



**2020+ Explorer ST BIG MOUTH
“LIT KIT” Intake Installation
Guide**

VELOSSA TECH

Kit Contents (LIT Flare Only)

Please review this 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
Diode Dynamics RGBW Controller	1
Diode Dynamics 1m LED Extension	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	8
Cable Clips	2
Assembled LIT Flare	1

If you already own the Velossa Tech Design GEN 4 Focus ST BIG MOUTH, skip to slide 7 to see install and wiring instructions.



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Stock Components Removal

Use Google or online forums to search for best practices when removing the front bumper.

Assemble the Brackets

Two brackets are supplied in the kit, these brackets are to be fastened to the main body as shown.

Lay the body on a soft surface or towel and use a Phillips screw driver to screw the main bracket from the inside of the body. Use 6 of the countersunk screws for the large bracket.



Assemble the Brackets

Use the other 3 countersunk screws for the small bracket.



Install the LIT BIG MOUTH Flare

SKIP THIS SLIDE IF YOU PURCHASED A FULL LIT KIT

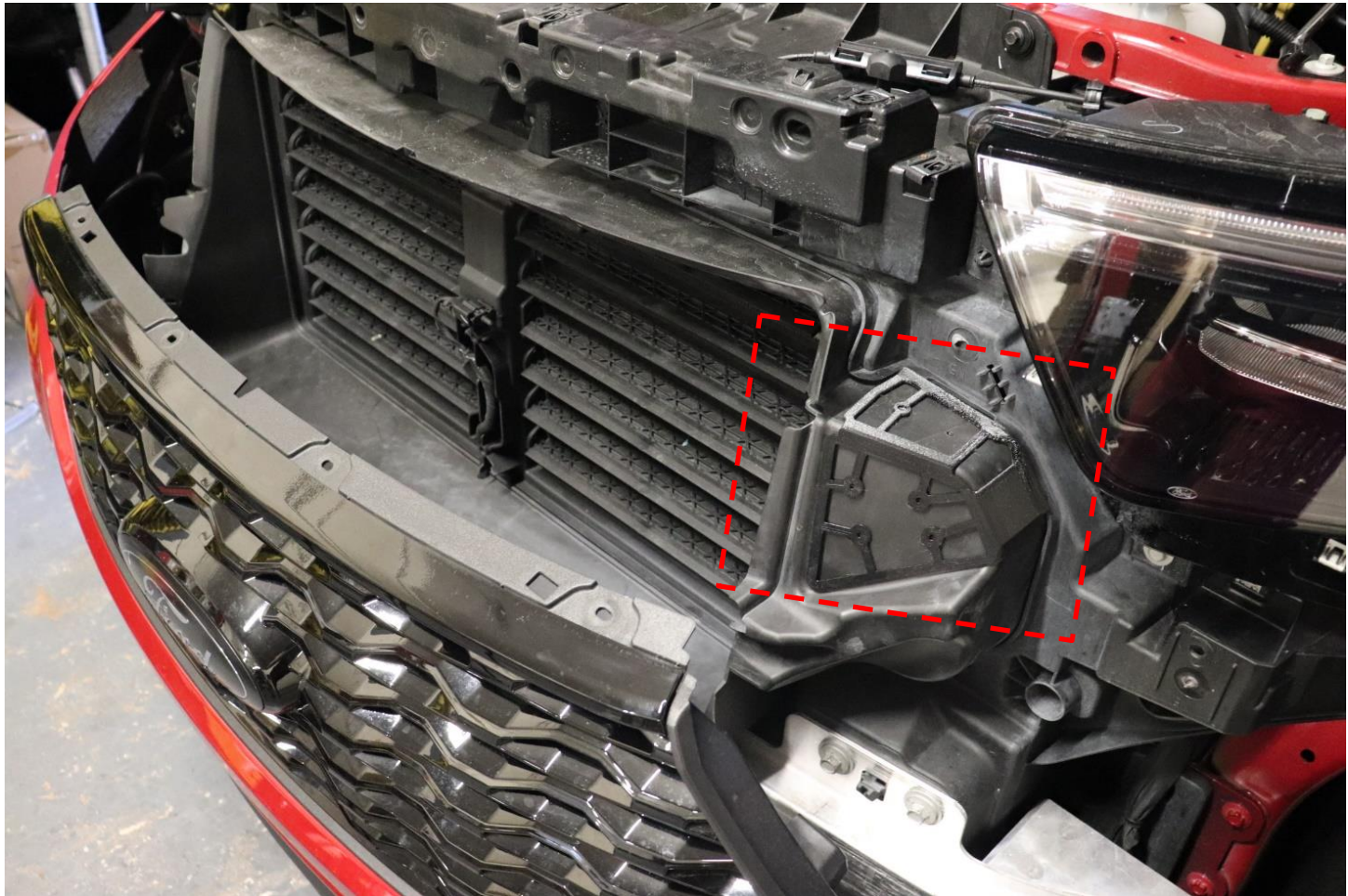
If you already own a BIG MOUTH and want to swap flares to upgrade to a lit kit, use the following instruction. There are 4 allen key screws that attach the flare to the body, as shown behind the green circles. Remove the screws and install the LIT Flare.



