



**2015-2021 Subaru WRX/STI BIG
MOUTH "LIT KIT" Ram Air Intake
Installation Guide**



Kit Contents (Full Kit)

Please review this document before attempting installation.

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

Kit Contents	Qty
M6 x 12mm Cap Screw	1
M6 Washer	3
M6 x 20mm Cap Screw	1
M6 x 3mm Spacer	1
M6 Lock Nut	3
Cable clip	1
Diode Dynamics RGBW Controller	1
Positive Cable w/ In-Line Fuse	1
Power Cable w/ Pigtail Connector	1
Switch	1
Switch Ground Cable w/ Crimped Connector	1
8" Zip Ties	8
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.

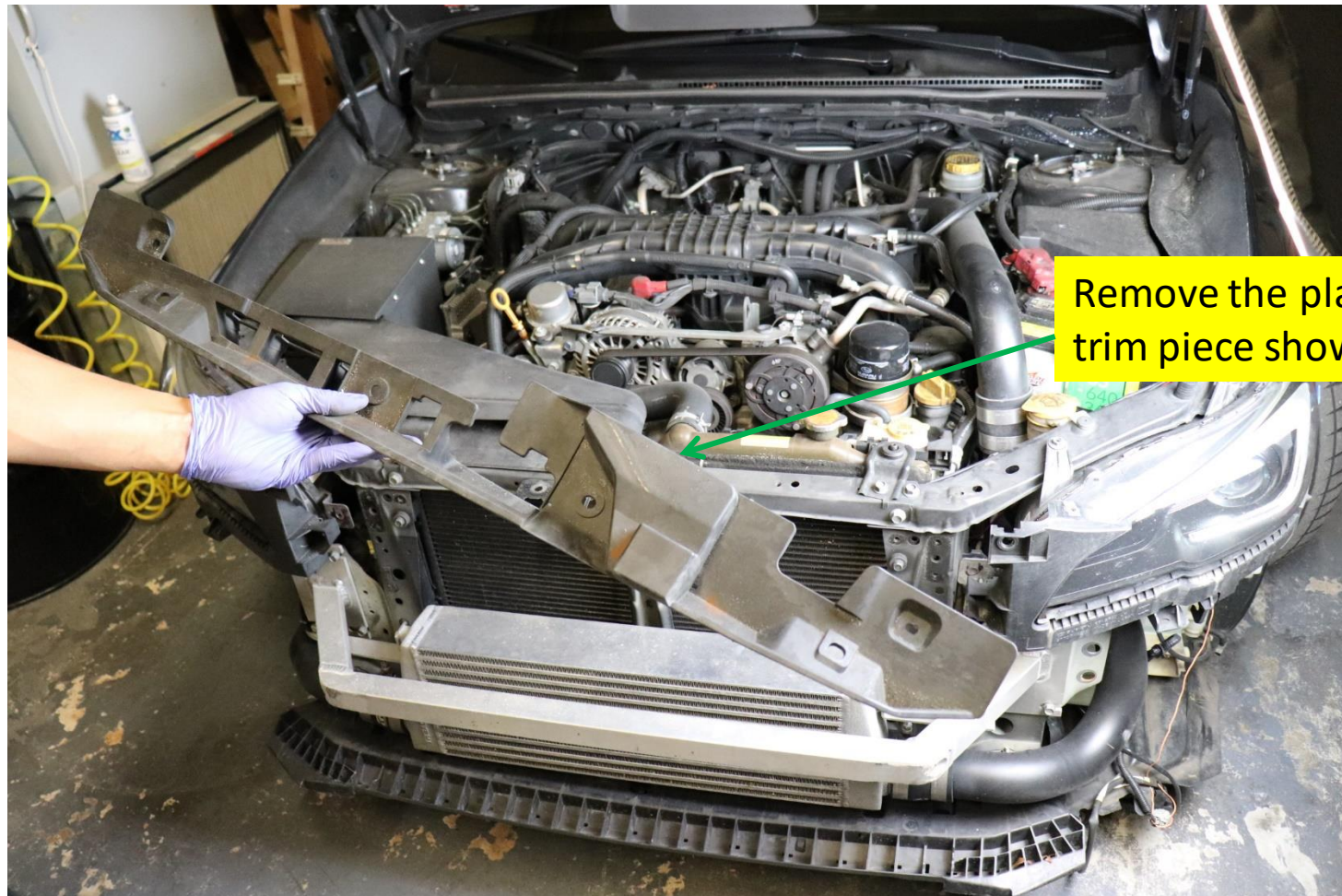
Kit Contents	Qty
Diode Dynamics RGBW Controller	1
Positive Cable w/ In-Line Fuse	1
Power Cable w/ Pigtail Connector	1
Switch	1
Switch Ground Cable w/Crimped Connector	1
8" Zip Ties	8
Cable Clips	2
M6 Lock Nut	2
Assembled LIT Flare	1



If you already own the Velossa Tech GEN 4 Subaru WRX BIG MOUTH, skip to slide 9 to see install and wiring instructions.

