



**2013-2017 Hyundai Veloster Turbo
BIG MOUTH “LIT KIT” Ram Air
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 25mm Cap Screw	2
M6 lock nut	1
M6 large washers	3
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 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.

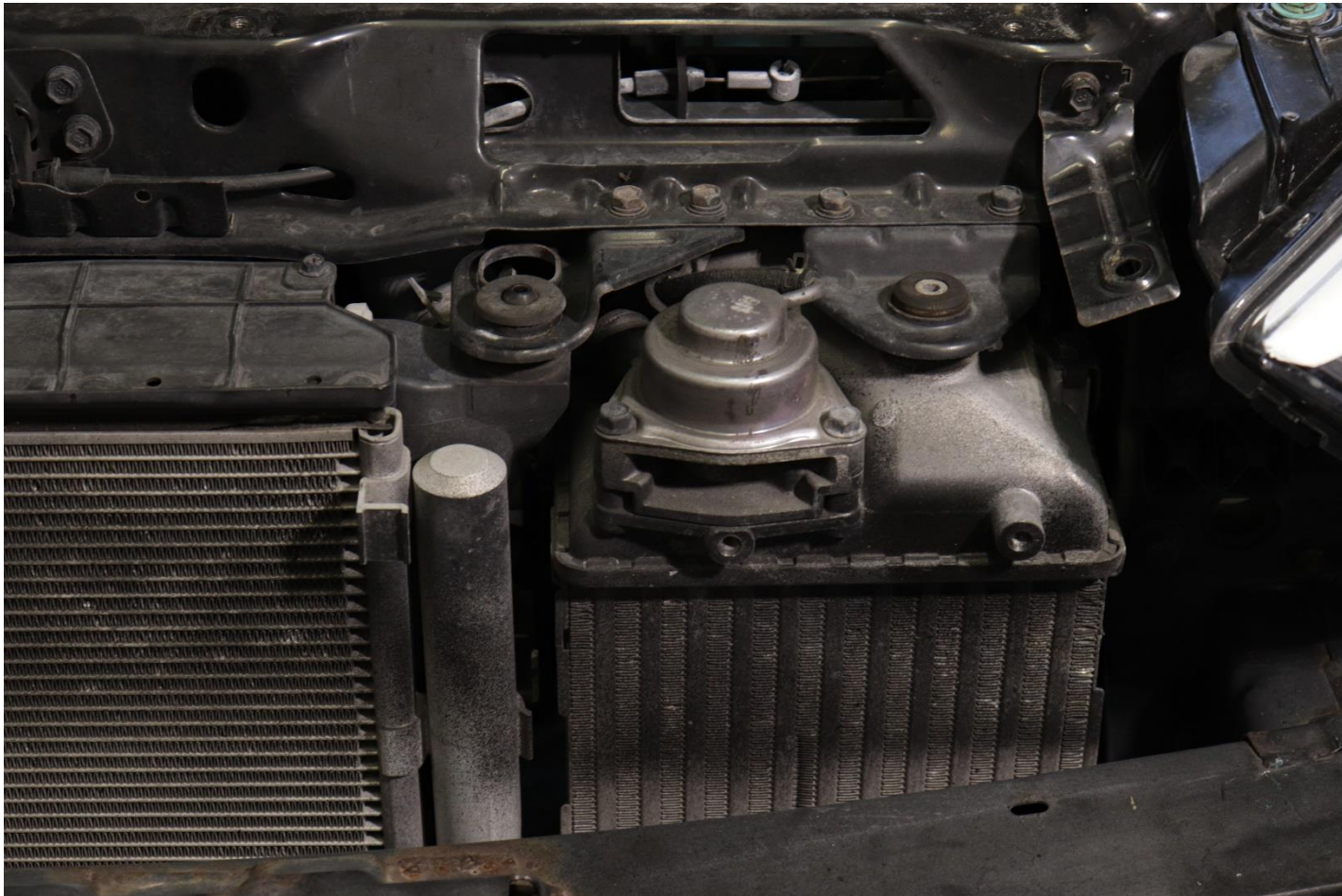
Kit Contents	Qty
Diode Dynamics RGBW Controller	1
Positive Cable w/ In-Line Fuse	1
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Switch	1
Switch Ground Cable w/Crimped Connector	1
8" Zip Ties	8
Cable Clips	2



If you already own the Velossa Tech Veloster Turbo BIG MOUTH, skip to slide XX to see install and wiring instructions.

Stock Components Removal

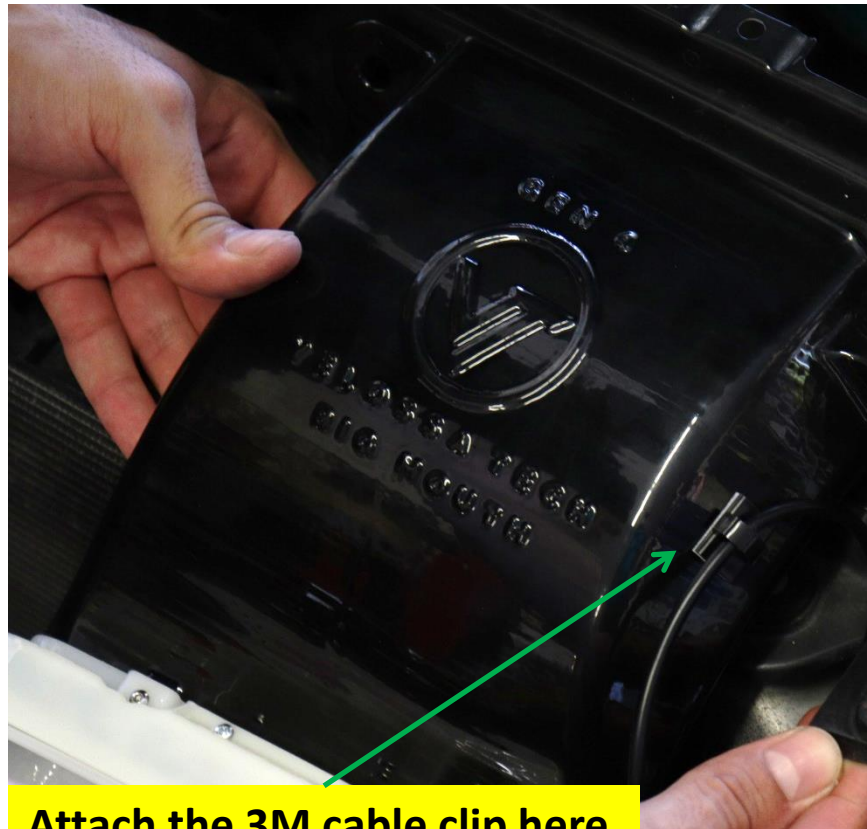
It is best to google “how to remove bumper” for your particular trim, after the bumper is removed, you will see the following.