LED power cable must exit the passenger side of the flare once installed!

Template

Use the supplied template as shown, place it snugly up against the surface so that you can mark the holes with a sharpie or sharp edge.



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Template

You will need to drill these holes out from the rubber shroud. Use a 1/8" drill bit.

Seat the BIG MOUTH into the cowl opening, make sure you feel the click as the big mouth slots snap into place. Begin drilling the holes through the shroud into the BIG MOUTH plastic brackets using the template holes.

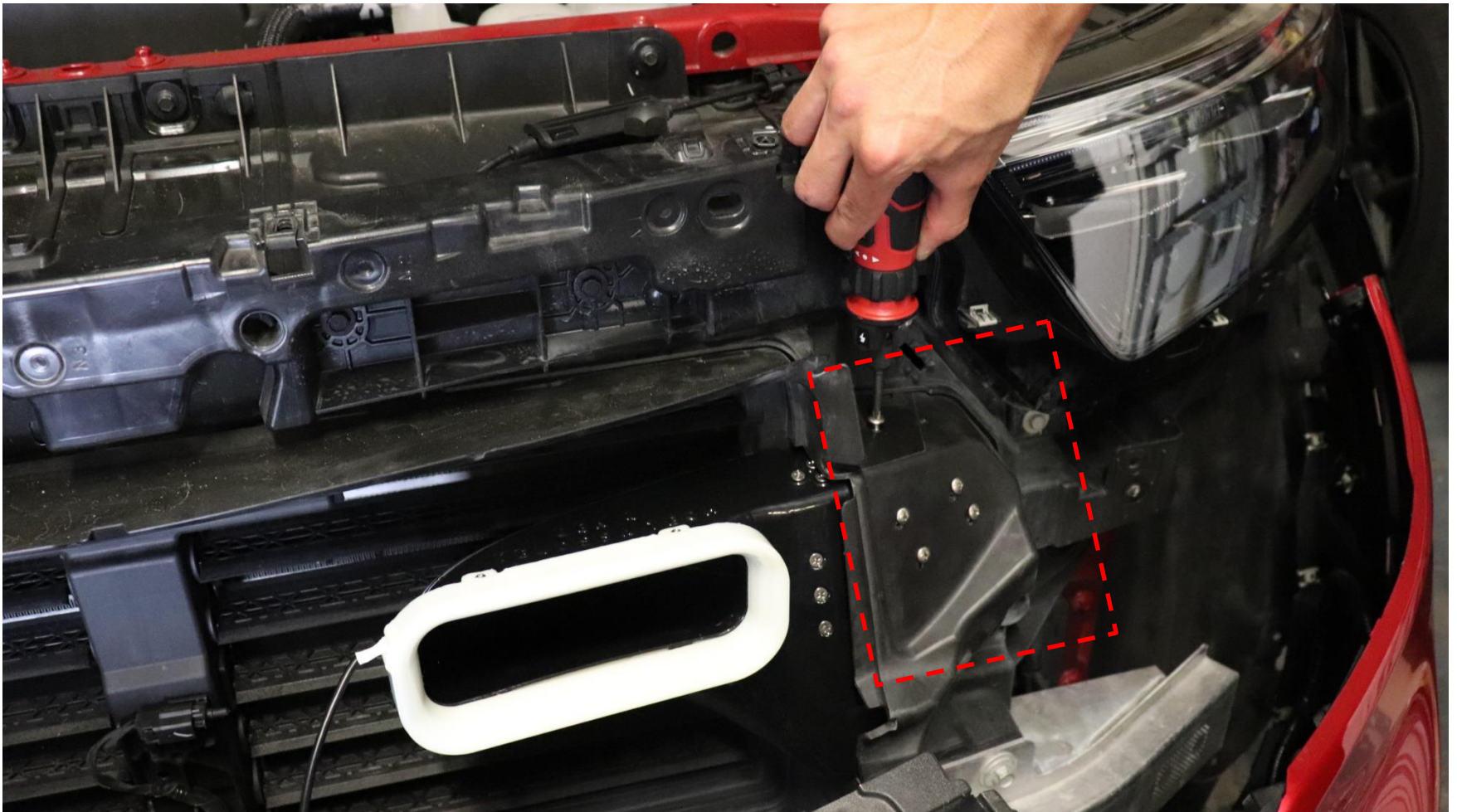


DO NOT PUSH HARD WHEN DRILLING, THIS WILL CAUSE THE BRACKETS TO FLEX AND YOU WILL LOSE HOLE POSITION.



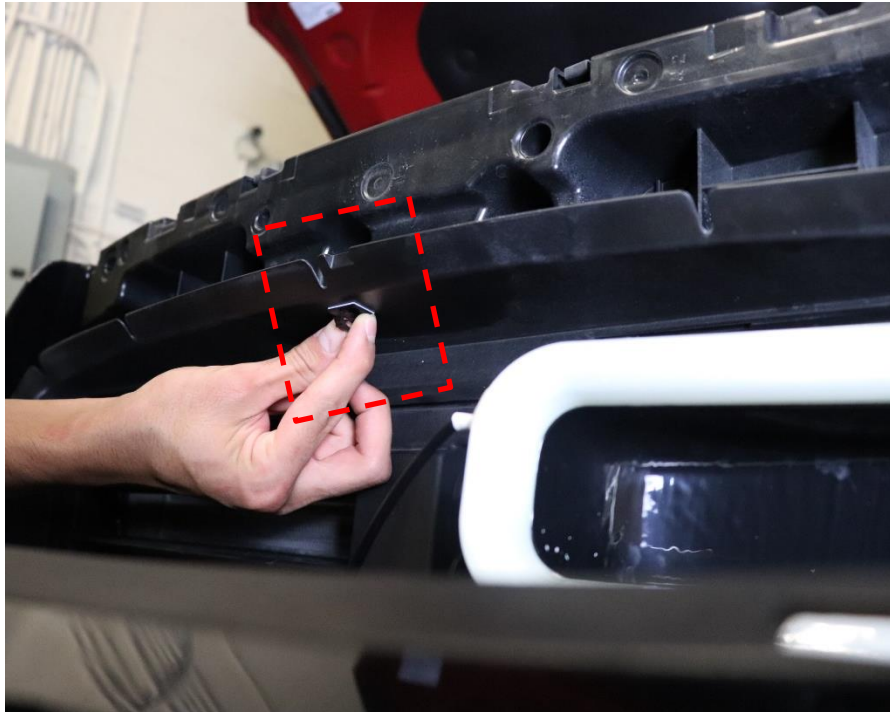
BIG MOUTH Installation Procedure

Use the button head Phillips screws to screw the 5 self tapping screws into the brackets as shown. Do not overtorque, hand tight is enough.



BIG MOUTH Installation Procedure

Clean this surface with a cloth and stick the wire tie down as shown, on the underside of the radiator shroud, near the first gap.