Stock Components Removal

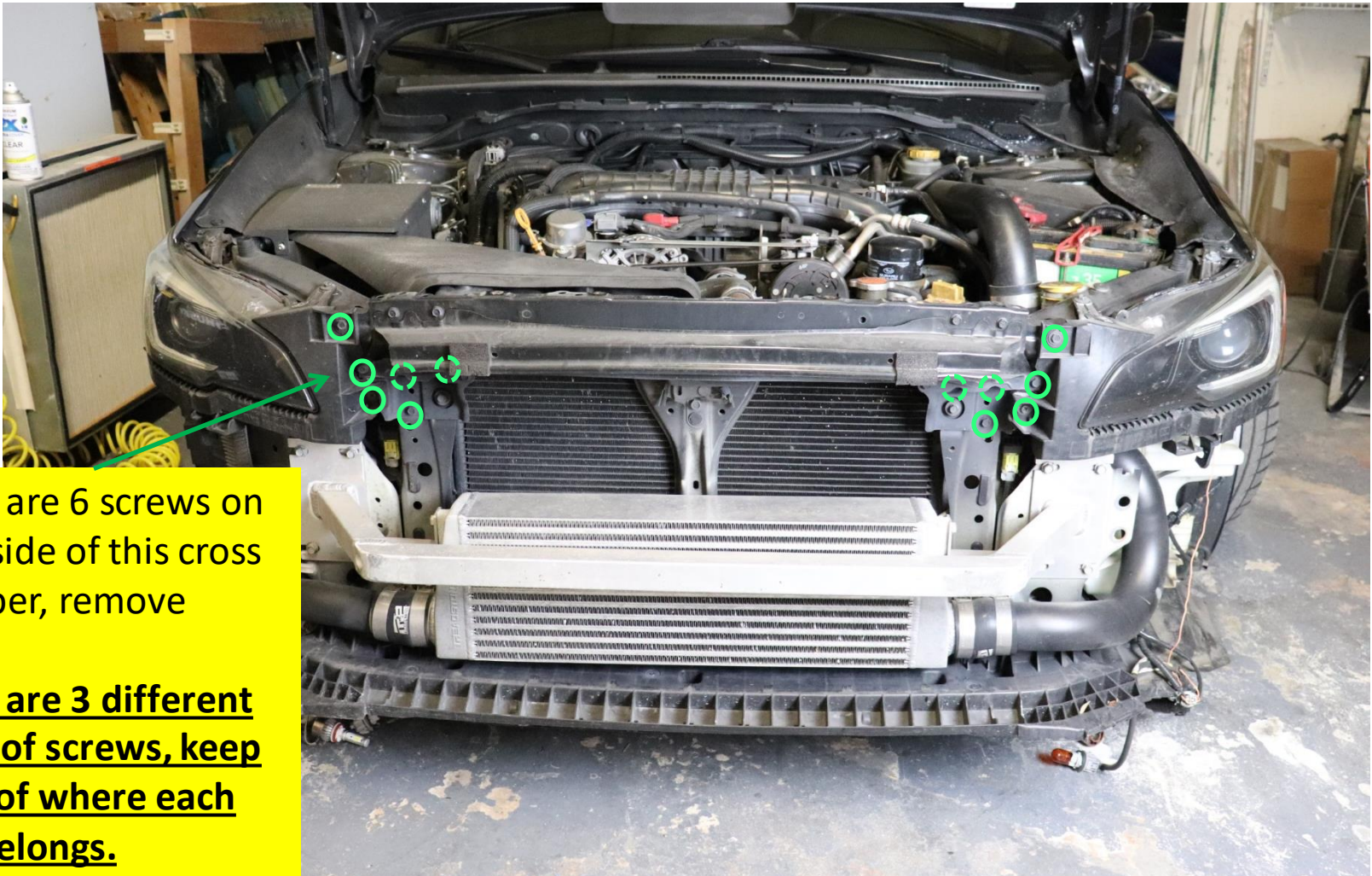
It is best to Google “How to remove bumper” for your particular trim.
After the bumper is removed, you will see the following.



Remove the plastic trim piece shown.

Stock Components Removal

Remove front cross member.



There are 6 screws on each side of this cross member, remove them.

There are 3 different types of screws, keep track of where each one belongs.

BIG MOUTH Installation

The BIG MOUTH slides into position as shown, make sure that it is seated properly over the OEM tab with one hole that is present underneath.

You MUST use the split ring lock washer on this bolt!

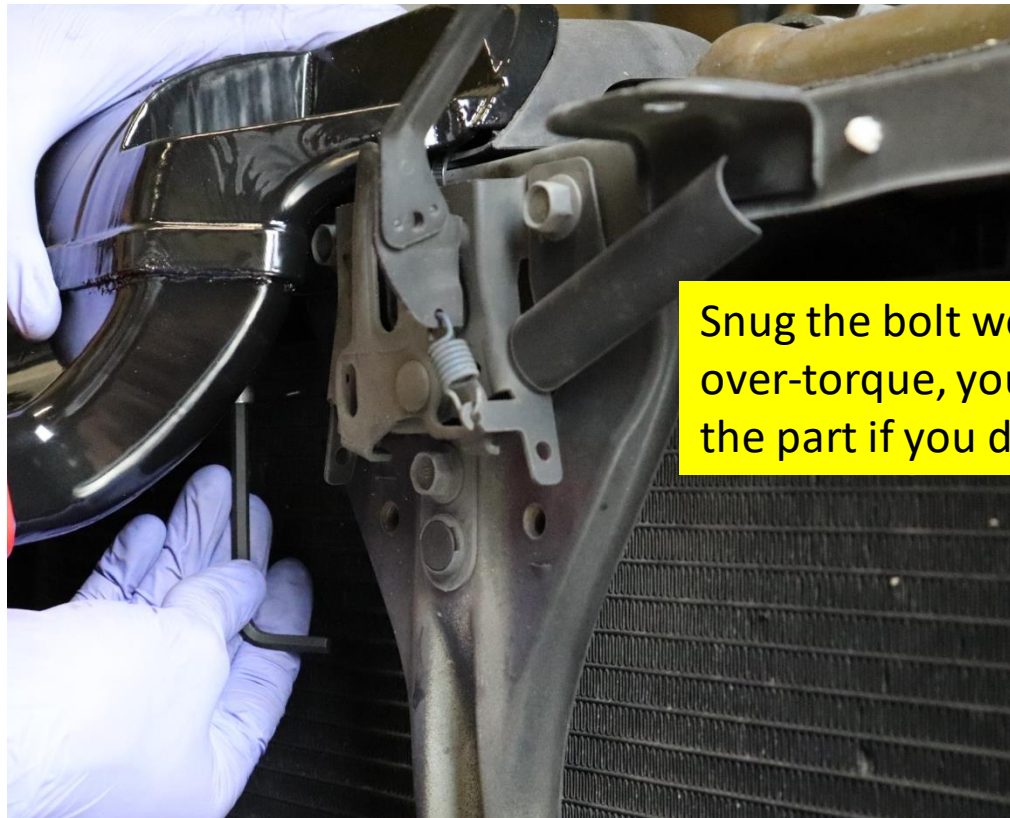


Place the 6mm split ring lock washer over the short 6mm bolt and balance on allen key as shown.



BIG MOUTH Installation

Be patient with this next step. Ensure the bolt, OEM hole and BIG MOUTH fastening point are all lined up, feel for thread engagement and slowly begin to thread the bolt into the BIG MOUTH.



Snug the bolt well, but do not over-torque, you risk damaging the part if you do so.

Patience is key, reverse rotation of the bolt until you hear it click/step down from the first thread under the BIG MOUTH, then begin to tighten.

