



advanced FLOW engineering

Instruction Manual P/N: 77-46210 **SCORCHER HD PLUS POWER MODULE**

Make: Jeep
Make: Jeep

Model: Wrangler (JL)
Model: Gladiator (JT)

Year: 2020-2023
Year: 2021-2023

Engine: V6-3.0L (td) EcoDiesel
Engine: V6-3.0L (td) EcoDiesel



THIS IS A HIGH-PERFORMANCE PRODUCT: Do not use this product until you have carefully read the following agreement and installation instruction. This sets forth the terms and conditions for the use of this product. The installation of this product indicates that the BUYER has read and understands this agreement and accepts its terms and conditions.

DISCLAIMER OF WARRANTY AND LIMITATION OF LIABILITY: Advanced FLOW Engineering, Inc. (also known as aFe or aFe POWER) and its successors, distributors, jobbers, and dealers (hereafter “SELLER”) shall in no way be responsible for the product’s improper use and service. It is the installer’s responsibility to check for proper installation and if in doubt, contact the manufacturer. The SELLER assumes no liability regarding the improper installation or misapplication of its products. BUYER acknowledges it has had the opportunity to fully inspect the product. Accordingly, BUYER acknowledges that the product is being sold in “AS IS/WHERE IS” condition. SELLER shall not be held liable for special, indirect, incidental or consequential damages of any nature with respect to the products (including, without limitation, lost profits, lost sales, loss of production, property damage, personal injury or loss or damage resulting from interruption or failure in operation of the products) and BUYER hereby expressly waives and disclaims all such liability claims. The BUYER acknowledges and agrees that the disclaimer of liability contained herein is a material term of the sale of the product and, to the fullest extent permitted by law, BUYER shall defend, indemnify and hold SELLER harmless from any and all claims, demands, causes of action, controversies, liabilities, fines, losses, costs and expenses (including, but not limited to attorneys’ fees, expert witness expenses and litigation expenses) arising from or related to SELLER’s products.

Before proceeding with the installation:

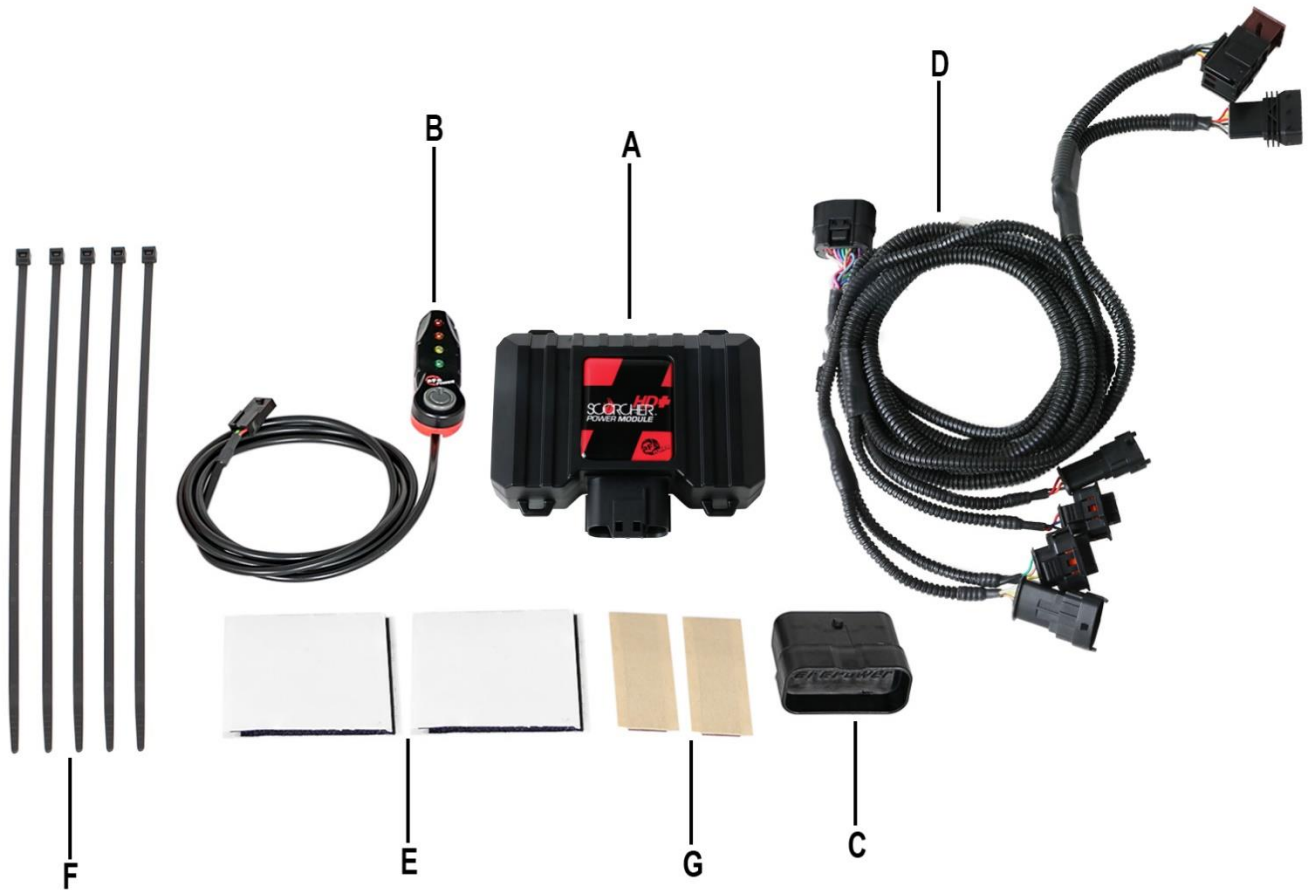
- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 951-493-7185.
- Ensure you have all necessary tools before proceeding. Do not attempt to work on your vehicle when the engine is hot.