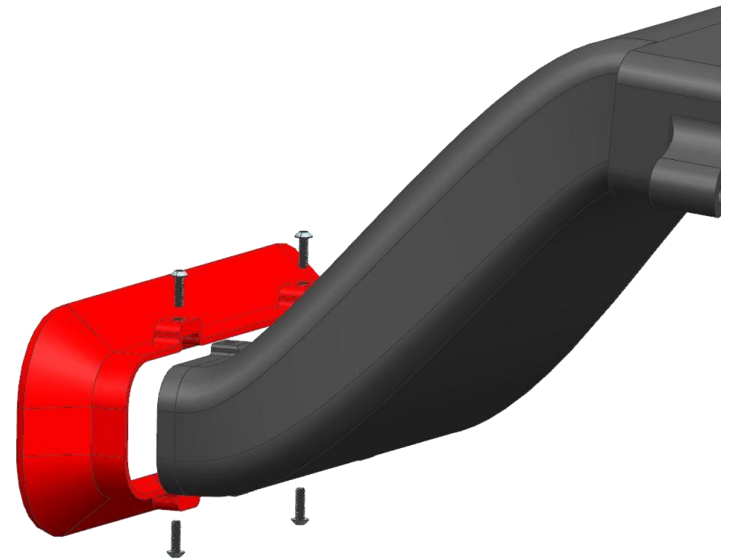
Install the LIT BIG MOUTH Flare

SKIP THIS SLIDE IF YOU PURCHASED A FULL LIT KIT

Attach the supplied cable clip to your BIG MOUTH as shown. Fasten the cable and provide enough slack to not strain the cable.



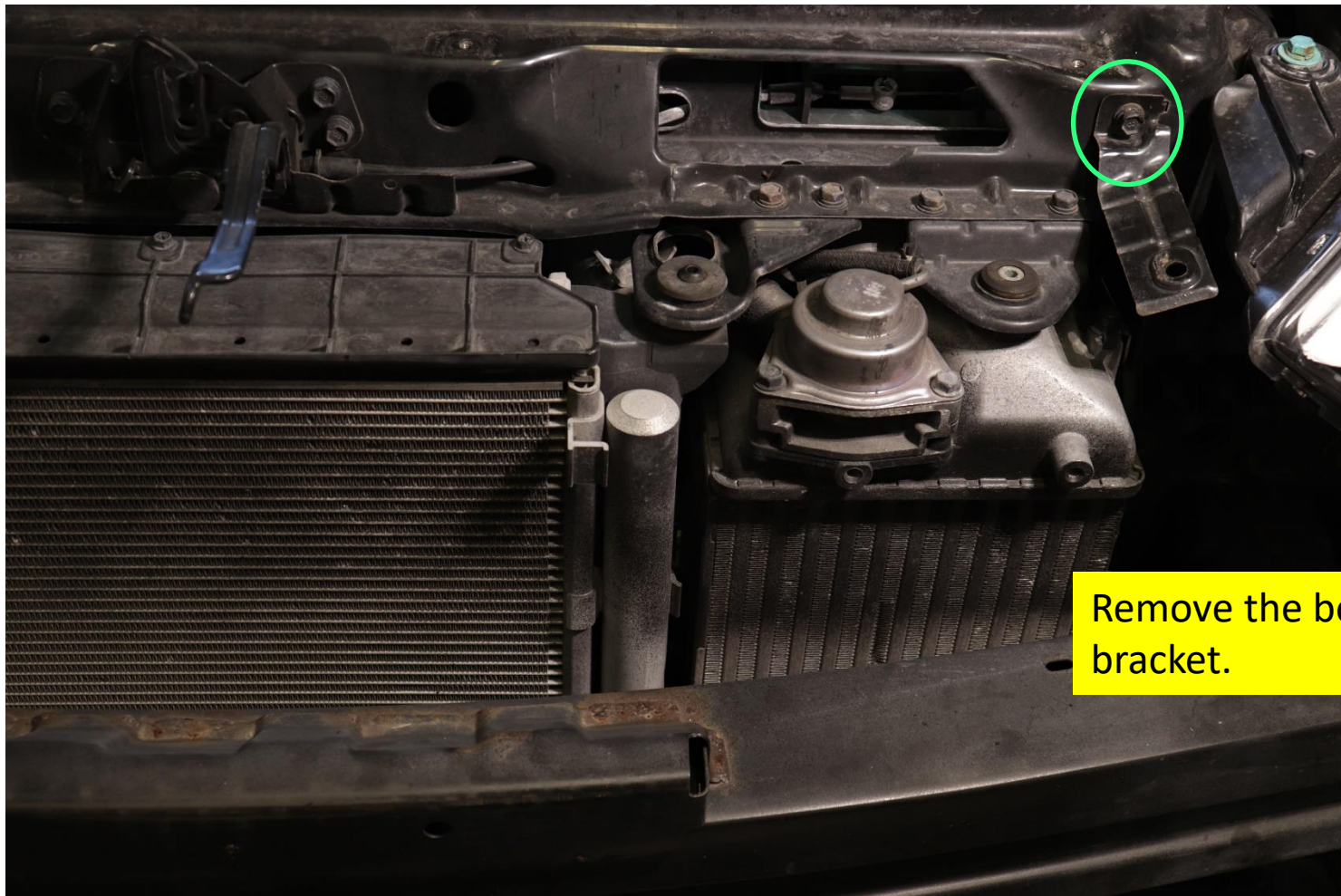
Attach the 3M cable clip here



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.

BIG MOUTH Installation

Remove the OEM bolt located here. Keep the metal tab in place, the bolt will be replaced with the M6 bolt found in the kit.



Remove the bolt, keep bracket.

BIG MOUTH Installation

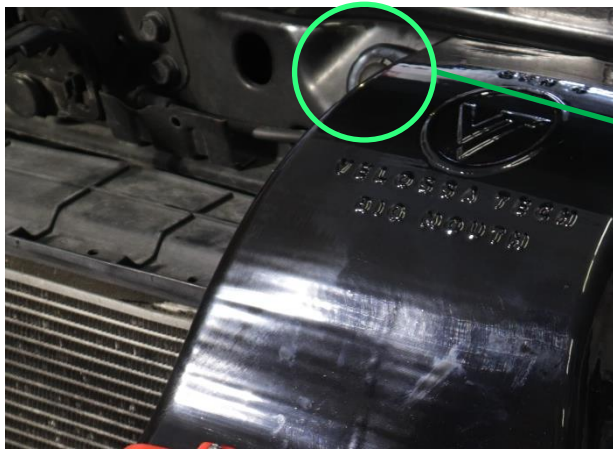
Fasten the M6 bolt with washer through this mounting point on the BIG MOUTH, the mounting point goes OVER the OEM bracket.

Ensure the top of edge of the BIG MOUTH sits parallel to the cowl edge shown here.



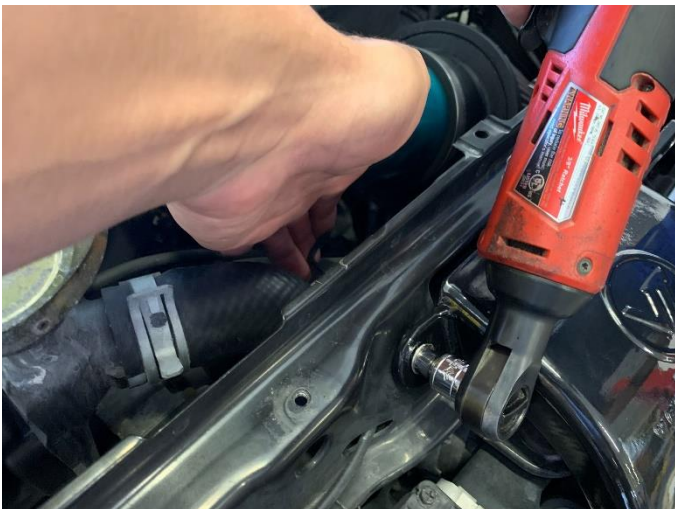
Big Mouth Installation

Use the passenger side mounting hole on the BIG MOUTH to mark the hole for drilling through the sheet metal. Ensure the drill bit is centered in the hole, ensure the drill bit does not walk (start with a small bit for a pilot hole). Final hole should be $\frac{1}{4}$ " or $\frac{5}{16}$ " (a bigger hole will allow for level adjustability of the BIG MOUTH if required).