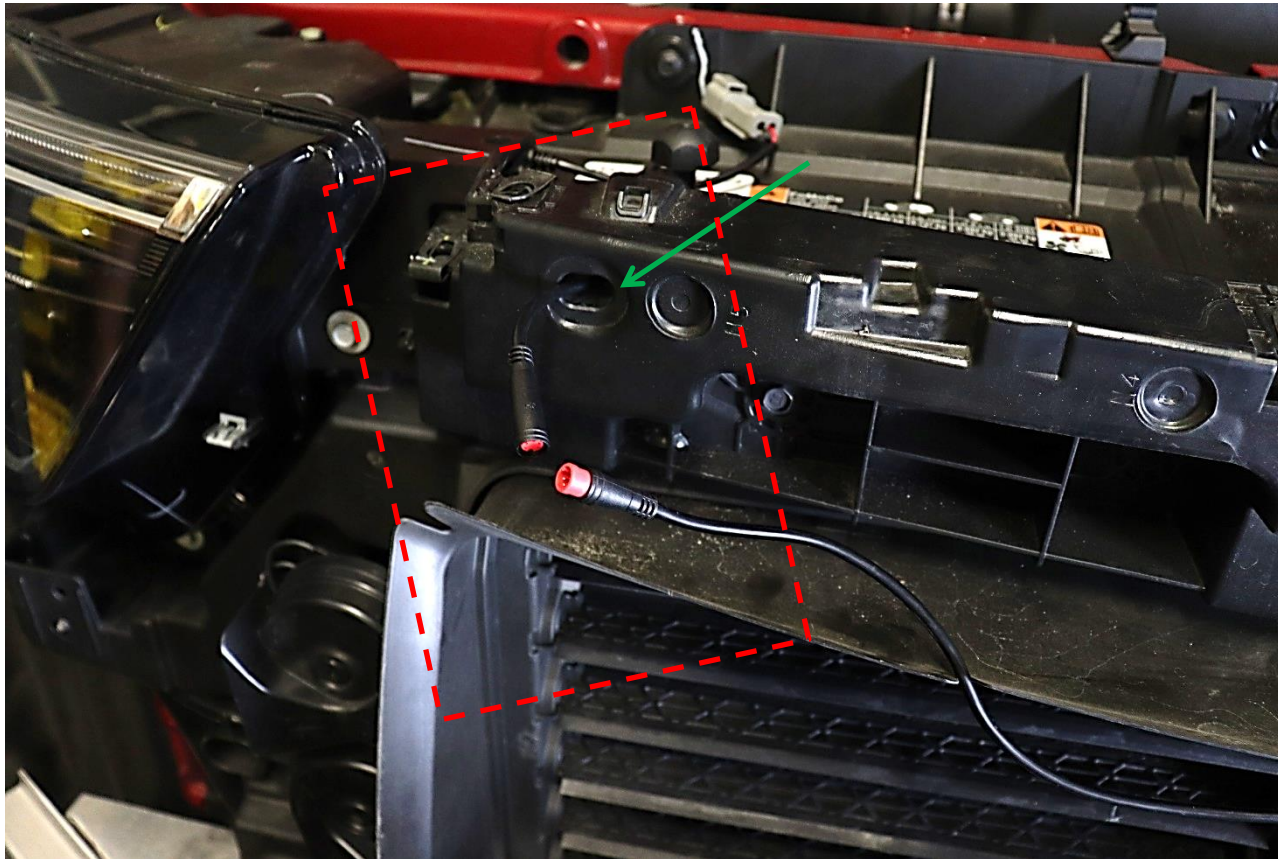
Snake the wire through the second gap as shown.