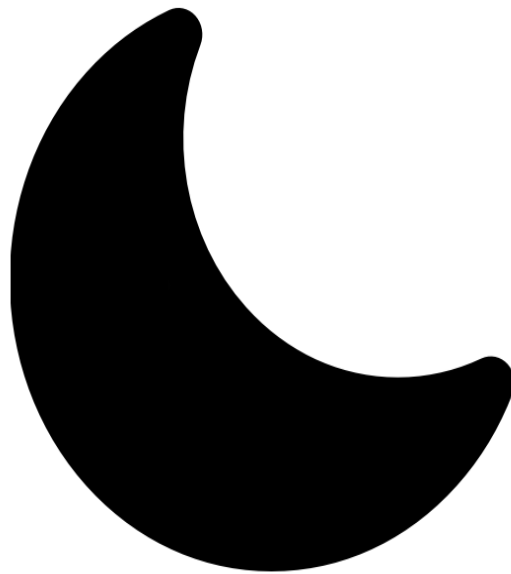
Warranty Information available at <https://afepower.com/contact#warranty>

Emission Disclaimer: This product is not currently CARB exempt and is not available for purchase in California or for use on any vehicle registered with the California Department of Motor Vehicles.



Label	Qty.	Description	Part Number
A	1	Module	R77-46210
B	1	LED Switch	05-70029
C	1	Bypass Plug	ADS-03-053
D	1	Harness	AFE-11-124
E	2	Velcro (2" Inches)	05-01244
F	4	Cable Ties	05-60167
G	2	Double Sided Tape	07-90001





SLEEP MODE

Figure A

Refer to Figure A for Step 1

Step 1: Before installing your aFe POWER module, you will have to place your vehicle's ECU in sleep mode. In order to do this, you will need to do the following:

- If the engine is cold: open the hood, close the doors, lock the car and wait 30 seconds.
- If the engine is warm: open the hood, close the doors, lock the car and wait 20 minutes.
- If the engine is warm and you can't wait 20 minutes: disconnect the battery.

 **Note: Do NOT open doors or start vehicle while one of the sensors is disconnected. This could create a check engine light**