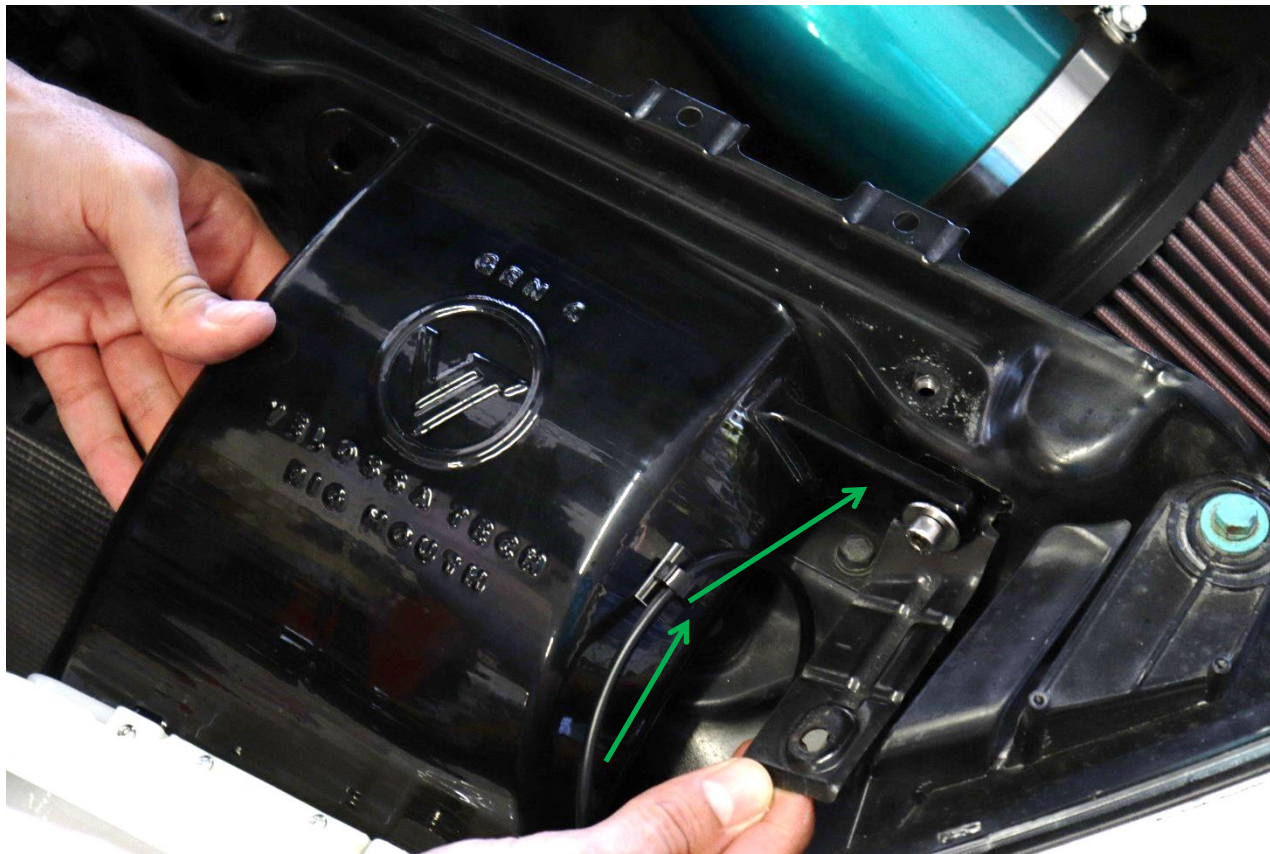
Big Mouth Installation

Install the second bolt from the back side of the sheet metal, there is an opening and clearance for the Allen key. Fasten with washer and nut on both sides, do not over-torque, hand tight is acceptable.



Big Mouth Wiring

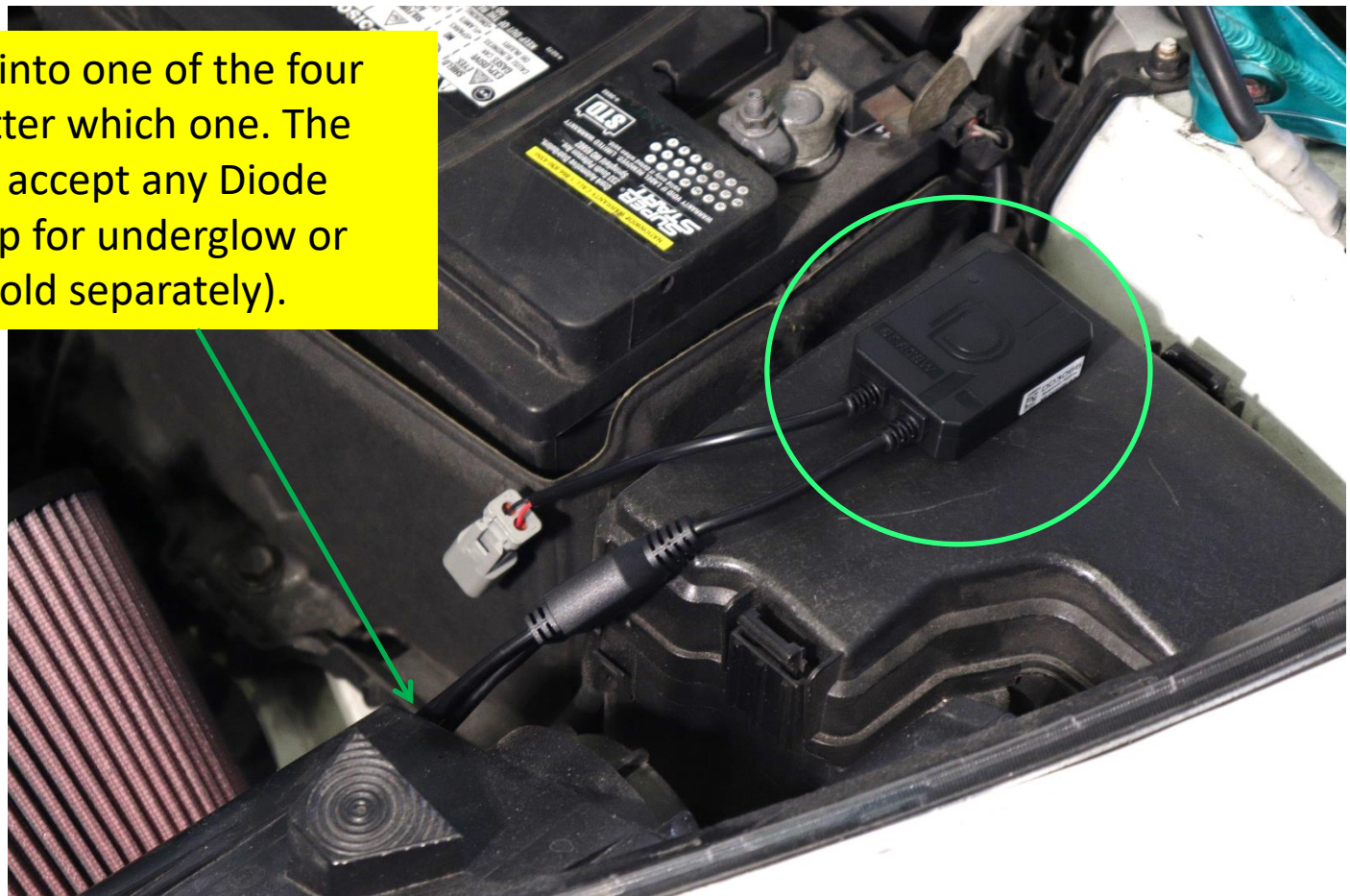
Begin by snaking the LED wire that is clipped to the side of the BIG MOUTH, as shown. Snake it through behind the headlight, there is a gap.



