



# **2015-2021 Subaru WRX Headlight 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 25mm cap screw	2
M6 x 30mm cap screw	1
6mm large washer	5
M6 lock nut	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/ Crimped Connector	1
8" Zip Ties	8
Cable Clips	4



## Bumper Removal

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

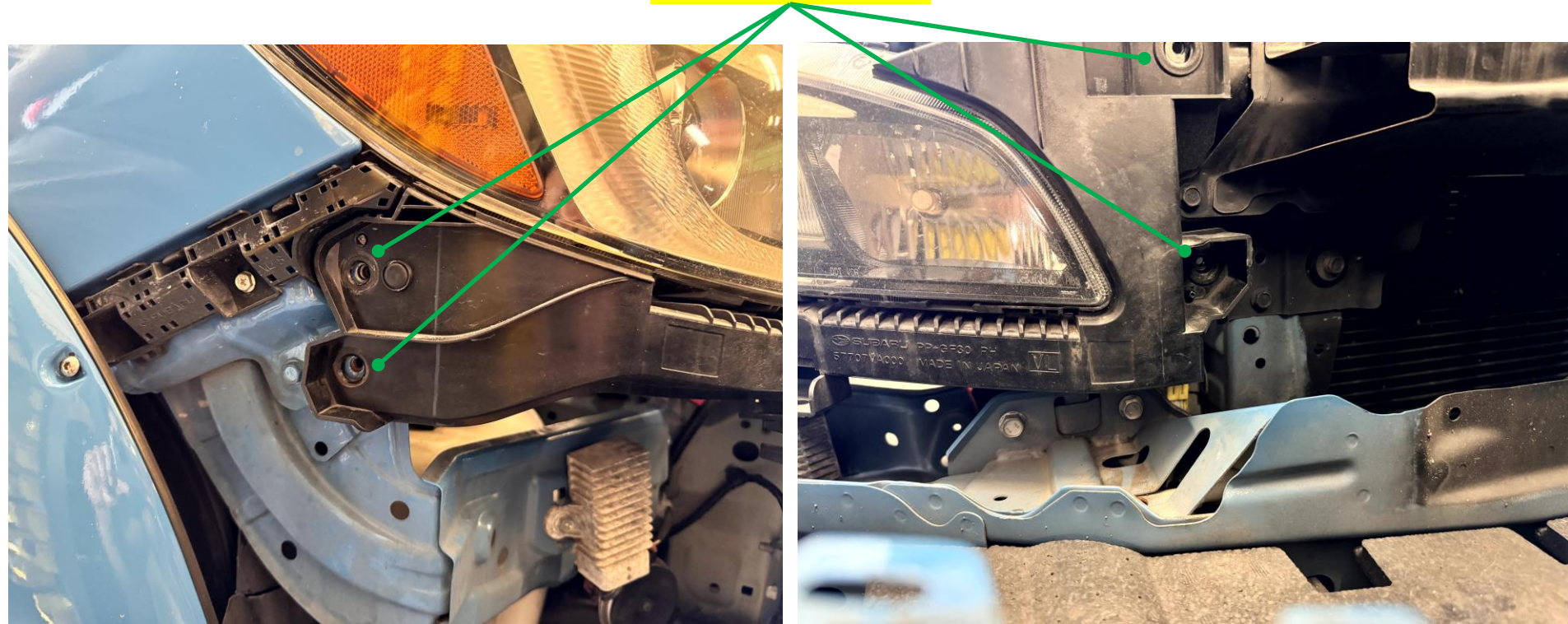




## Stock Components Removal

The next step is to remove the front bumper corner bracket (plastic bracket surrounding the headlight). It will be reinstalled so there is no need to stow away.