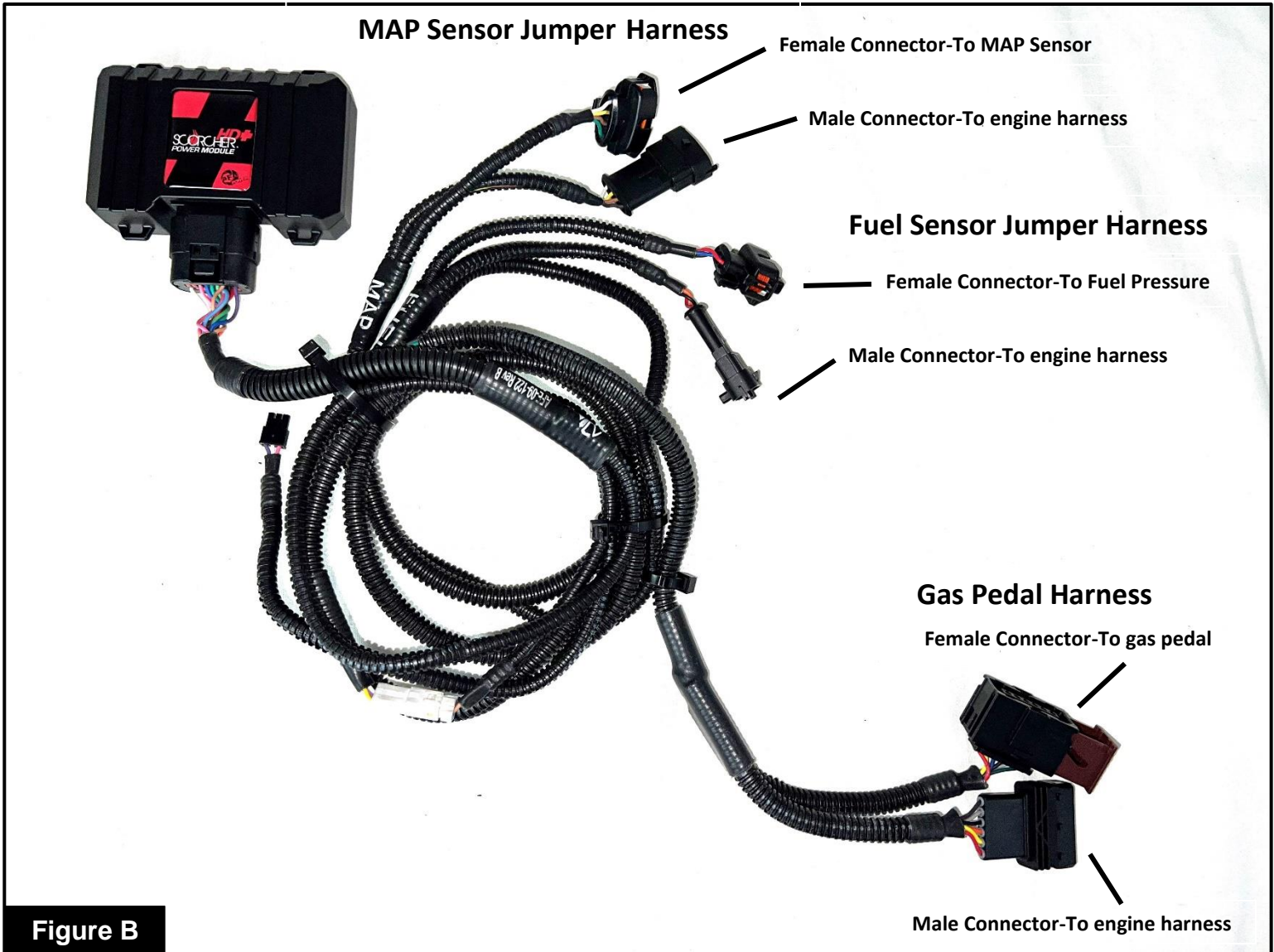


Figure B

Refer to Figure B for Step 2

- Step 2: Refer to the diagram to identify the connectors and their corresponding sensors that they plug into.
- The MAP sensor jumper harness will be the longer set of wires. It has a 4 wires connector and is labeled "MAP".
 - The Fuel Pressure Sensor jumper harness will be the shorter set of wires. It has a 3 wires connector and is labeled "Fuel"
 - The Gas Pedal Harness is the largest set of connectors. It has 6 wires and the female connector will have a red locking tab.

**Figure C****Refer to Figure C for Steps 3-5**

Step 3: Remove the oil cap (Engine cover cannot be removed with the oil cap in place)

Step 4: Remove the two 10mm bolts. The engine cover can now be lifted and removed.

Step 5: After removing the engine cover, re-install the oil cap for the time being so that small objects cannot fall into the oil filler neck.