Big Mouth Wiring

Mount the controller on top of this black box. Use the supplied double sided tape. Clean the surface with a clean cloth prior, and press firmly in place as shown.

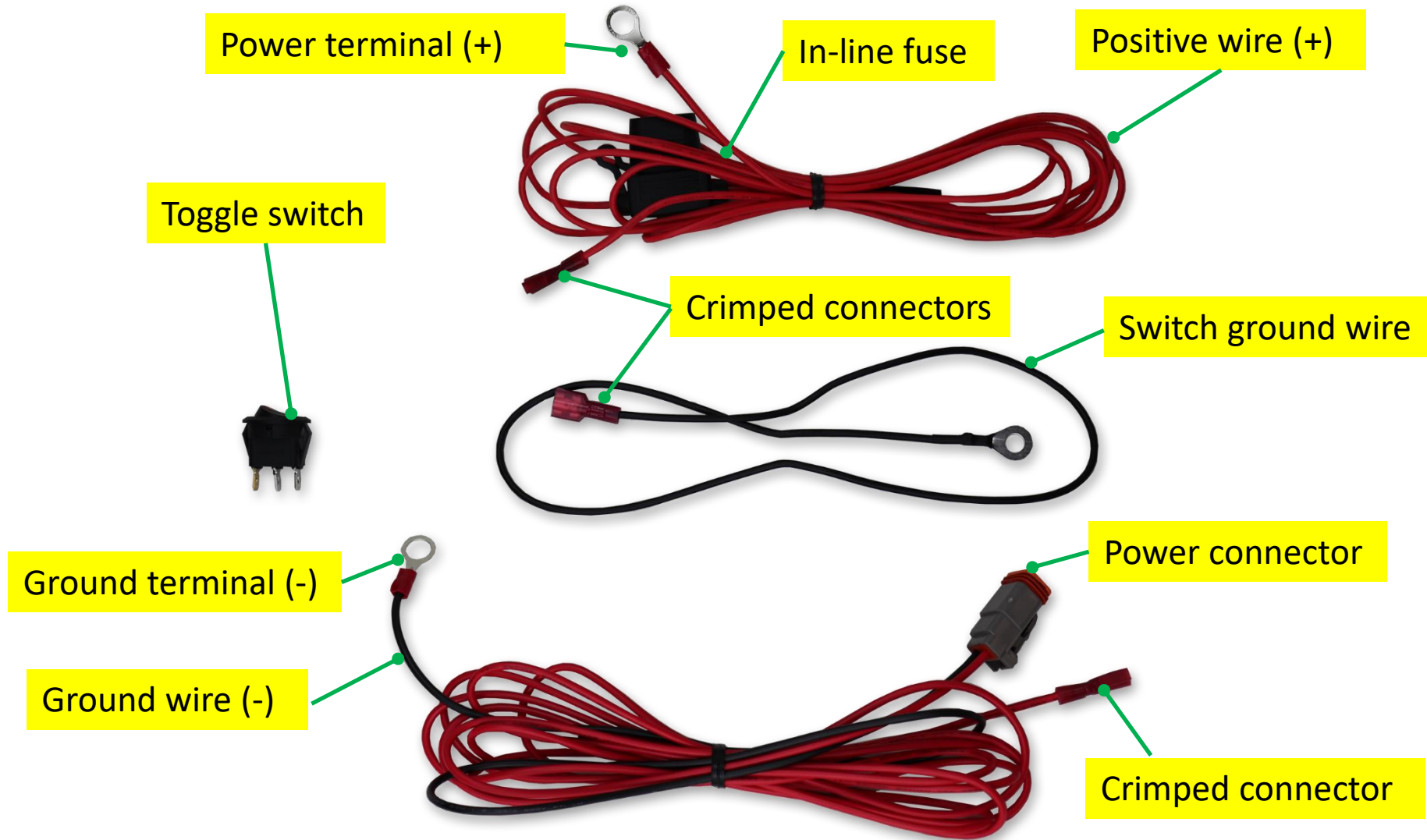
Plug in the LED cable into one of the four ports, it does not matter which one. The other three ports can accept any Diode Dynamics lighting strip for underglow or underhood lighting (sold separately).





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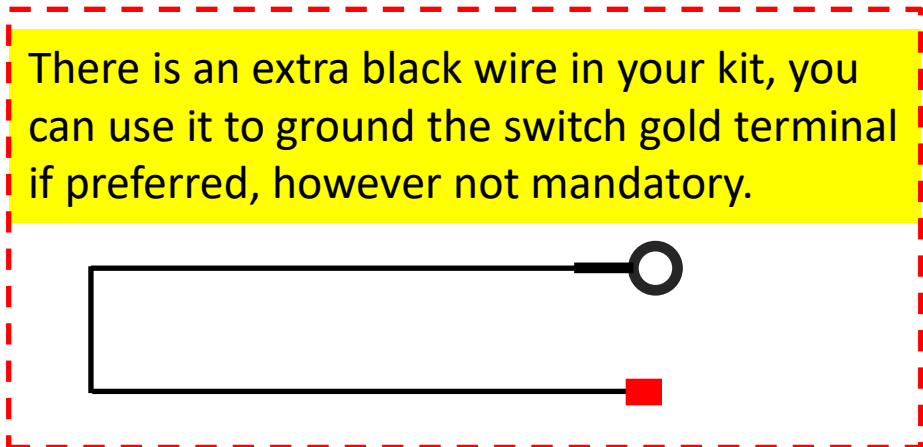
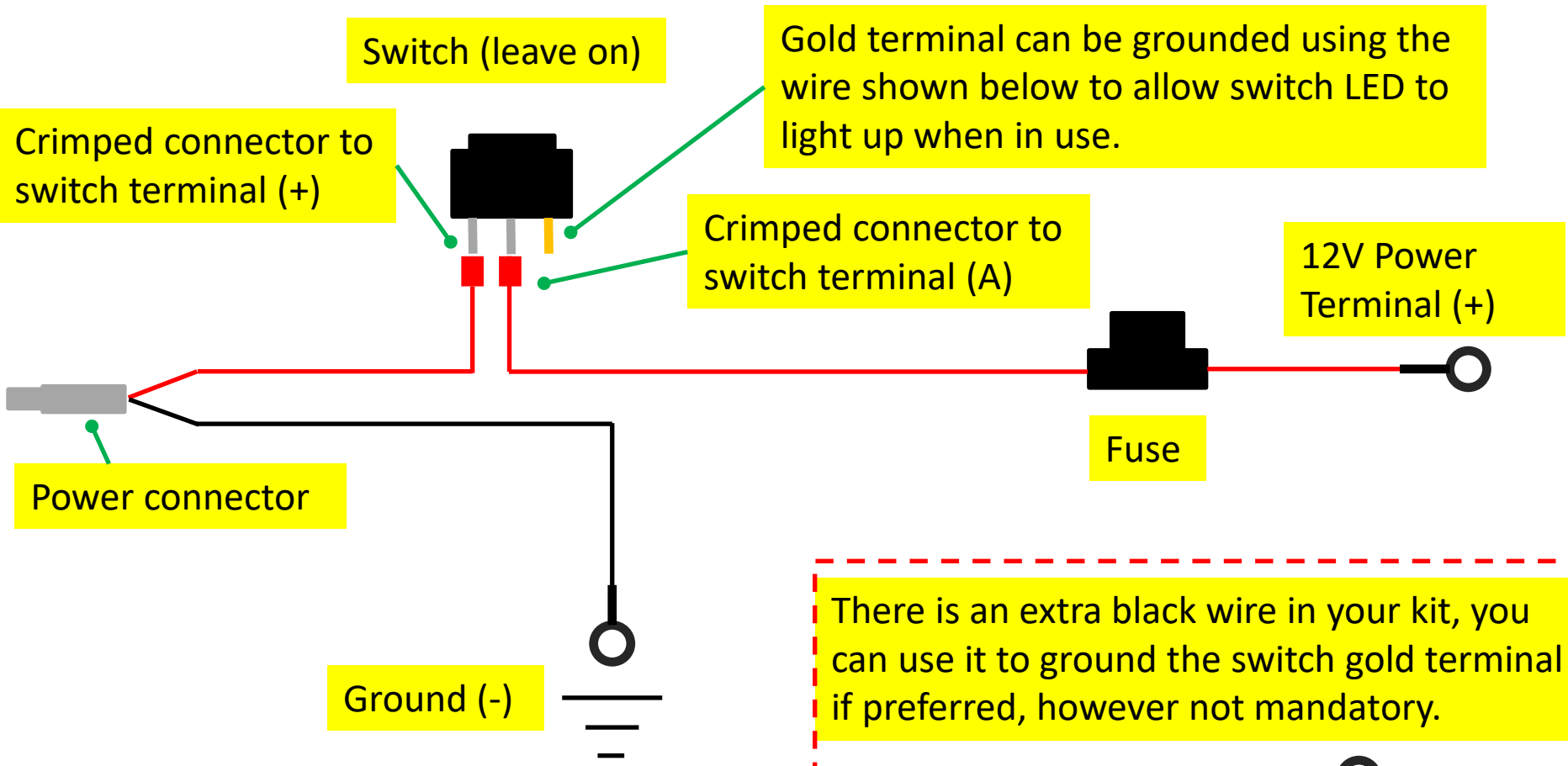
Wiring Harness