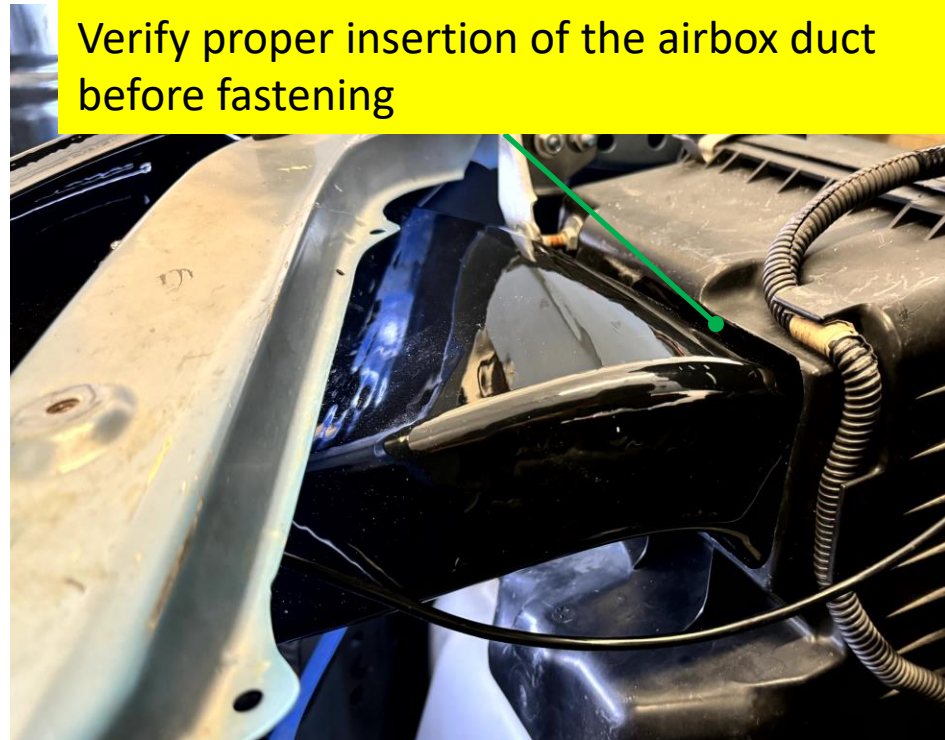
Undo fasteners  
at these points



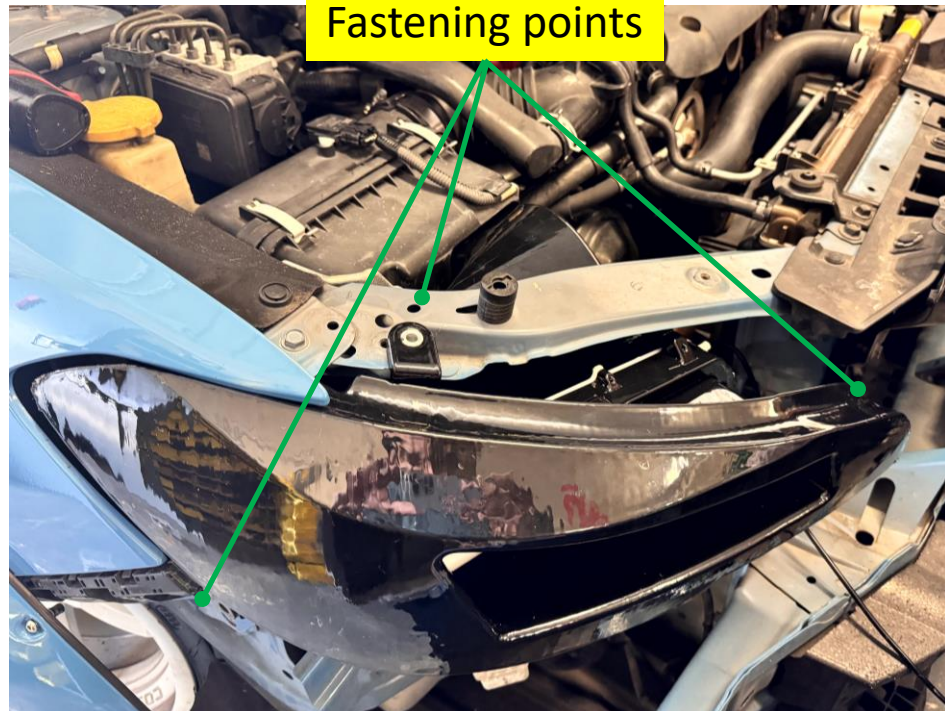
## Installing Headlight Intake

When positioning the headlight intake, it is important that the airbox duct is inserted into the airbox opening. Align the fastening points with their respective holes.

Verify proper insertion of the airbox duct  
before fastening



Fastening points





## Installing Headlight Intake

**Place the front bumper corner bracket back in position.** Use an M6 x 25mm cap screw, 1x M6 lock nut and 2x 6mm washers (one on the head side, one on the nut side) to fasten the leftmost fastening point but do not fully tighten until all other fasteners have been installed.