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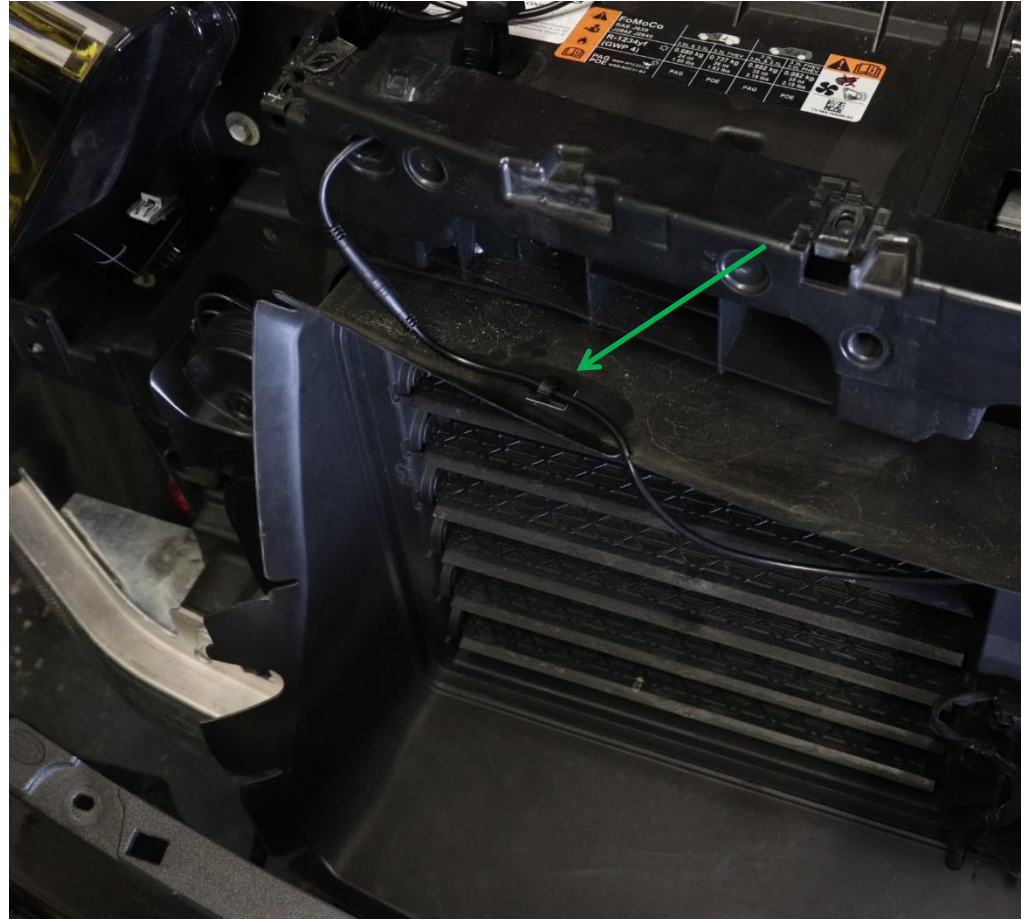
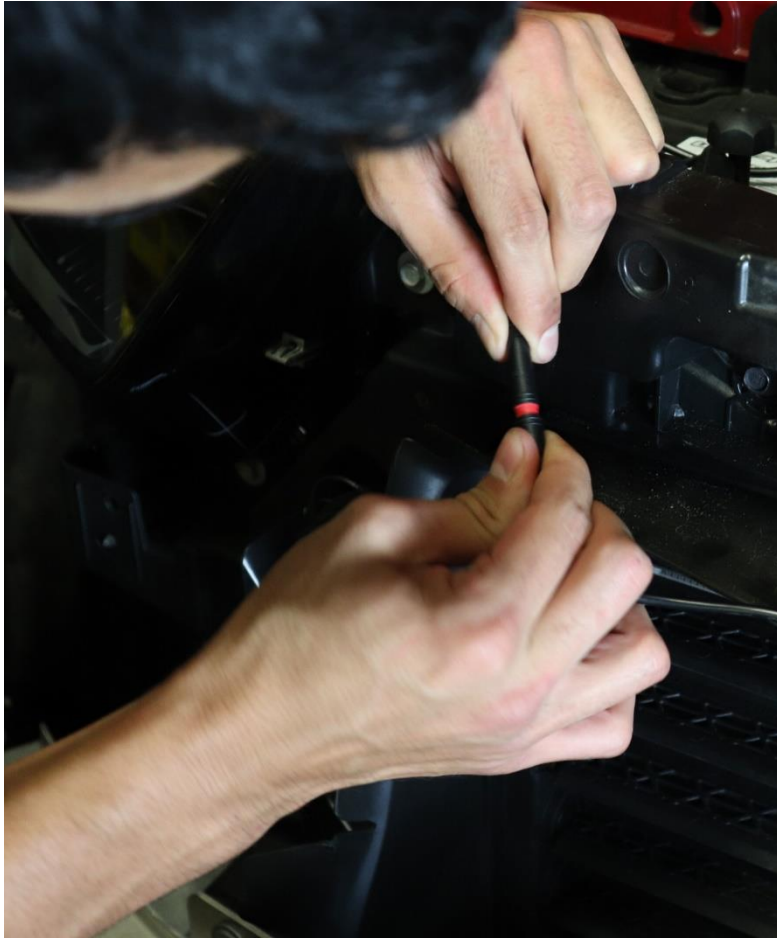
BIG MOUTH Installation Procedure

Route the LED power cable (from the controller) from the engine bay side, through this hole in the radiator support.



BIG MOUTH Installation Procedure

Plug the LED cable into the power controller as shown. Add another wire tie down, clean the surface first.

