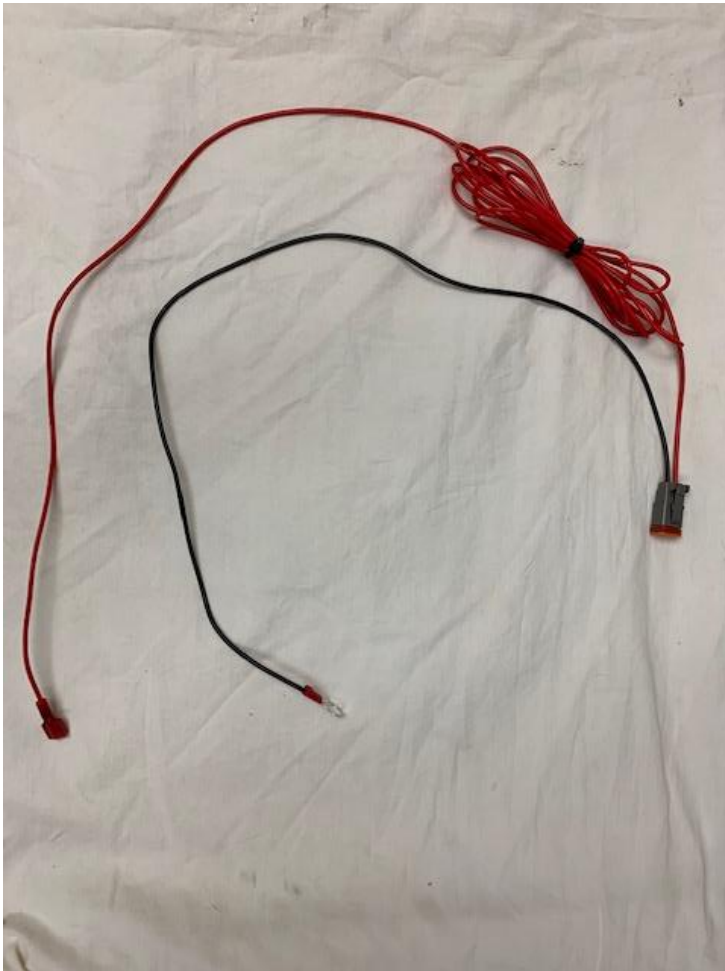
## Wire Management

Locate this area underneath the driver side headlight. Use two of the supplied 8" zip ties to fasten the controller; the higher it is placed, the better. One zip tie should go through the Bluetooth Controller mounting eye.