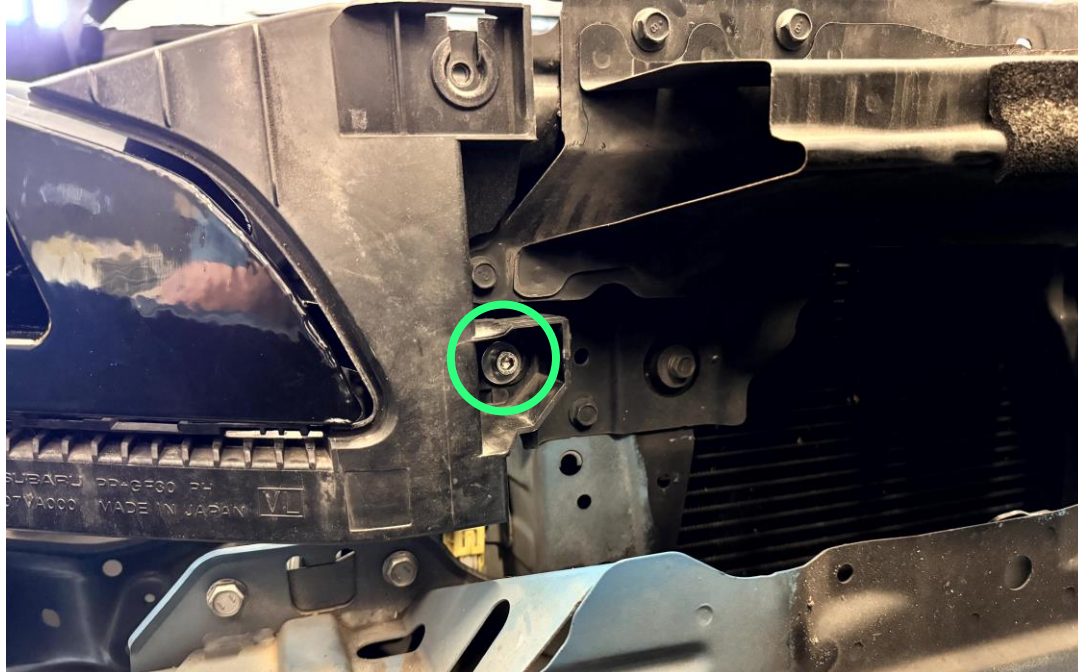
## Installing Headlight Intake

Use an M6 x 25mm cap screw and 1x 6mm washer for the topmost fastening spot. Do not tighten yet.