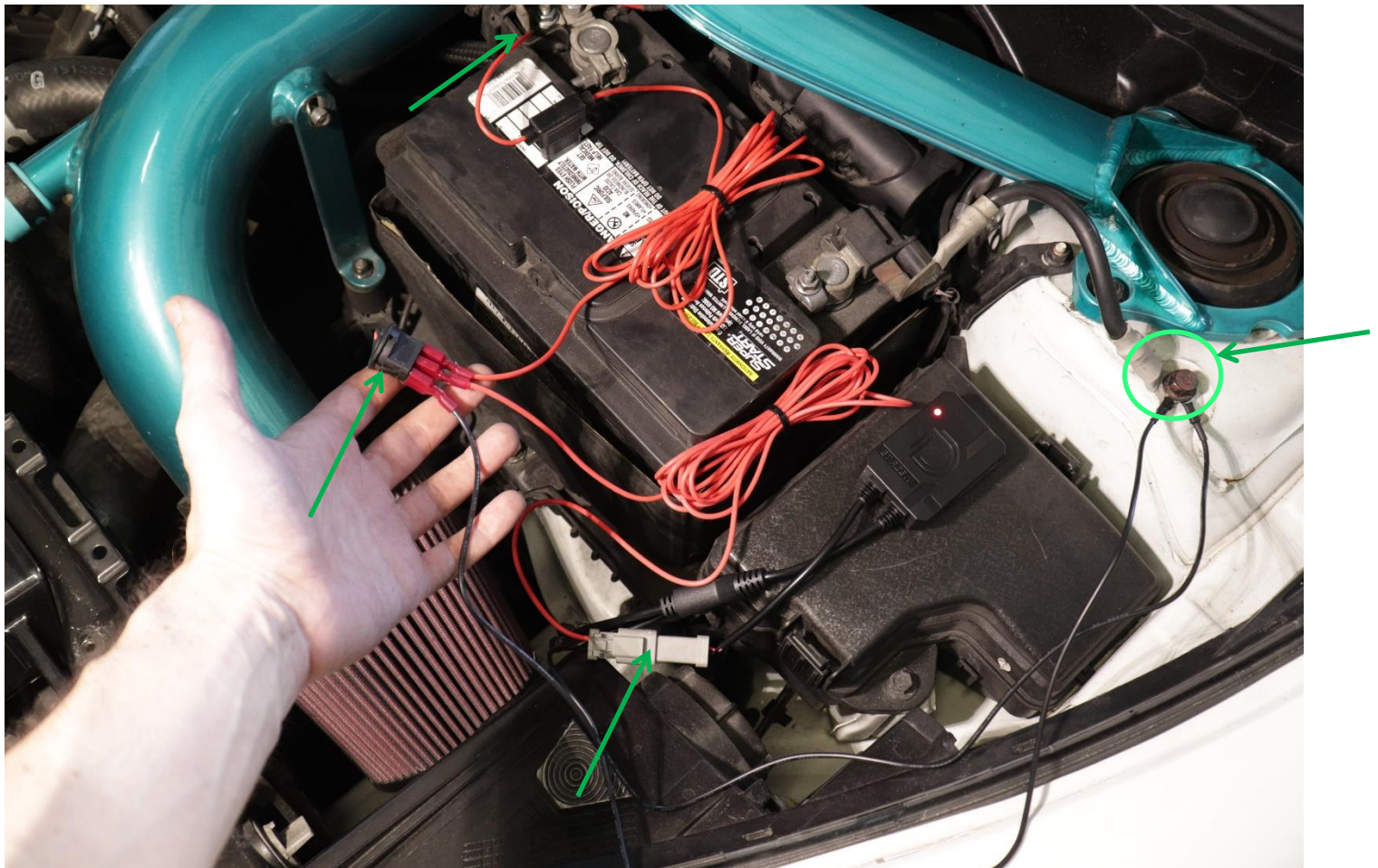
VELOSSA TECH

Wiring Harness Schematic



Big Mouth Wiring

Use the wiring diagram and zip ties to wire the system up as shown. Ground the two black wires as shown. Plug in the grey main power connector and install the blade connectors to the main power switch.