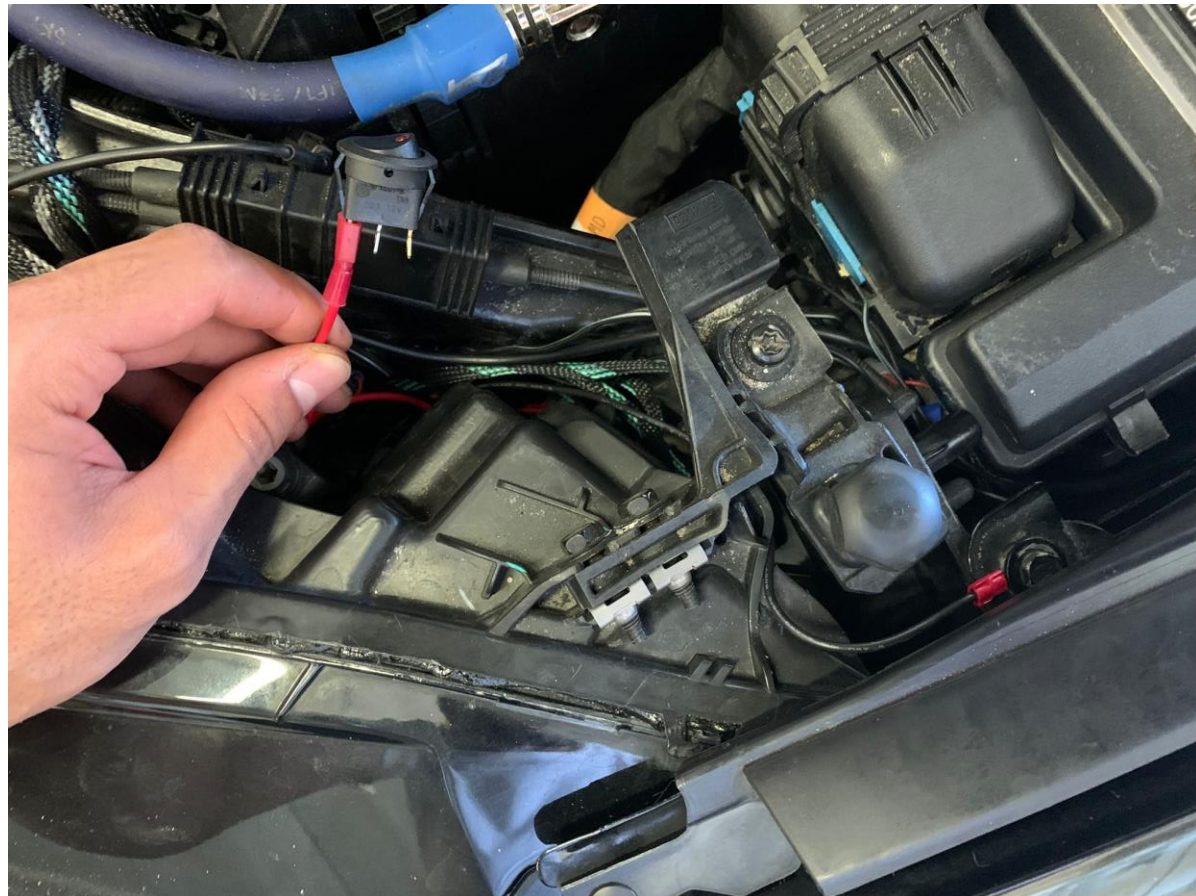
## Wire Management

Zip tie the bundle of red wire from the power connector as shown, leaving ~20" of free wire. Connect the grey power connectors. Leave some slack to prevent wire strain.



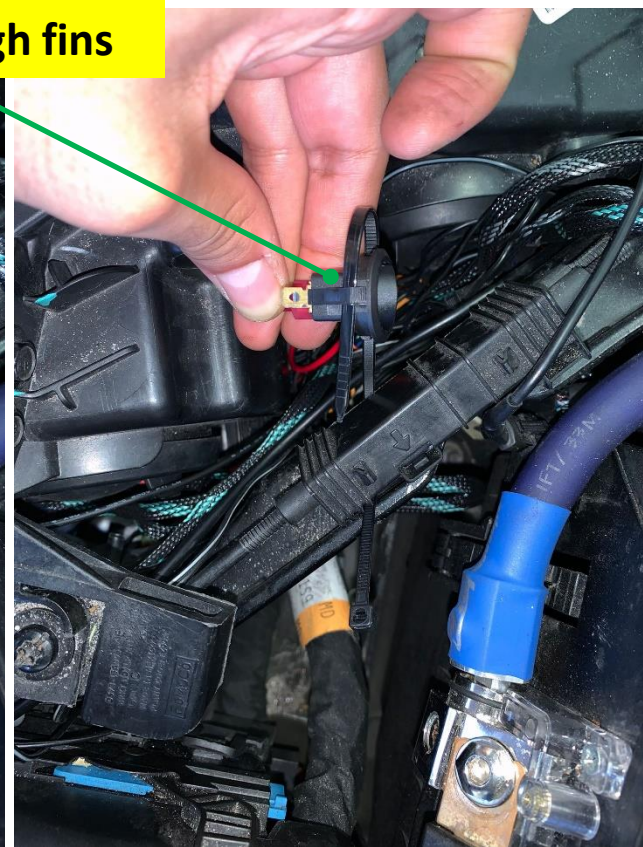
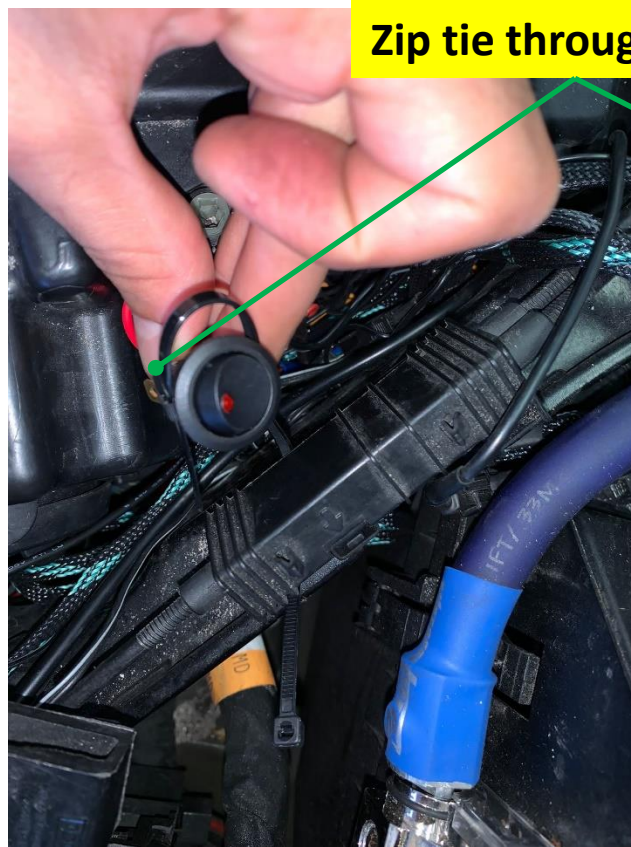
## Wire Management