## Installing Headlight Intake

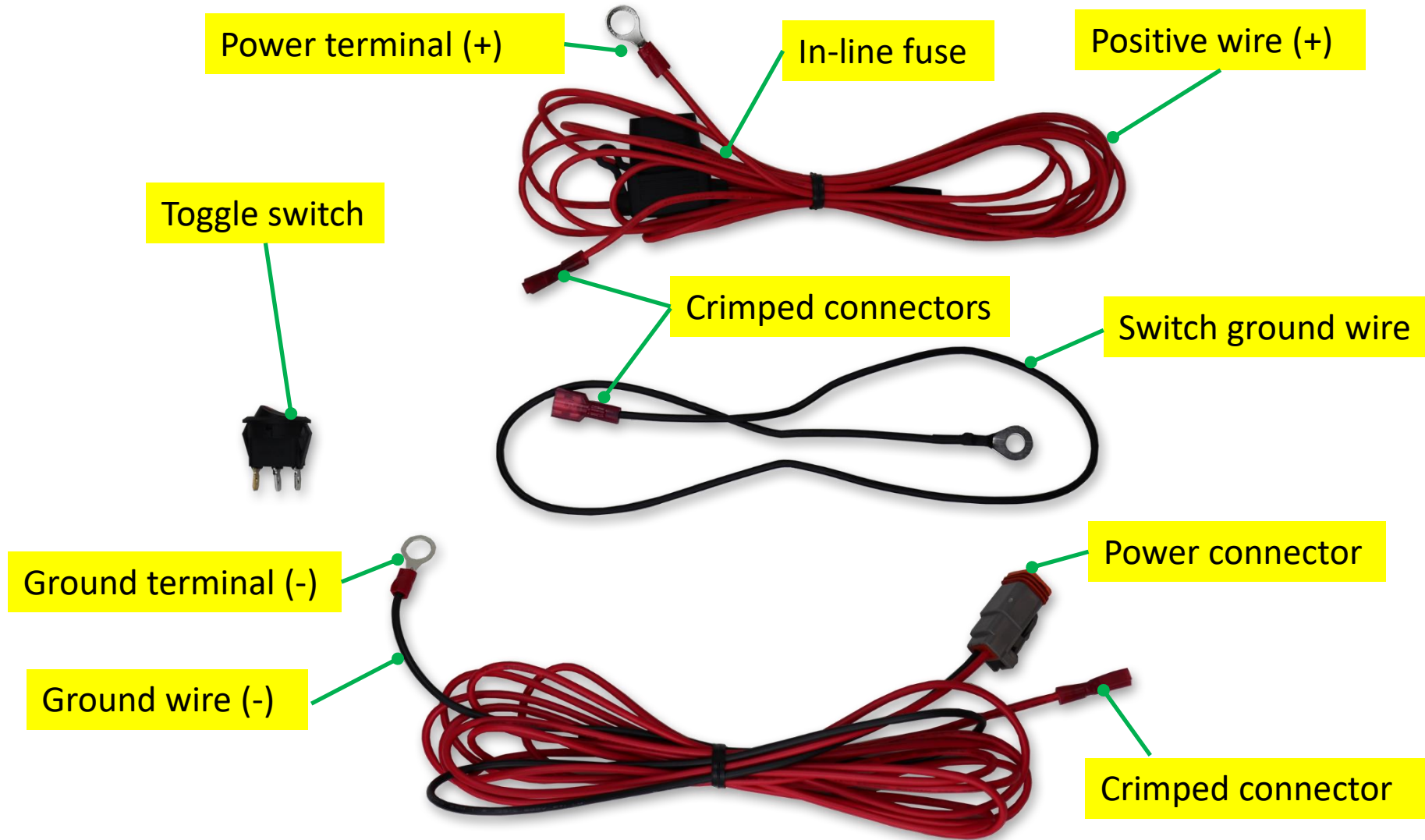
Use the M6 x 30mm cap screw, an M6 lock nut and 2x 6mm washer (one on the head side, one on the nut side) for the rightmost fastening point. First, thread the cap screw all the way through the OEM welded nut on the car. Then, tighten the lock nut using a 10mm wrench or socket while keeping the cap screw in place. **Proceed to tighten the rest of the fasteners.**