BIG MOUTH Installation

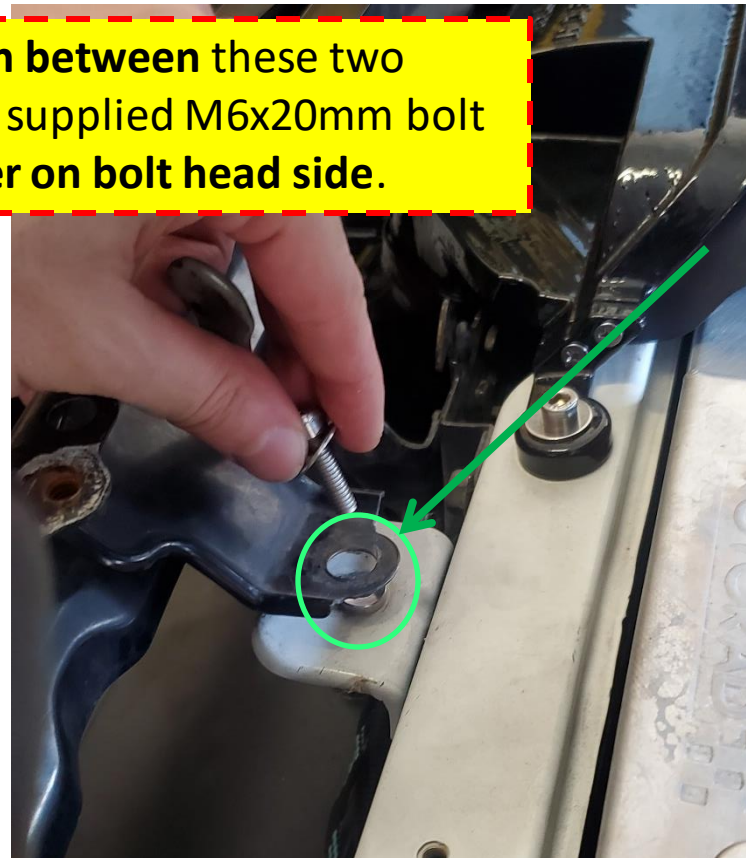
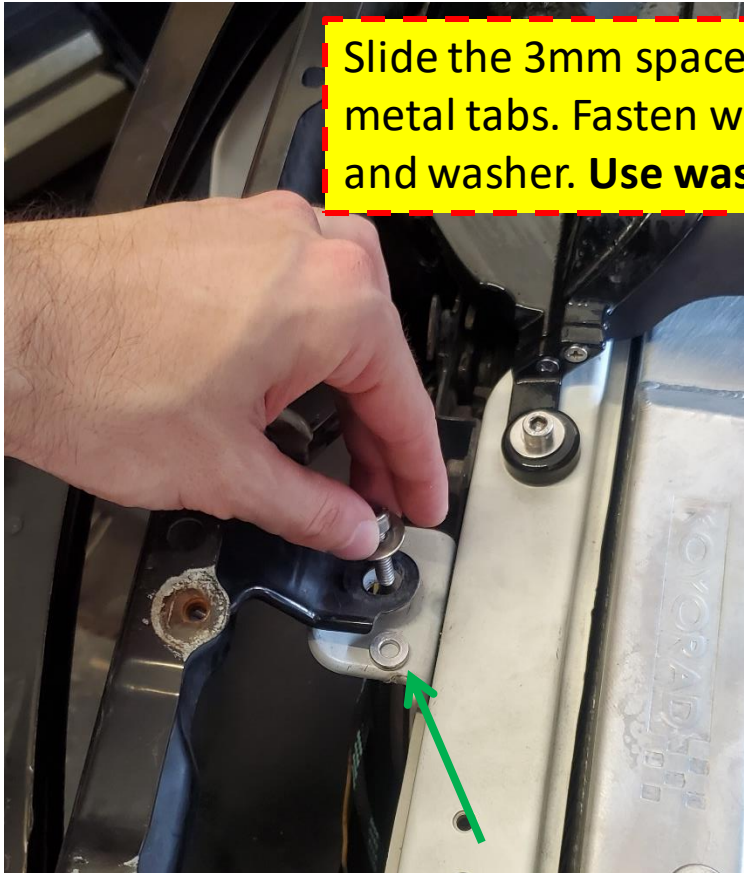
Install the M6x20mm bolt with washer on the driver side fastening point as shown.



BIG MOUTH Installation

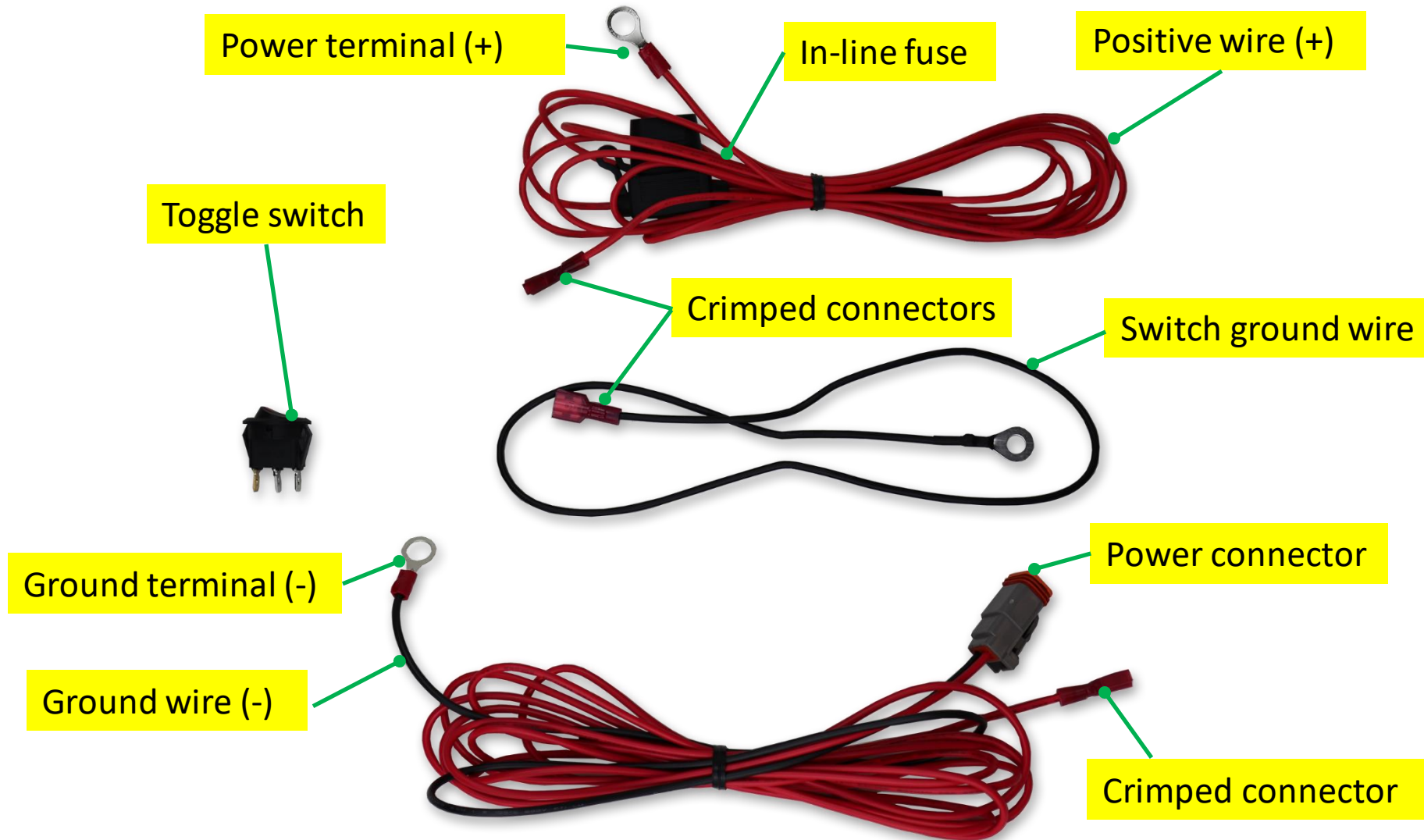
Once the BIG MOUTH is seated properly and screwed down, you may re-install the OEM cross member, ensure that the sides of the cross-member tuck behind the flaps behind the headlights before screwing together.