Route both wires from the power connector up through the side of the headlight into the engine bay. Ground the circuit using the indicated bolt and connect the red wire to the toggle switch as shown in the Wiring Harness Schematic.



## Wire Management

Zip tie the toggle switch to the hood latch casing shown using an 8" zip tie. Run the zip tie through the small fins of the toggle switch to prevent it from sliding.



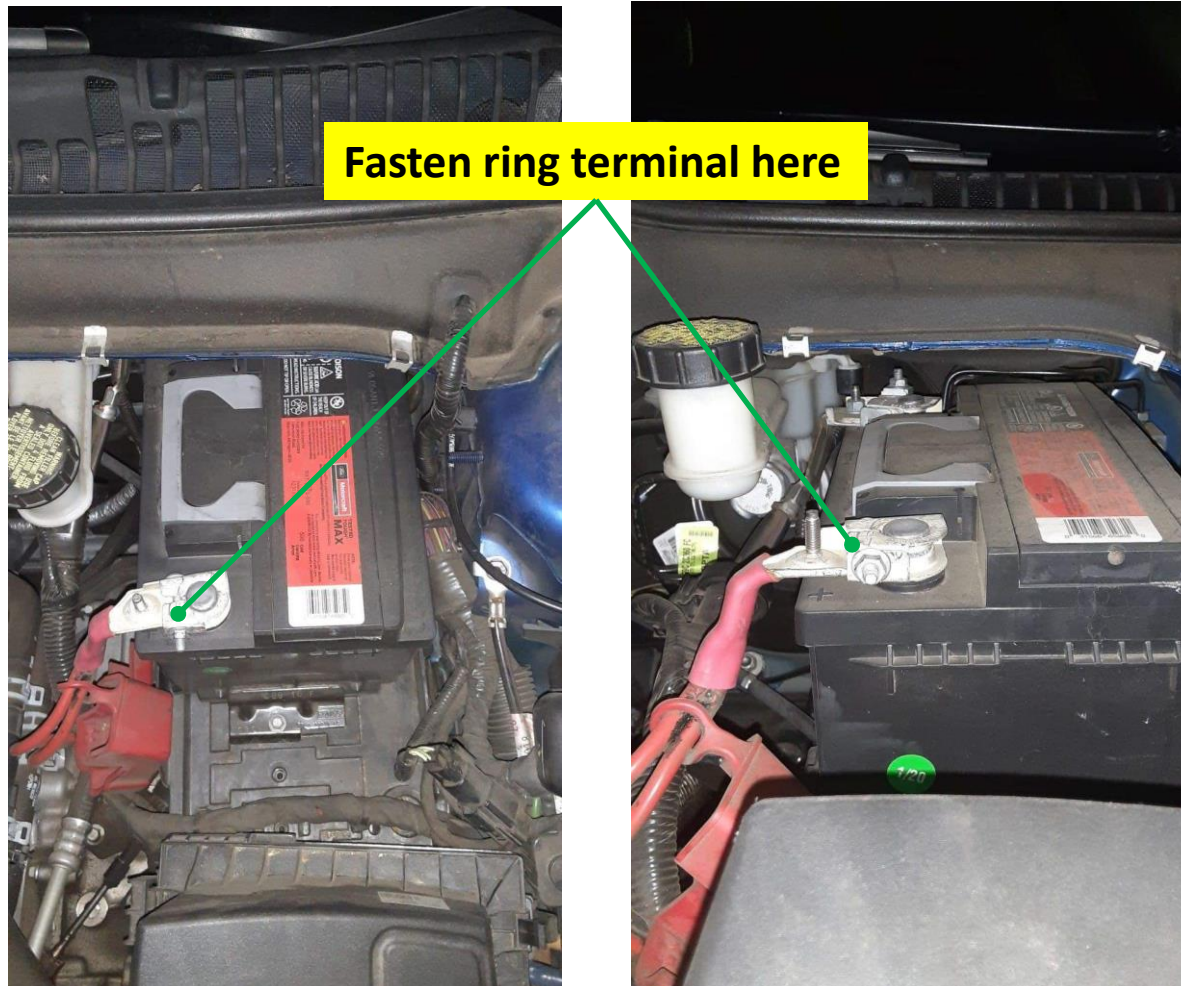
## Wire Management

Zip tie the bundle of red wire from the positive cable as shown, leaving ~30" of free wire. Connect to the toggle switch as shown in the Wiring Harness Schematic. **Leave some slack to prevent wire strain.**