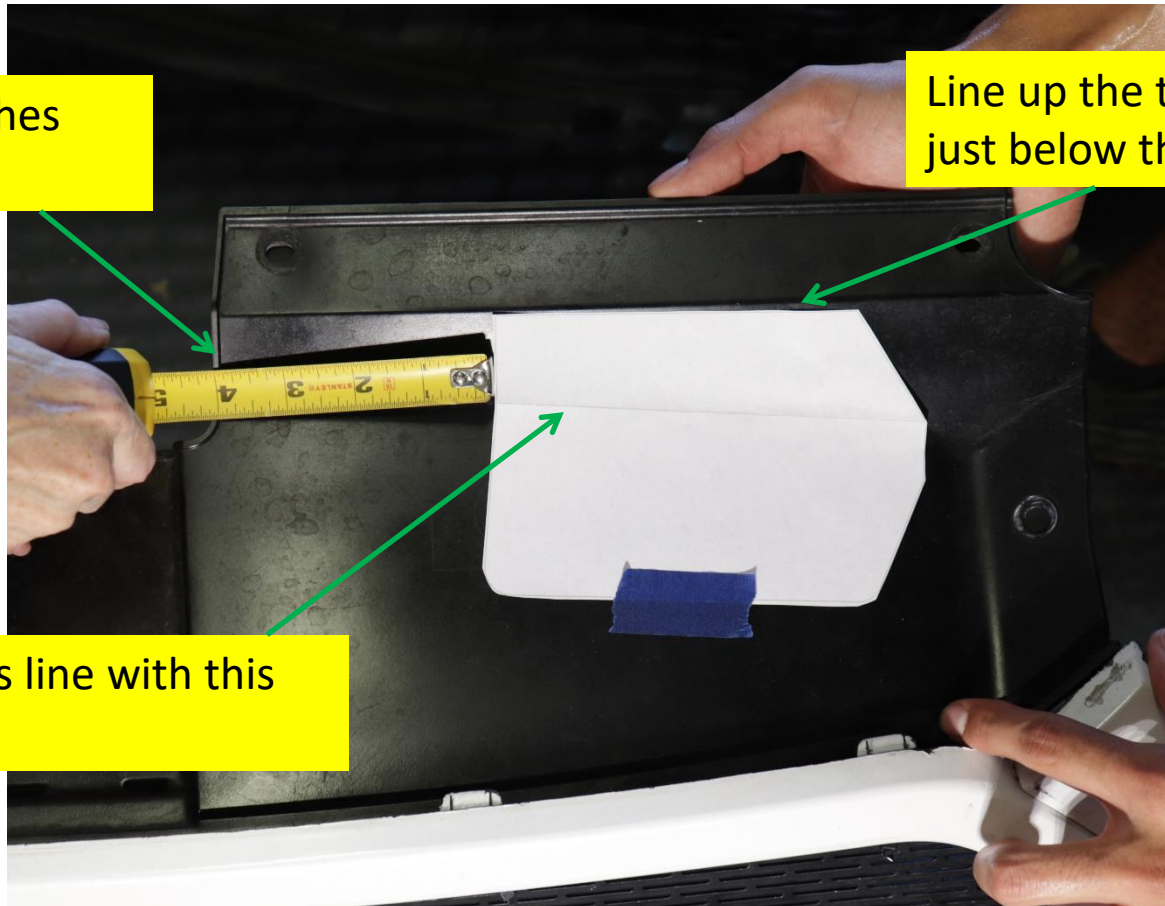
Trimming

Use this trimming template to trim the OEM bumper cover. Place the template as shown, measure 4 inches from this edge and line up the line with the corner in the shroud. You can use tape to hold it down for marking.

Measure 4 inches from here.

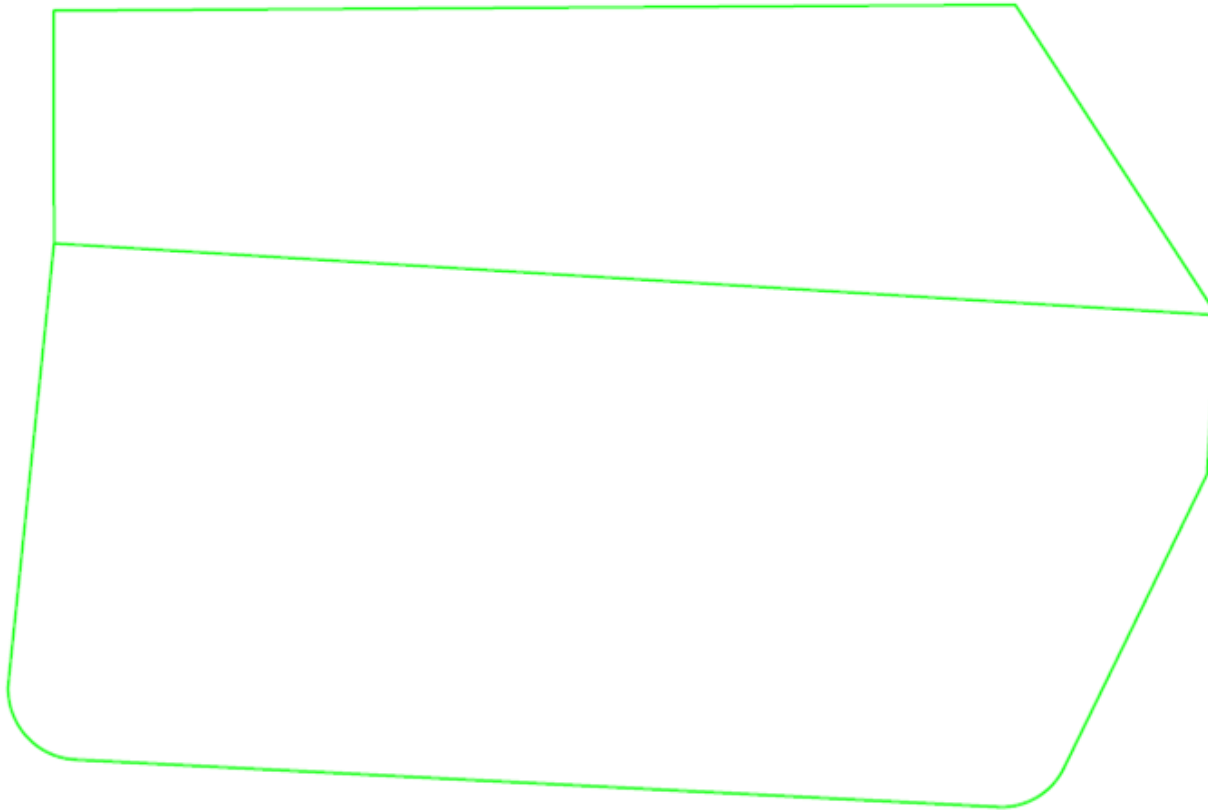
Line up the template edge just below this edge.

Line up this line with this corner.



Trimming

If a new template is needed, print this sheet on standard paper and cut it out. Ensure the printer settings DO NOT scale the sheet as this will affect the accuracy of the template dimensions.



Trimming

After marking around the template, cut the cover using a cut-off wheel or router bit.