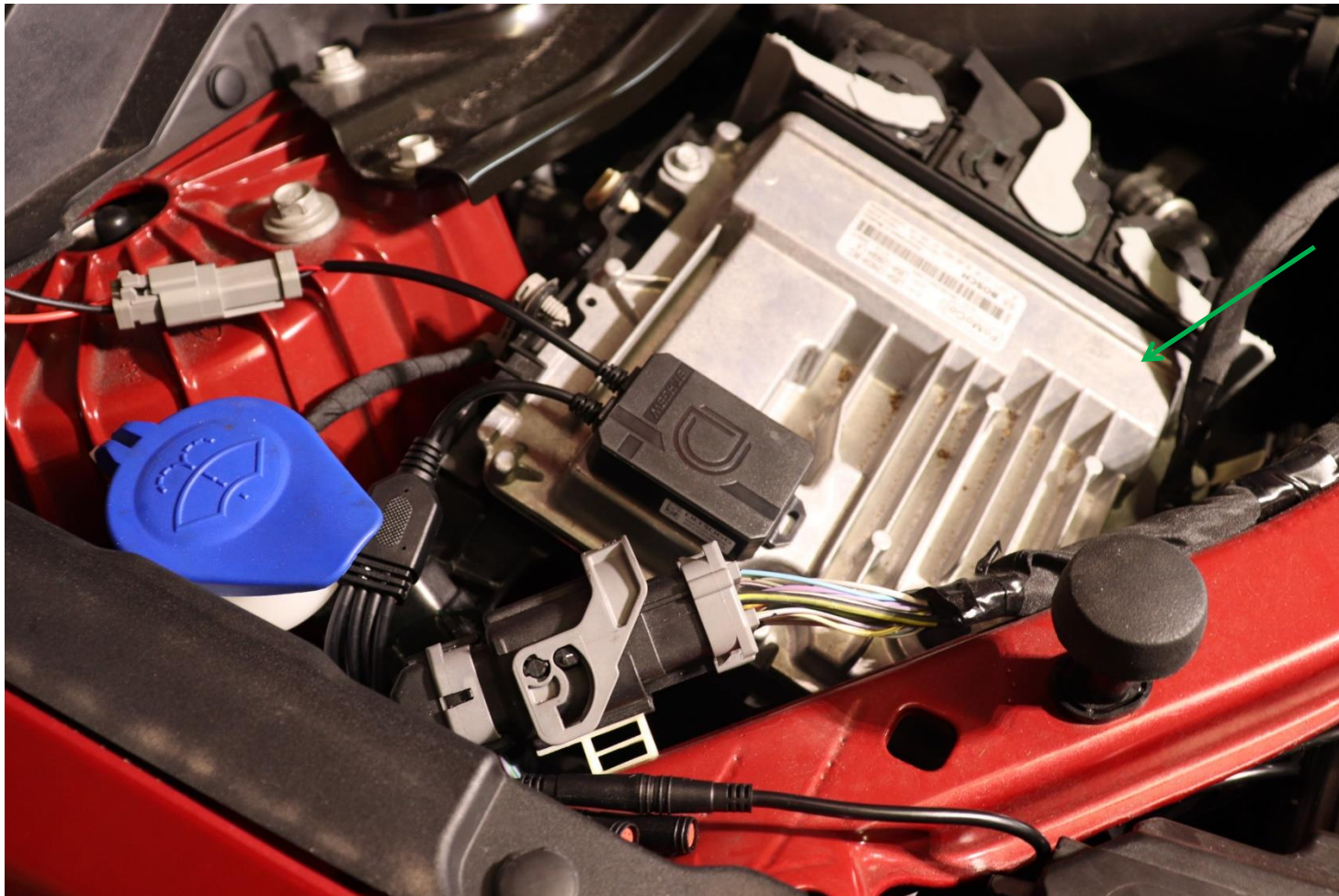




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BIG MOUTH Installation Procedure