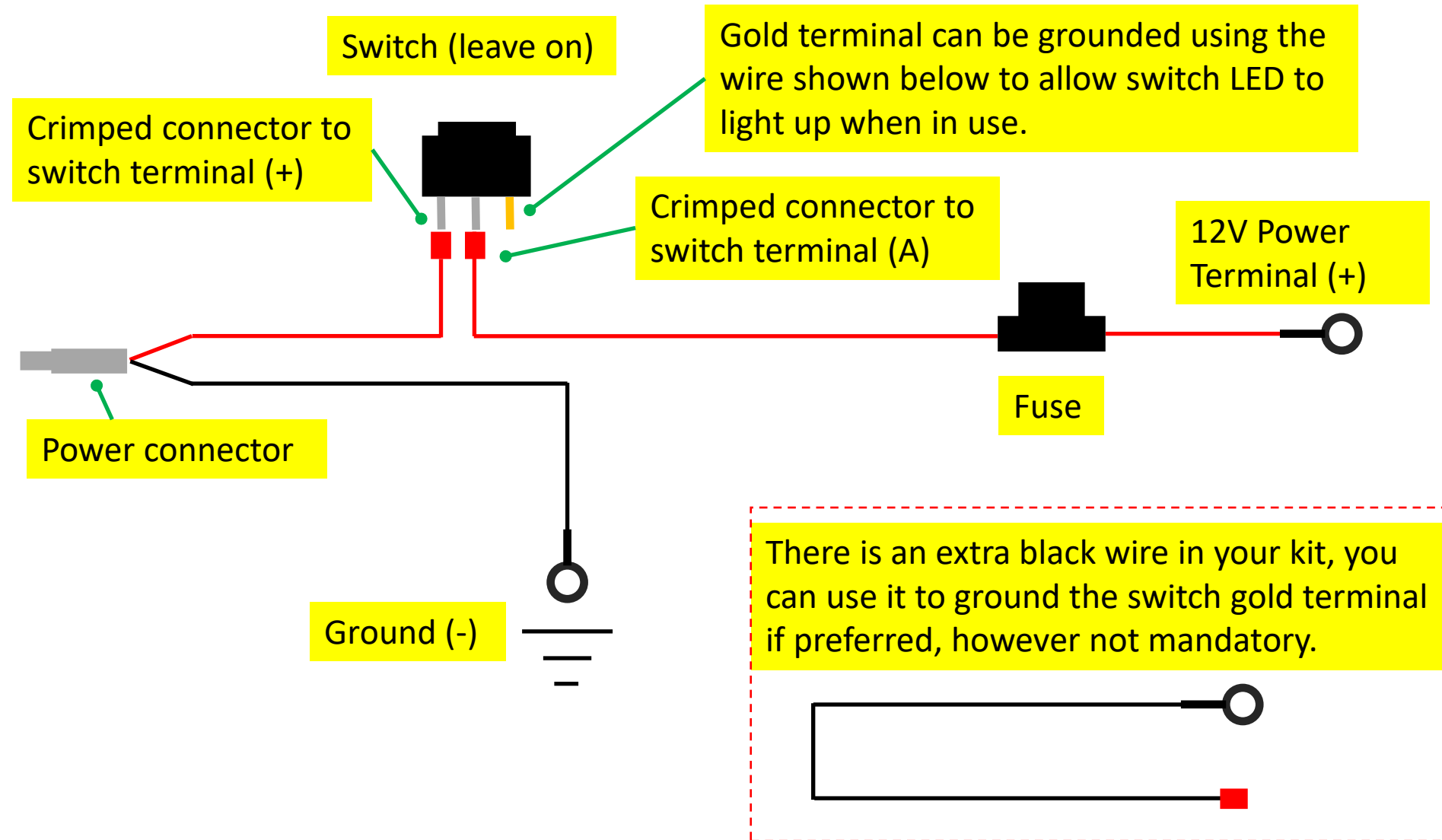




## Wiring Harness



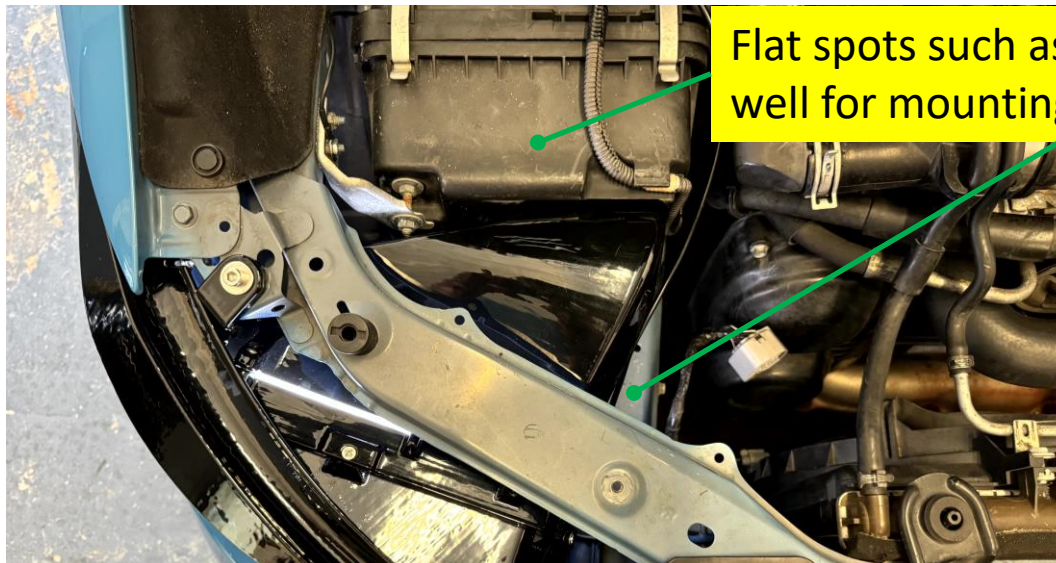
## Wiring Harness Schematic



## Wiring: Mount the LED Controller

Begin wiring your Lit Kit by finding an appropriate location for your Diode Dynamics Bluetooth RGBW controller. We recommend a flat spot such as the indicated areas shown in the image. It is important to avoid an area that is surrounded by too much metal as that can cause signal interference and Bluetooth connectivity issues.