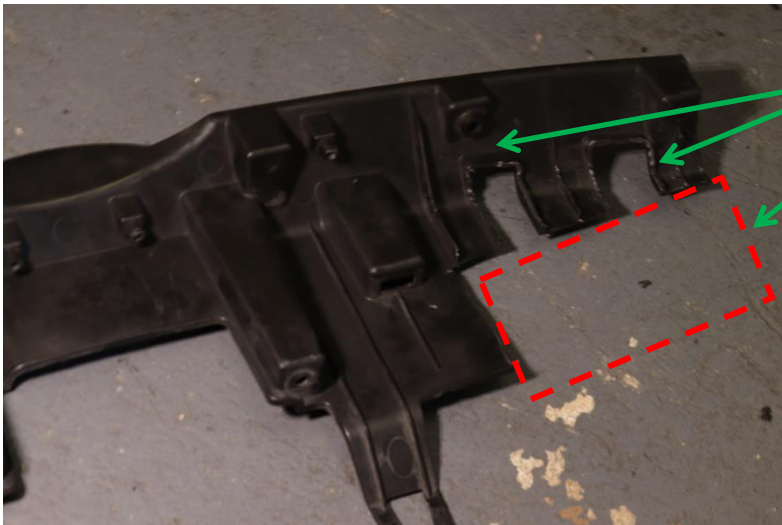
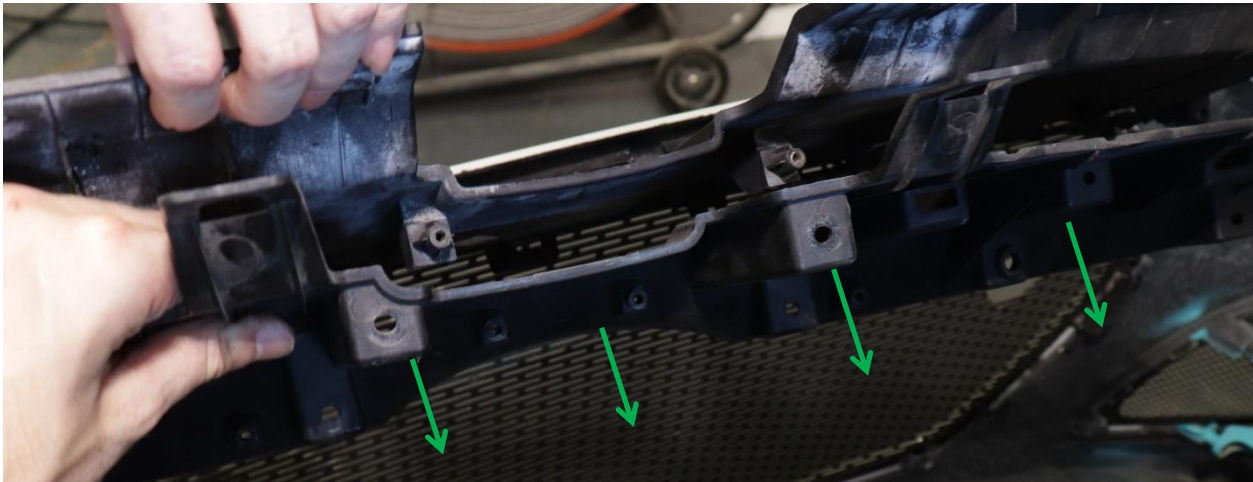
There is another plastic shroud underneath the top cover, it is shown in the next slide. You will need to cut through it as well. See next slide.



VELOSSA TECH

Trimming

The second shroud is shown below, after cutting from the top side of the bumper cover, you should see cut marks on the shroud. Remove the shroud and continue cutting it.

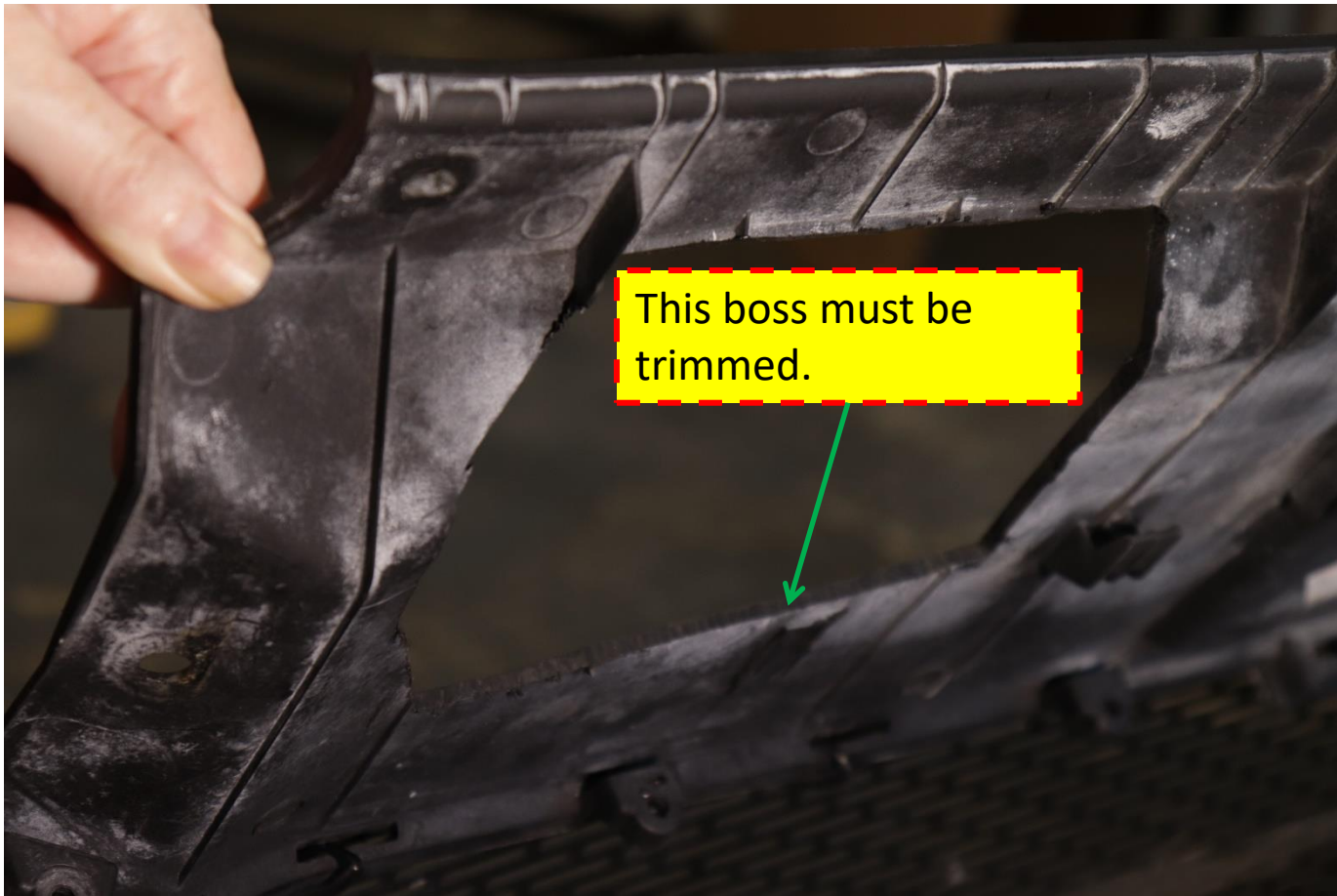


Cut these 2 bumps, and ensure this shroud is cut all the way through, there cannot be any binding against the BIG MOUTH!

VELOSSA TECH

Trimming

Trim bosses that interfere with the BIG MOUTH.