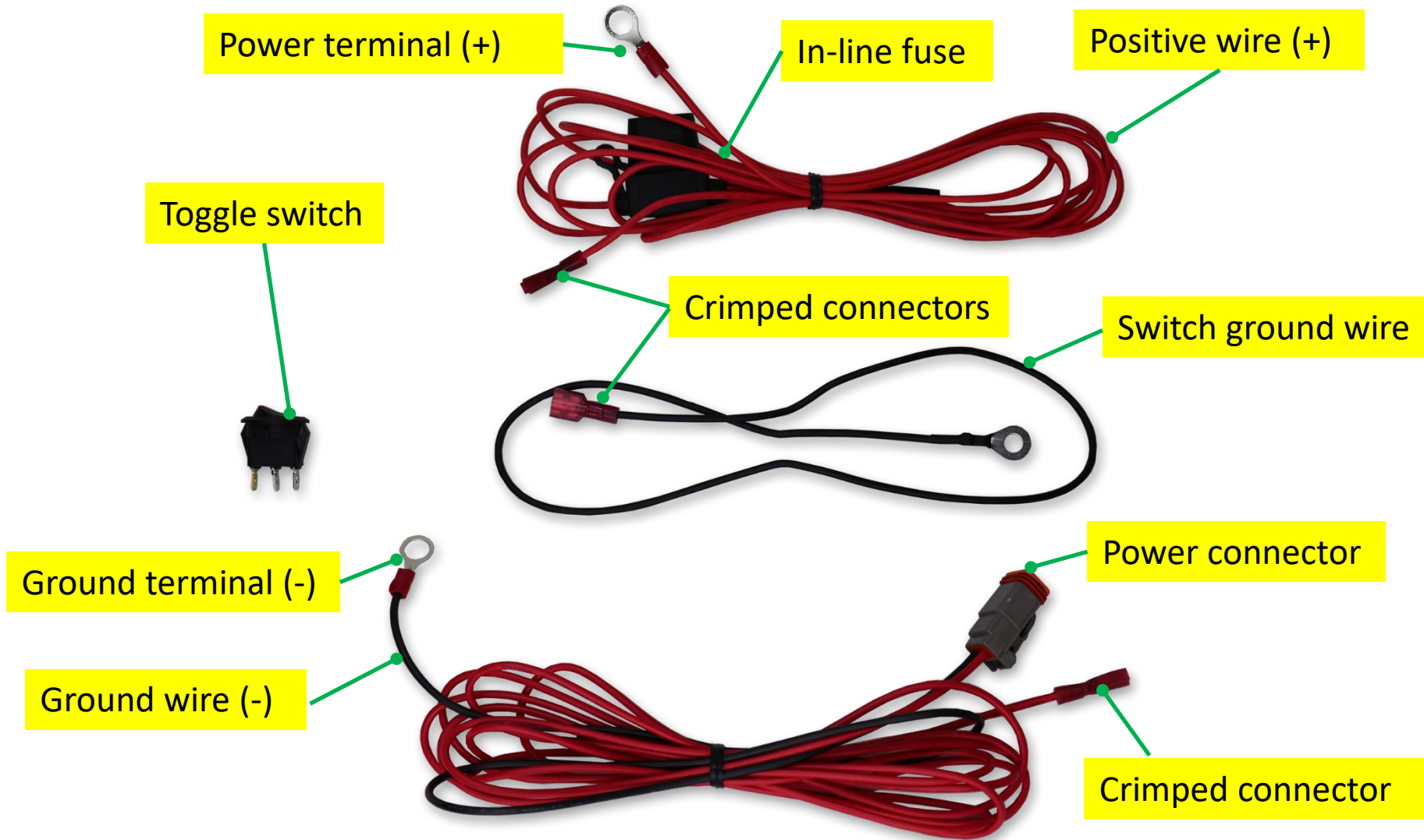
Use the double-sided tape from the controller package, clean surface and mount as shown.