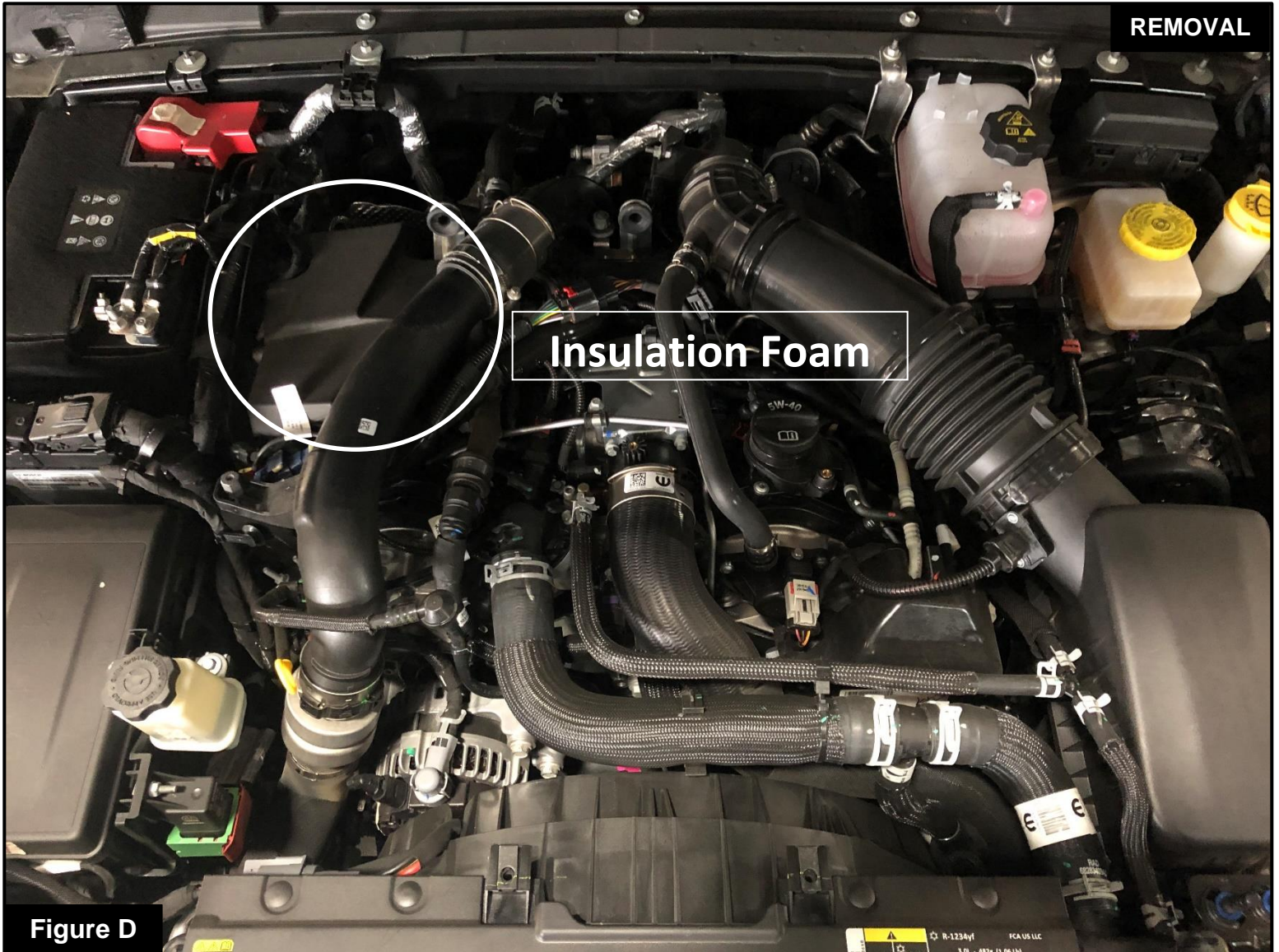


Figure D

Refer to Figure D for Step 6

Step 6: Remove the insulation foam on the passenger side of the vehicle to gain easier access to the MAP and Fuel Pressure Sensor.