Clean the area and use the double-sided tape to adhere the controller. Connect the pigtail connectors and LED cable to any of the 4 controller ports, making sure to line up the arrows on the LED connection.



Flat spots such as these will work well for mounting the controller



## Wiring: Ground

Find an appropriate ground for the circuit such as the indicated location. If needed, use the supplied M6 x 12mm cap screws or M6 lock nuts to fasten ground terminals to the frame. Route the wiring over to the battery using the supplied cable clips to maintain good cable management.

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

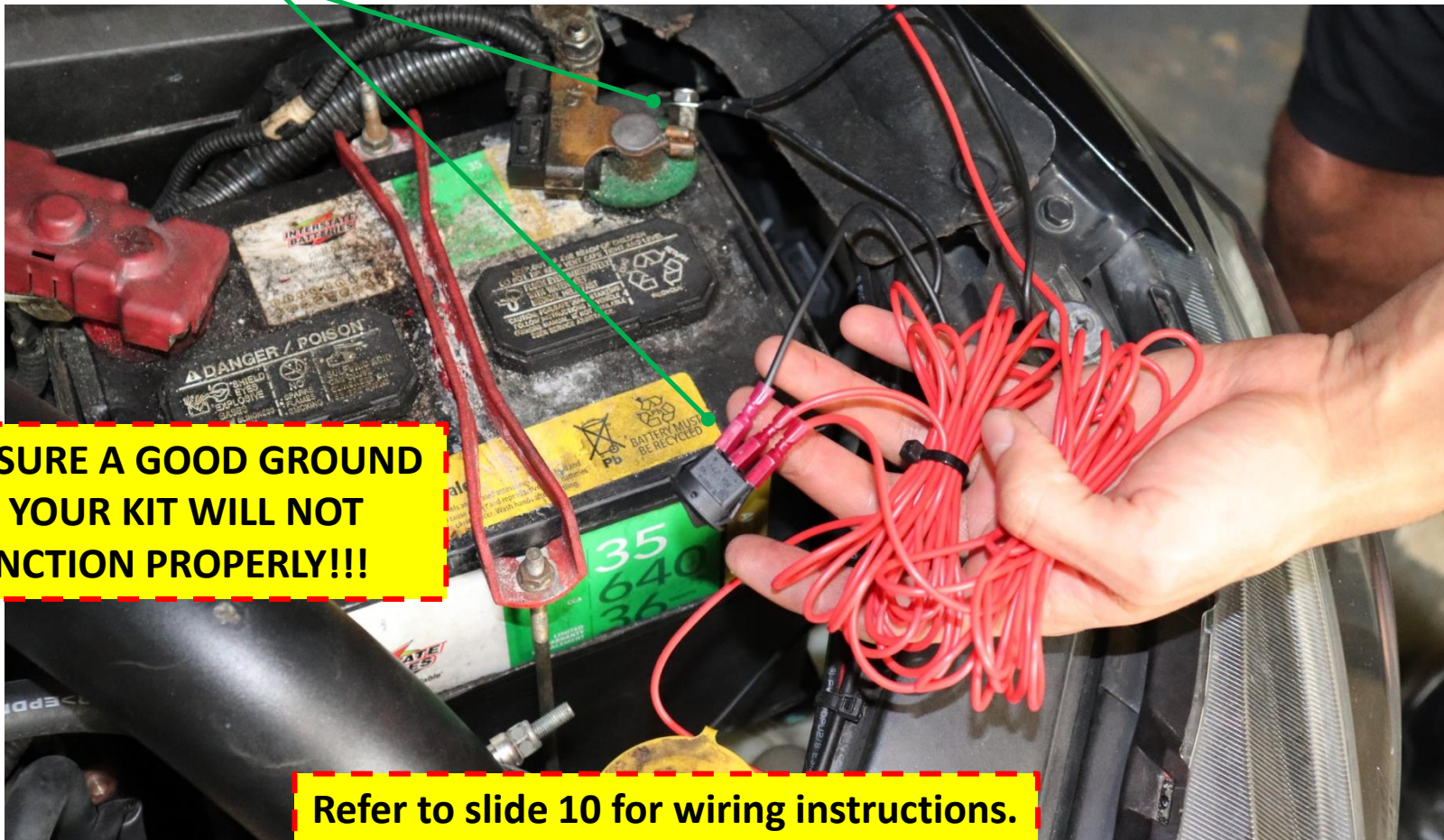
Route wiring  
over to battery  
side; use  
supplied cable  
clips