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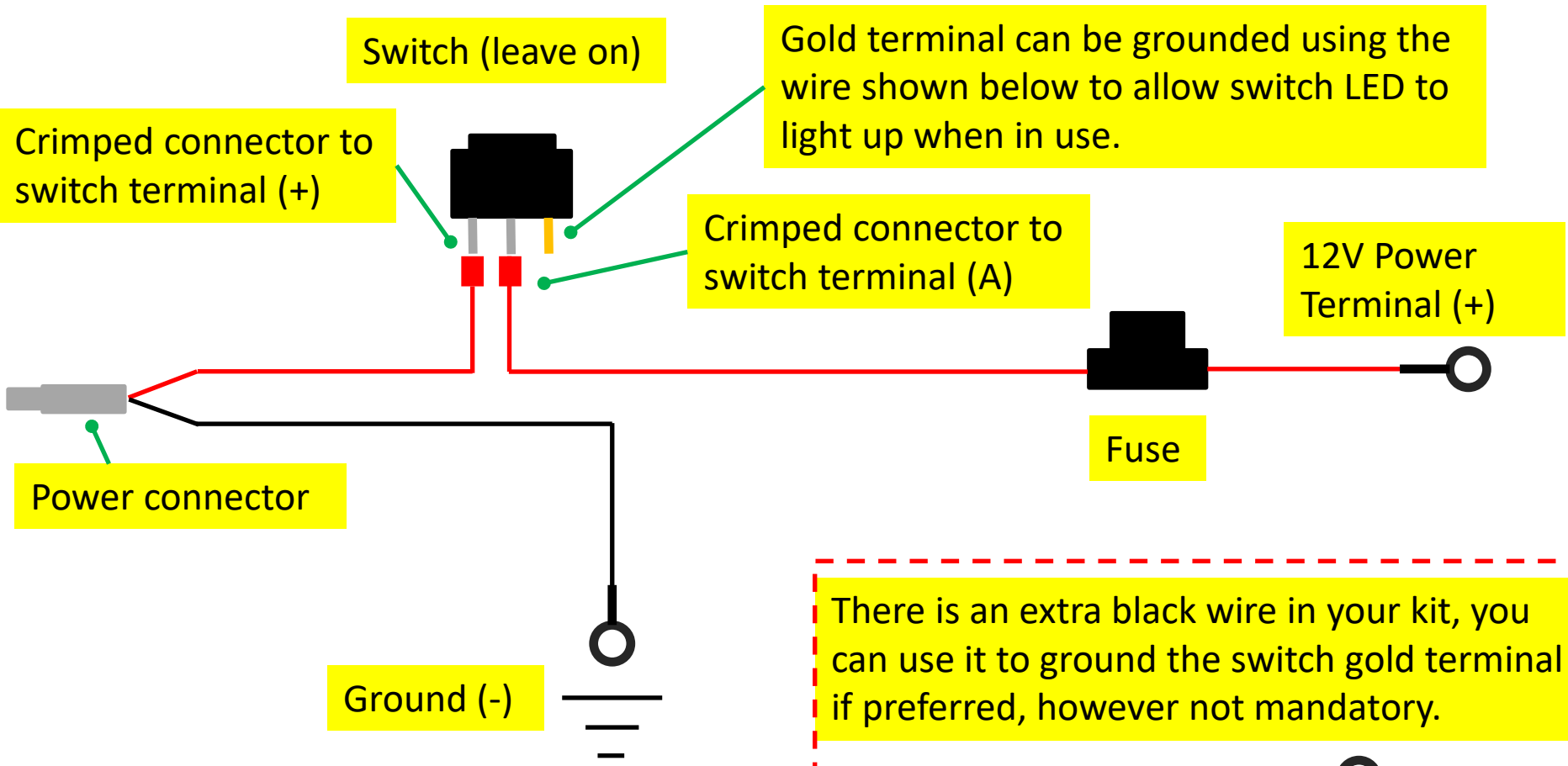
Wiring Harness





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Wiring Harness Schematic



Switch (leave on)

Gold terminal can be grounded using the wire shown below to allow switch LED to light up when in use.

Crimped connector to switch terminal (+)

Crimped connector to switch terminal (A)

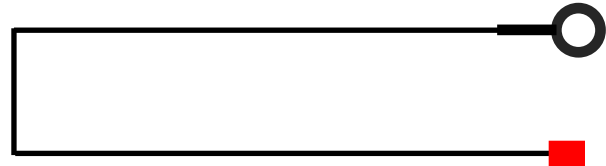
12V Power Terminal (+)

Fuse

Power connector

Ground (-)

There is an extra black wire in your kit, you can use it to ground the switch gold terminal if preferred, however not mandatory.



BIG MOUTH Installation Procedure

Plug the grey power connector into the controller as shown, route the wires under the seal trim as shown.





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BIG MOUTH Installation Procedure

Using the wiring diagram on slide 15, connect all power and ground wires and bundle any excess wires as shown. The switch is only to be used to turn off the controller for long term storage.





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BIG MOUTH Installation Procedure

Tuck the wire bundles and switch in the battery compartment. Use the + and – terminals to power and ground the controller and switch (ground only).





Fine Tune

You can make an adjustment to the BIG MOUTH to ensure it is level. Place bumper on the car, do not fasten yet, inspect visually for alignment and level.

If you need more adjustment, go back and drill bigger holes in the rubber shroud to give you some play room, then tighten as needed.



Phone App

Download the Diode Dynamics app and connect via Bluetooth.

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 the bumper the same way it was removed and ENJOY!