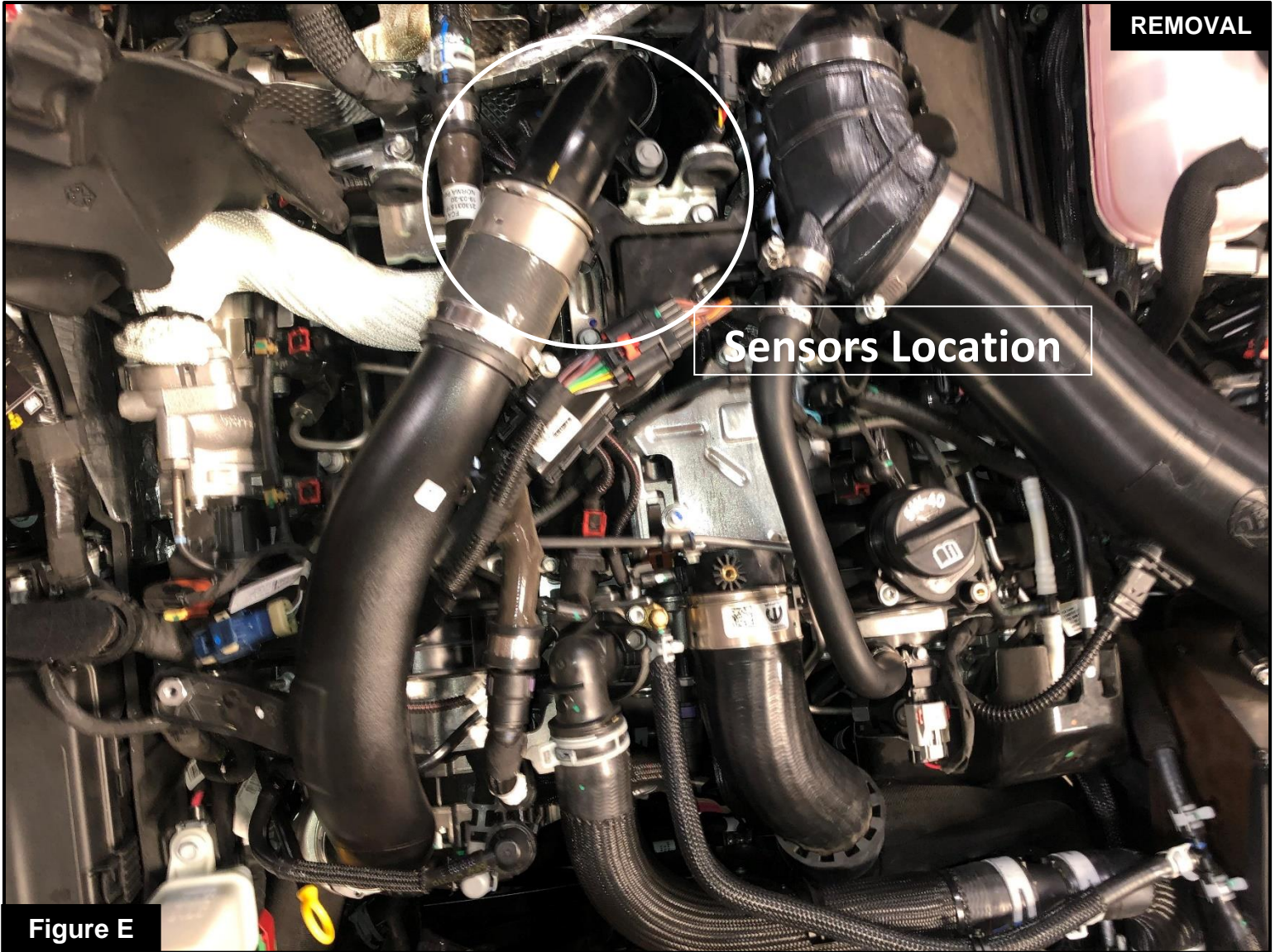