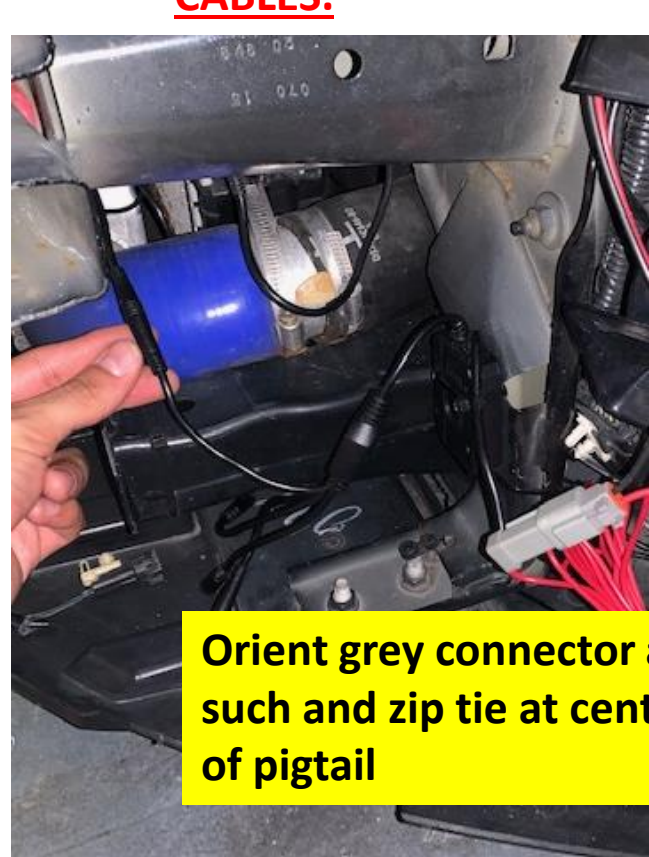
## LIT KIT Power

Power the Lit Kit by fastening the ring terminal to the battery using the OEM lock nut. Tuck away the excess wire.

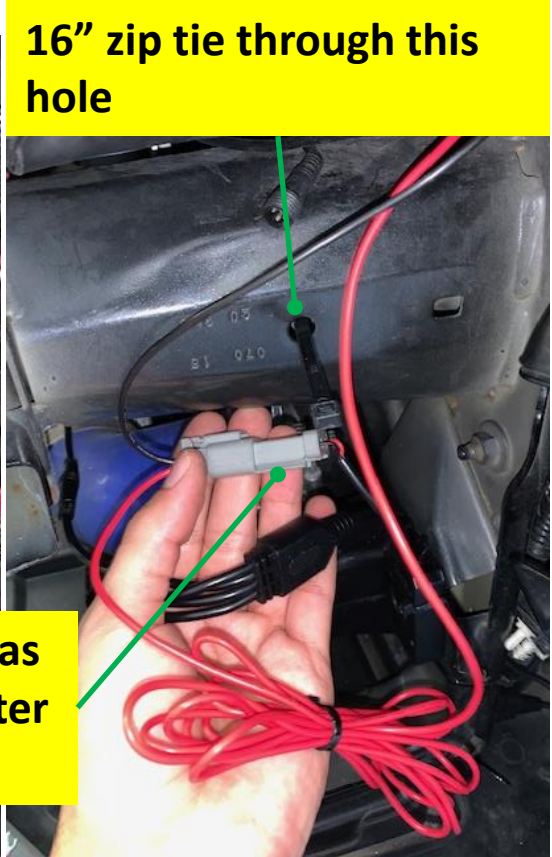


## Wire Management

Plug in the LED power cable as shown (left). Next, guide the 16" zip tie through the indicated hole in order to neatly fasten the loose cables and connectors. It is important that the grey power connector is oriented as such to not strain its wires and that it is fastened at the center of the connector. **DO NOT STRAIN CABLES.**