Slide the 3mm spacer in **between** these two metal tabs. Fasten with supplied M6x20mm bolt and washer. **Use washer on bolt head side.**

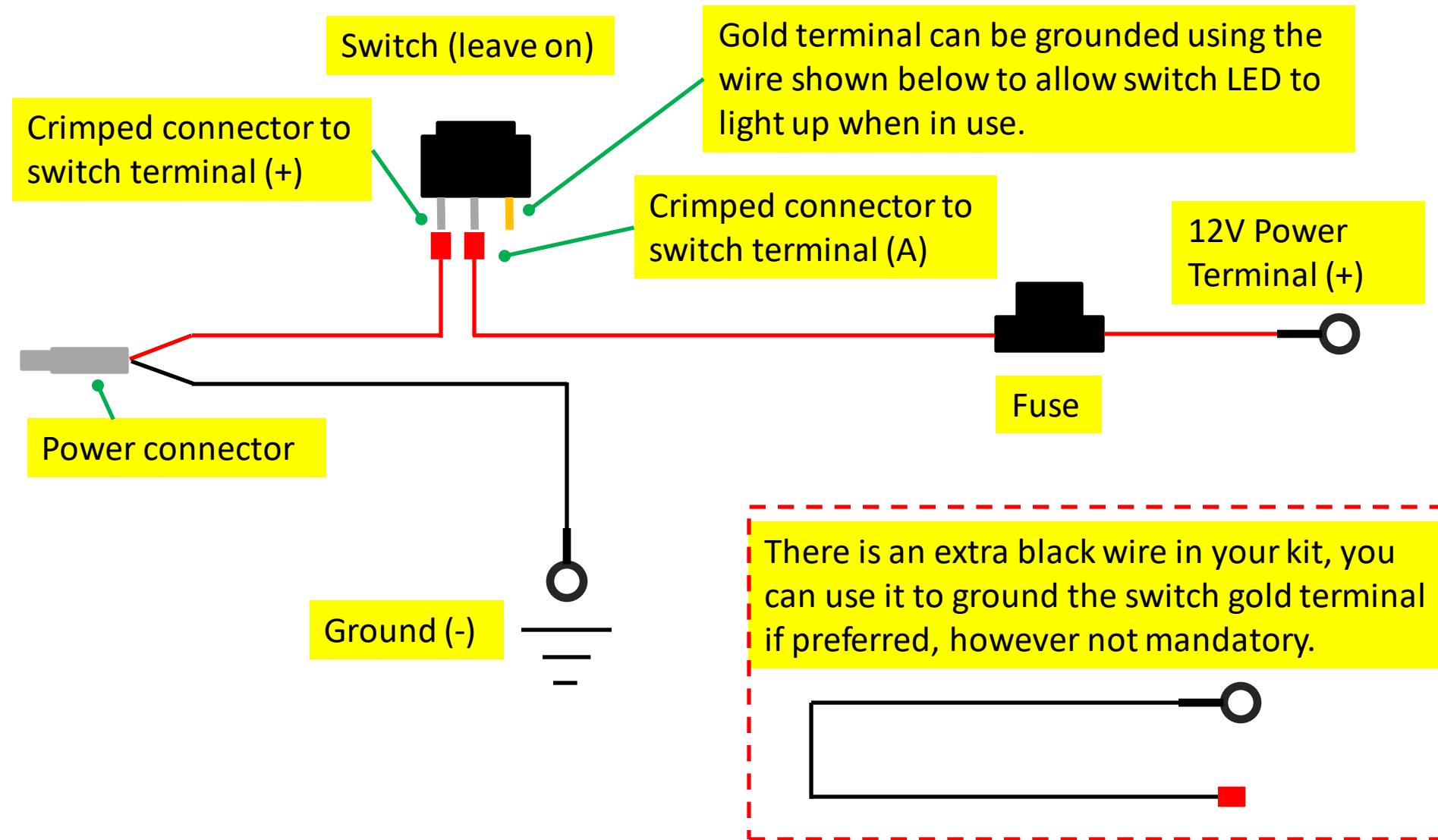




Wiring Harness

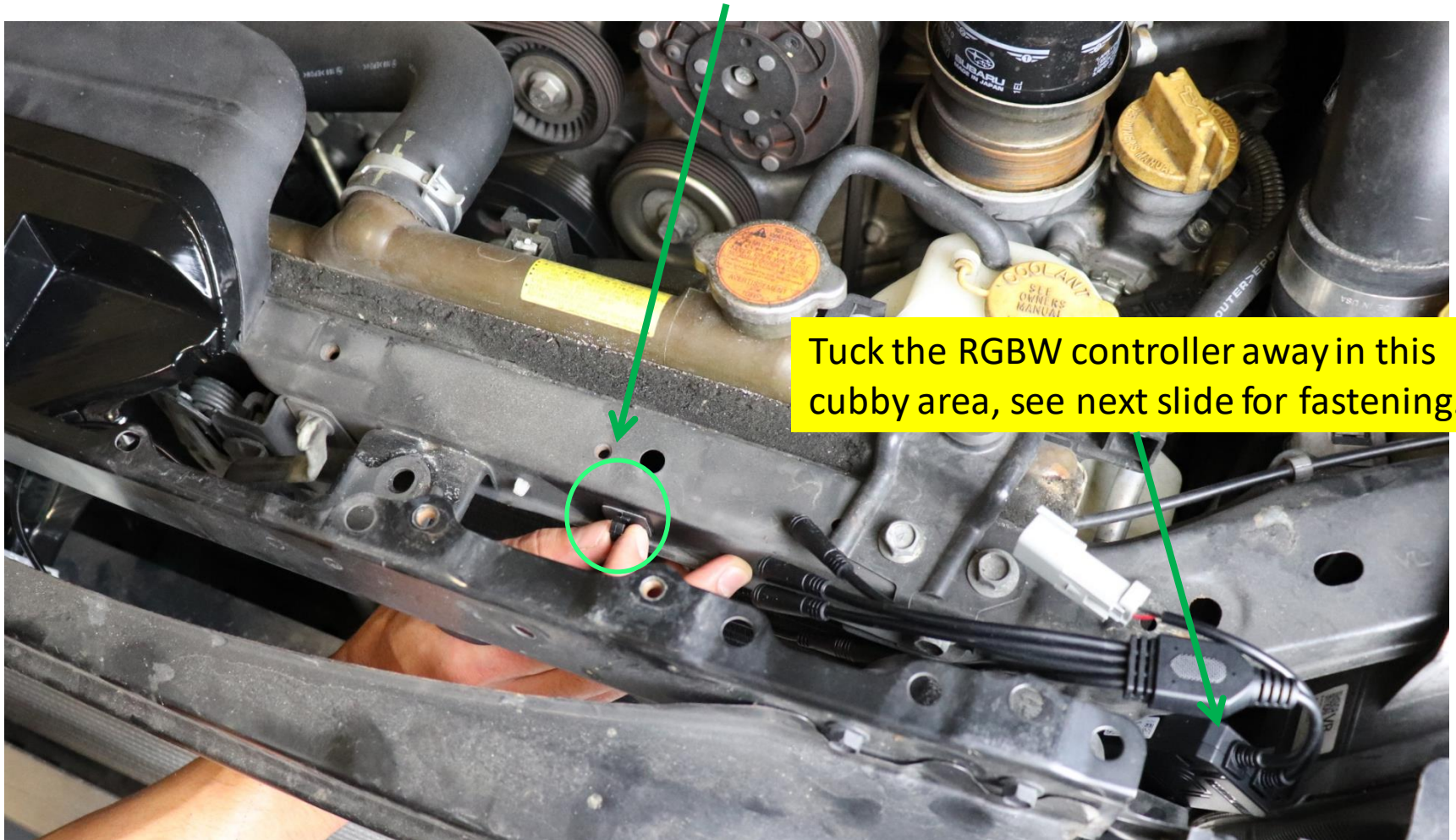