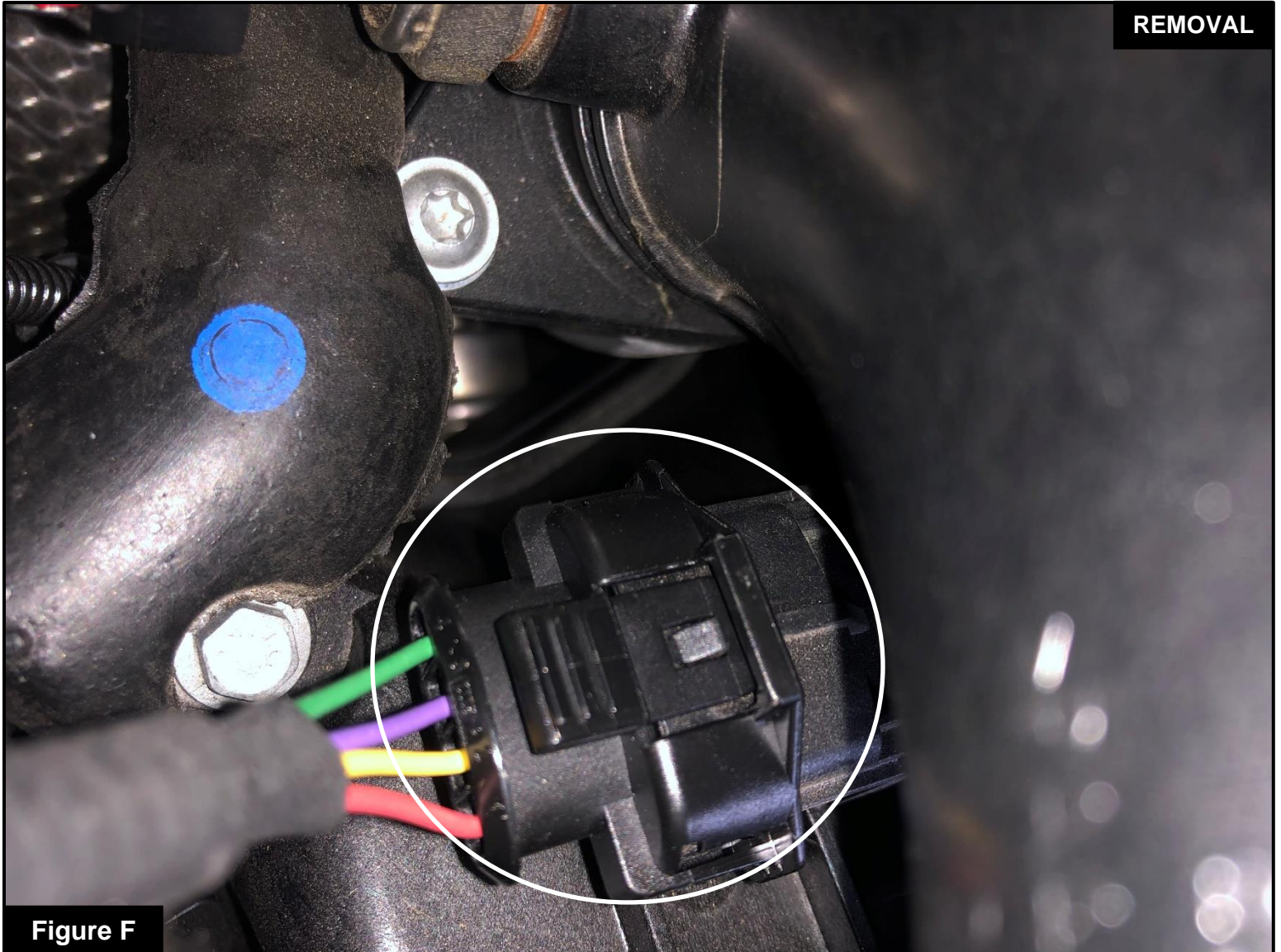