VELOSSA TECH

Trimming

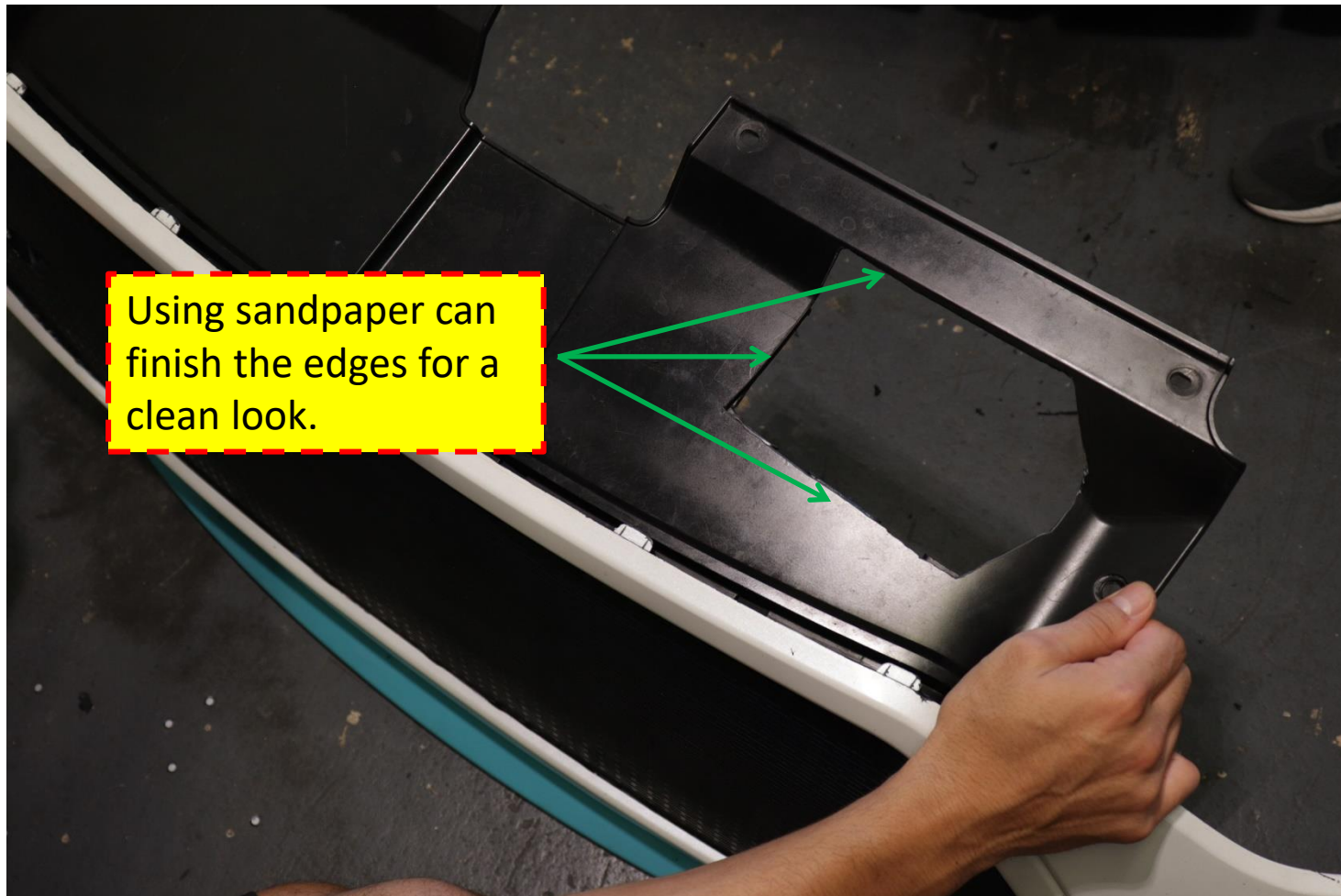
After trimming the cover/shroud, fasten the shroud back underneath the bumper cover. **The bumper cover should seat back properly with no serious binding**, if not, go back and continue to trim ribs/bosses until the BIG MOUTH and cover are not binding. Trim liberally to ensure no stress on the BIG MOUTH.



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Trimming

Final trimming should look like this. Remove ribs, bumps and bosses.





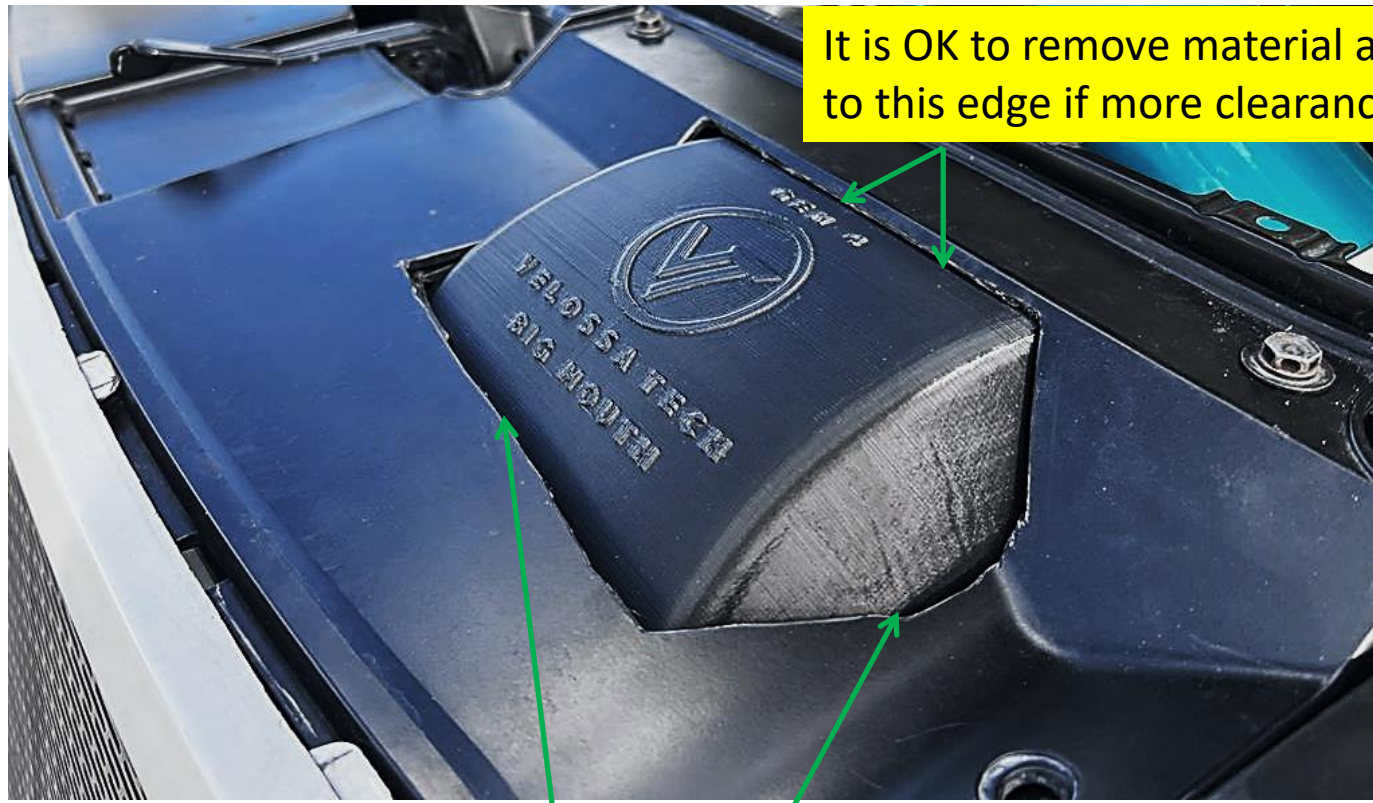
Big Mouth Adjustment

Before fastening the bumper back on the car permanently, inspect the levelness of the BIG MOUTH, use the oversized hole that was drilled as an adjustment method.



Final Assembly Review

Review the install and make sure nothing is binding or causing any preload on any parts, once fitment is confirmed, ensure that screws are tight and that your hood can close properly.



It is OK to remove material all the way up to this edge if more clearance is needed.

If there is any hard binding, remove more material in any of these places underneath the bumper cover.

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.