Wiring Harness Schematic



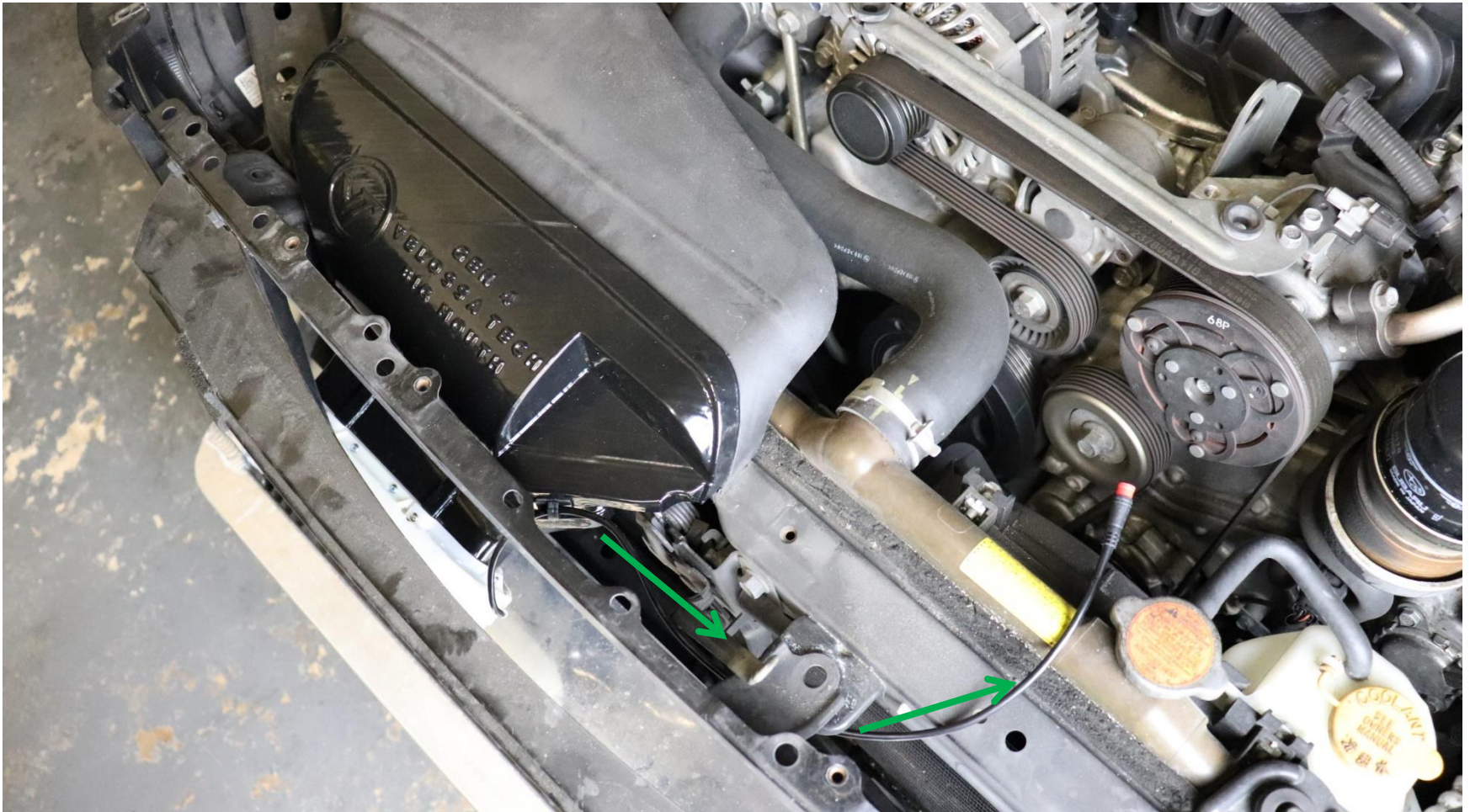
Wire Support

Clean this surface and place the cable clip as shown.



Wire Routing

Route the LED power wire underneath the metal brackets as shown.