## Wiring: 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 the switch LED at the battery.



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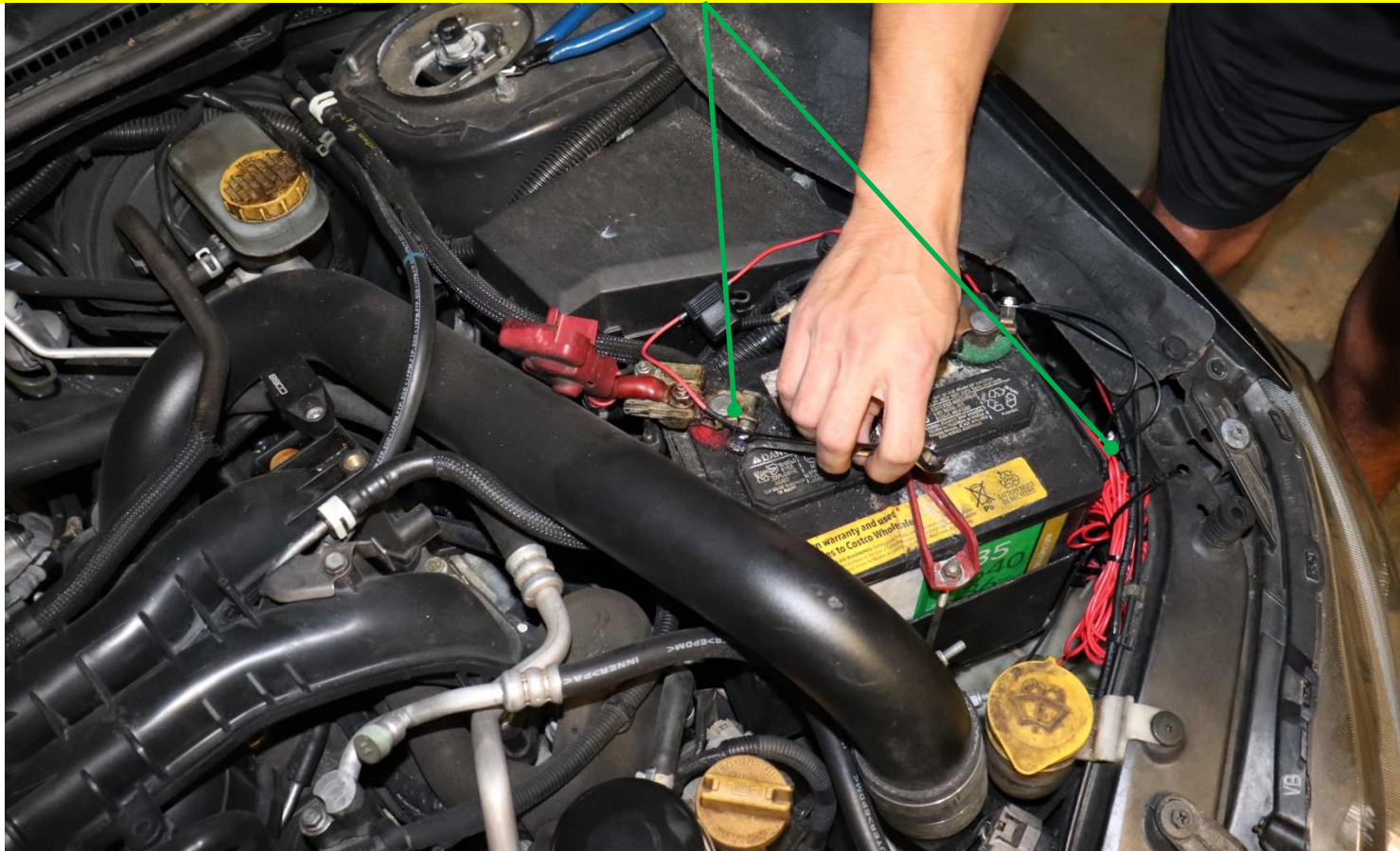
**Refer to slide 10 for wiring instructions.**



## 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.



## Final Assembly Review

Review the install and make sure nothing is binding or causing any preload on any parts, loosen and retighten if adjustment is necessary.



Re-assemble the bumper the same way it was removed to complete installation.