**Orient grey connector as such and zip tie at center of pigtail**



**16" zip tie through this hole**

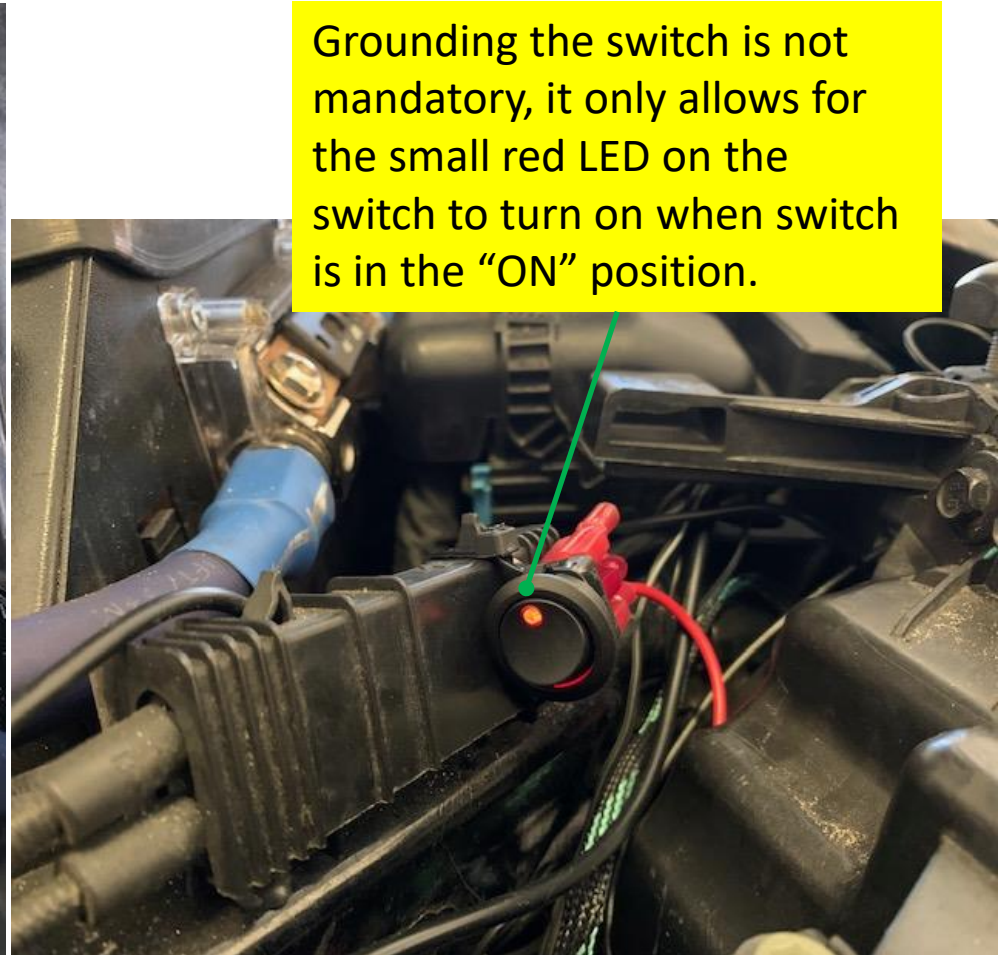


**DO NOT STRAIN THE CABLES**



## Wiring the LIT KIT

Optional: you may ground the toggle switch LED using the short black wire. Refer to the Wiring Harness Schematic.



## Phone App

Download the Diode Dynamics app and connect via Bluetooth.

Re-install the bumper in the reverse order and installation is complete.

How to connect to the app:

1. After installing the app from the app store, open the app on your device.
2. Cycle the power to the Bluetooth controller by unplugging it and plugging it back in or flick the power switch and wait a few seconds, then turn it back on.
3. Wait for the app to detect the controller, it will pop up on the app screen as a Bluetooth controller. If necessary, cycle the power once more to refresh the controller.
4. Once the controller shows up on the app, click it and connect. You have 30 seconds to select the controller once it shows up on the app. After 30 second you will need to refresh again to detect the controller again.
5. Note that if you mounted your controller behind a lot of metal components, this may degrade the signal and range.



## Finalize

Re-install bumper in reverse order and enjoy!