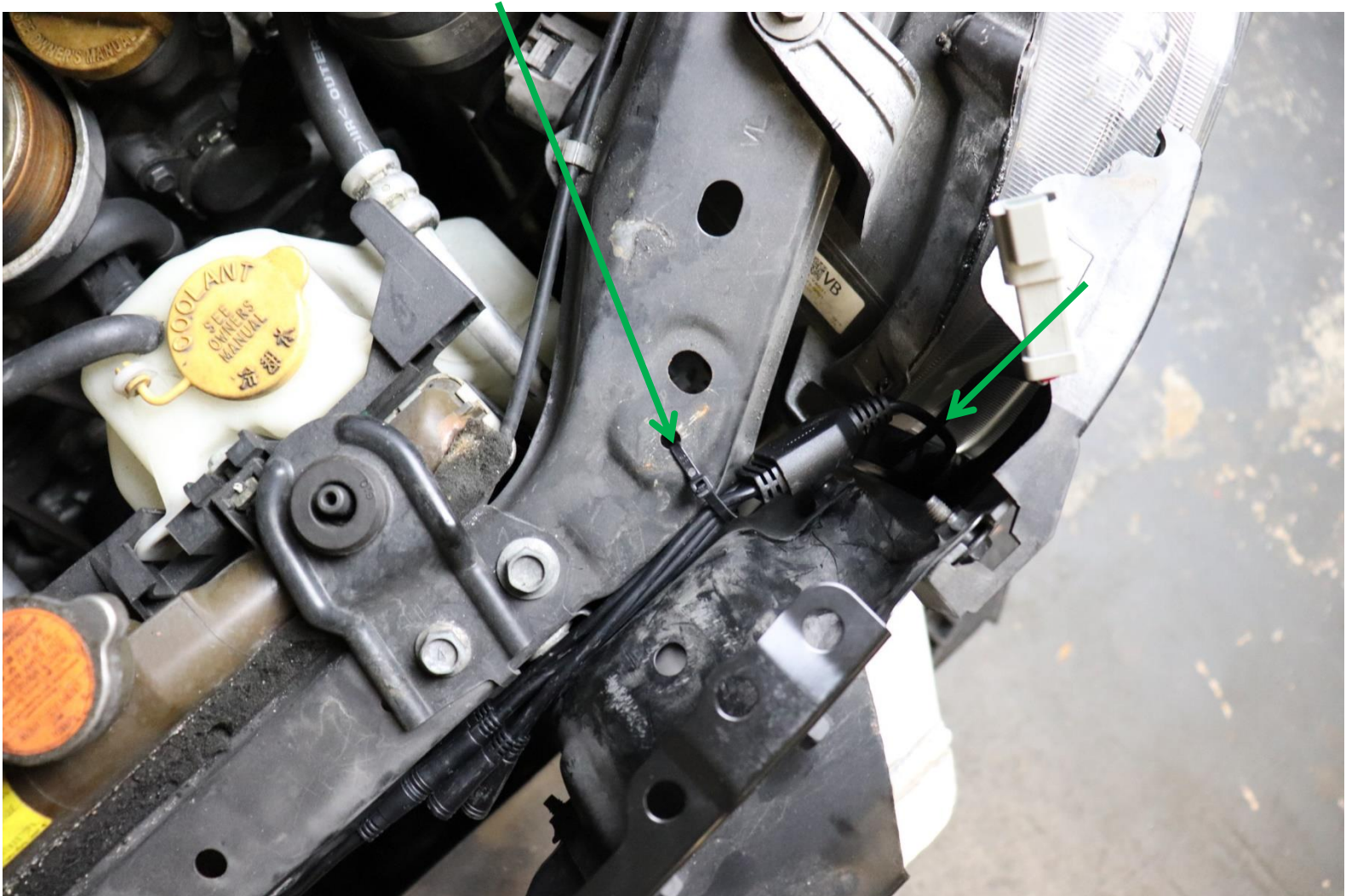
Wire Routing

Plug the LED into the controller, ensure that the wire is not being stressed!!!!



Controller Placement

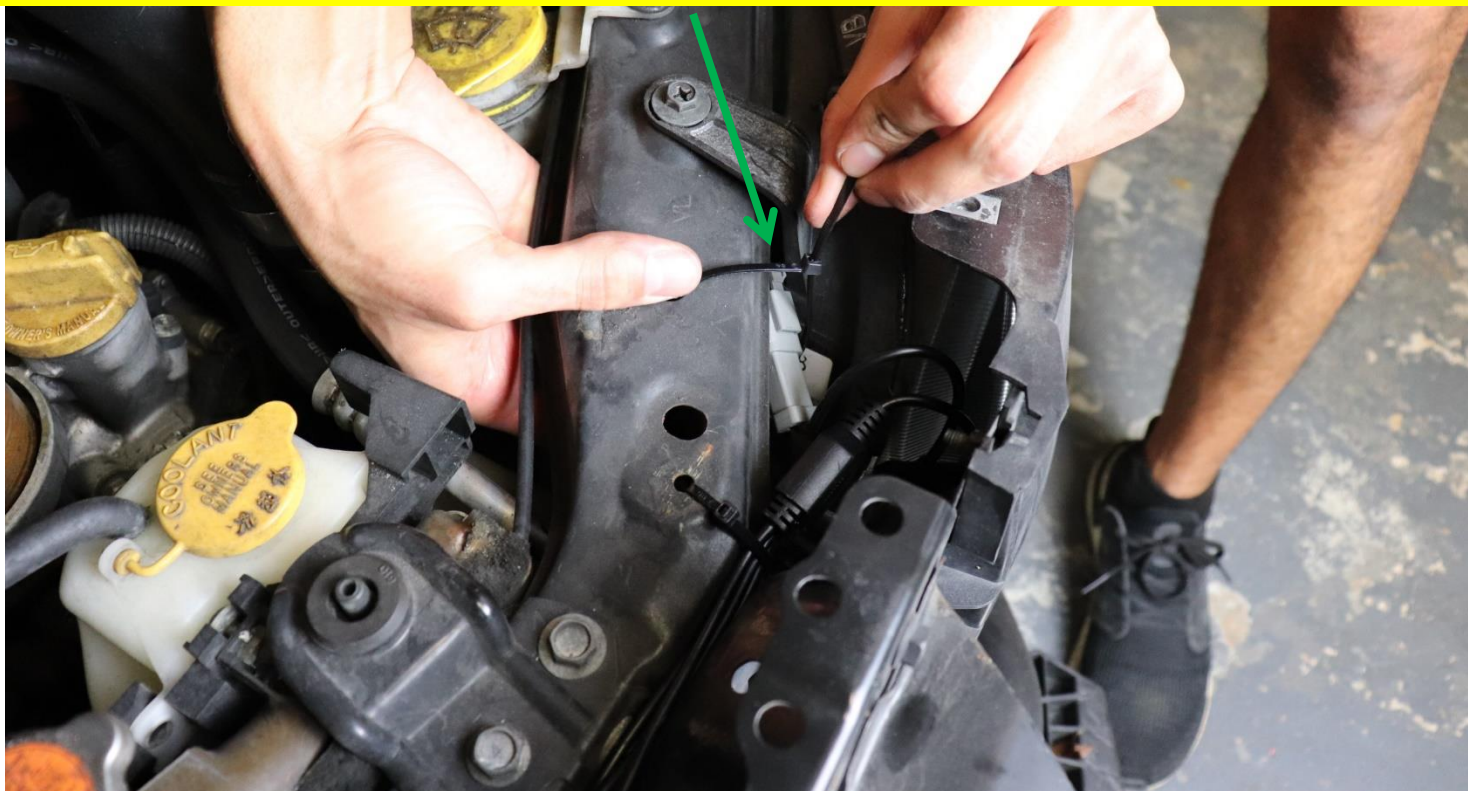
Use a zip tie here, note the location of the tucked controller.



Power Plug

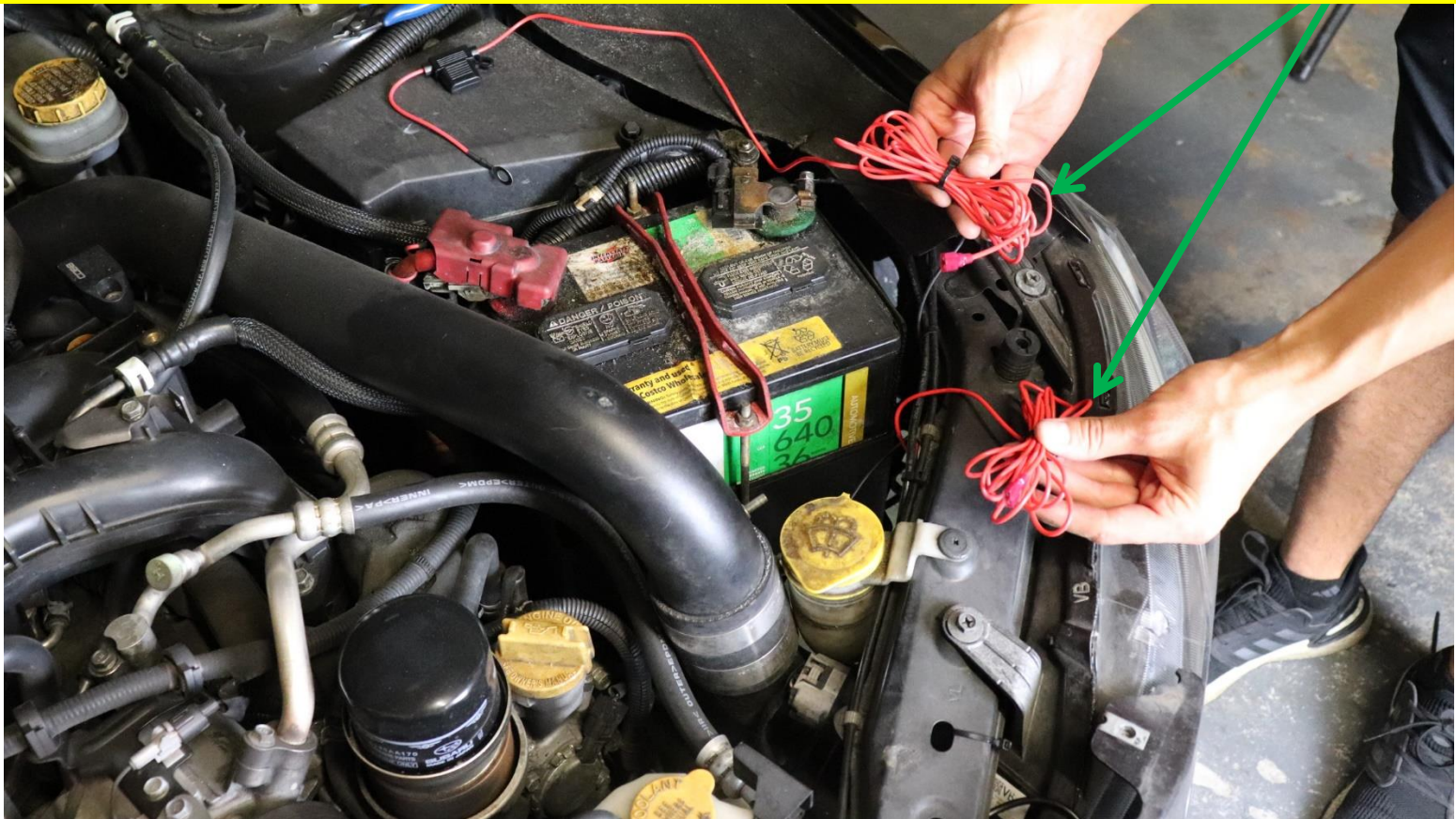
Zip tie the plug underneath this frame rail.

Plug the main power connector into the controller. Surround the two connectors with the zip tie as shown. Move the connectors to underneath the frame rail to conceal them and tighten the zip tie along the center.



Power Bundles

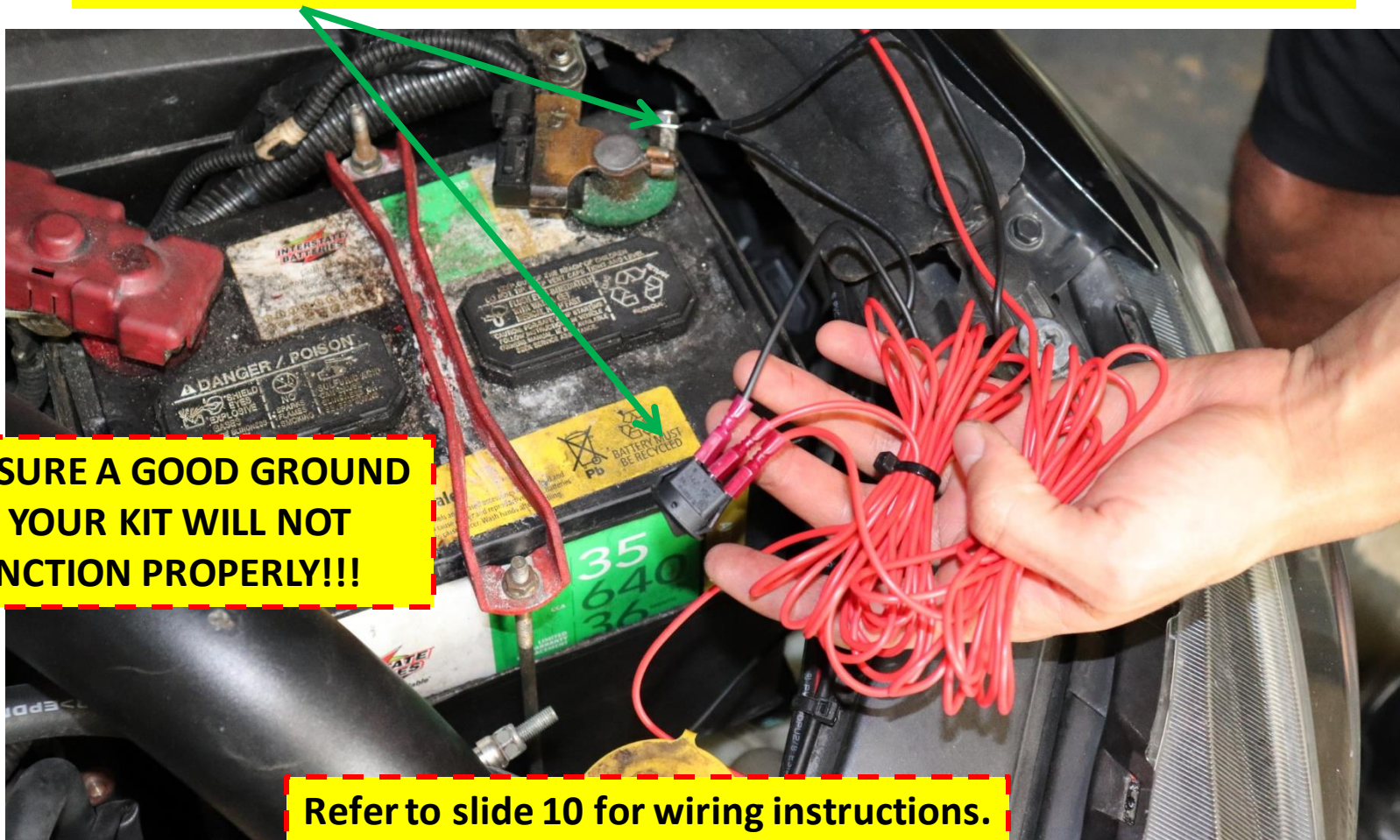
The first bundle is power wire from the controller main plug, the second bundle has the in-line fuse as shown. Bundle them as shown. Leave a few inches of free wire on the first bundle and **~20" of free wire** on the second bundle (in-line fuse). Zip tie the bundles.



Main Switch and Ground

Note: the switch IS NOT USED to control the LED's, it is just used to cut power if needed.

Plug the 3 wires into the switch, ground both black wires at the battery.



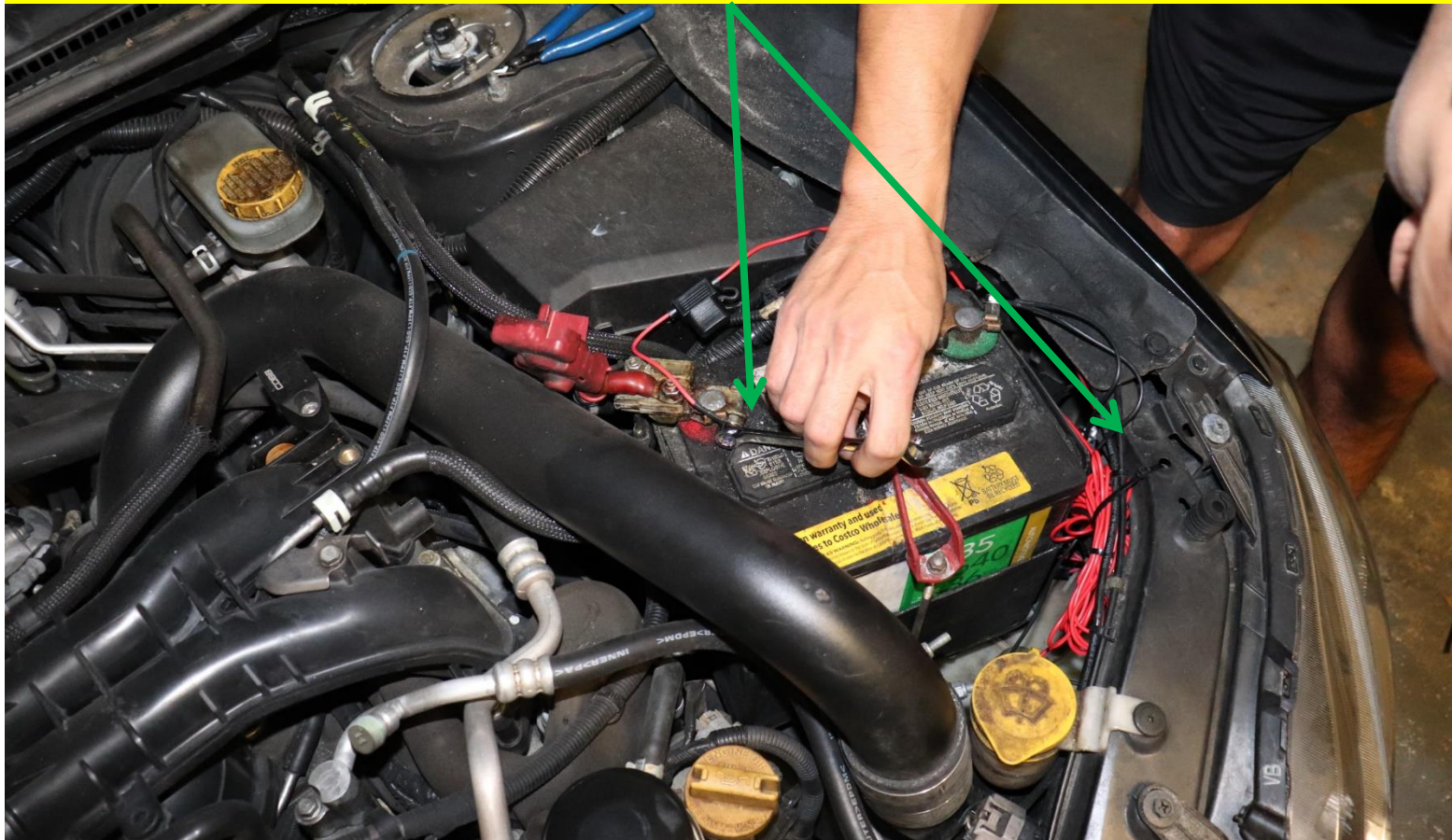
**ENSURE A GOOD GROUND
OR YOUR KIT WILL NOT
FUNCTION PROPERLY!!!**

Refer to slide 10 for wiring instructions.

Main Power

Route the power wire around the battery and fasten to battery terminal using 6mm nut.

You may tuck the bundles away under frame rail or neatly behind the battery and zip tie.



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!