Figure E

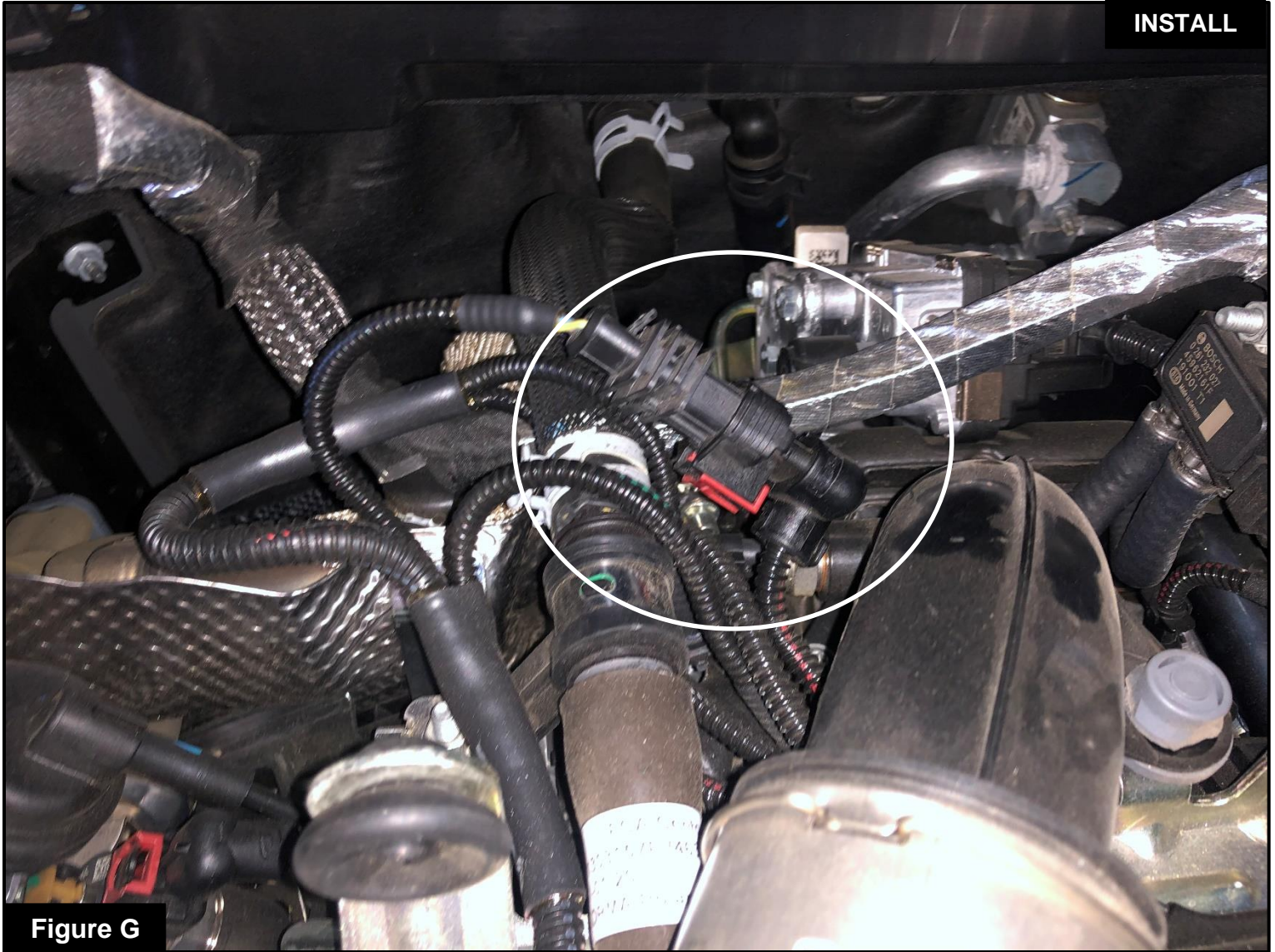
Refer to Figure E for Step 7

Step 7: Locate the MAP Sensor and the Fuel Pressure Sensor. The sensors are located on the back of the engine bay near the firewall and under the charge pipe.

**Figure F****Refer to Figure F for Steps 8-9**

Step 8: Locate the MAP sensor. It is on top of the intake manifold underneath the charge pipe. Disconnect it by pressing down on the locking tab and sliding the connector out of the sensor.

Step 9: Locate the MAP sensor jumper harness on the aFe POWER harness. This is the harness labeled "MAP". Plug the female connector of the aFe POWER harness to the MAP sensor, then take the male connector of the aFe POWER harness and connect it to the female connector of the engine harness.

**Figure G****Refer to Figure G for Step 10**

Step 10: Check with the picture to make sure the connectors are fully seated and that the red tab is locked back into place.



Make sure that the connections are fully engaged and not reversed. Usually, connectors make a snapping sound when fully engaged.

**Figure H****Refer to Figure H for Steps 11-12**

Step 11: Locate the fuel pressure sensor. It is underneath the heater hose and the main engine harness.

Disconnect it by pressing down on the locking tab and sliding the connector out of the sensor.

Step 12: Locate the fuel pressure sensor jumper harness on the aFe POWER module. This is the harness labeled "Fuel". Plug the female connector of the module to the stock fuel pressure sensor, then take the male connector of the module and connect it to the female connector of the engine harness.

**Figure I****Refer to Figure I for Steps 13-14**

Step 13: Check with the picture to make sure the connectors are correctly seated and that the red tab is locked back into place.

Step 14: Re-install the insulation foam.



Make sure that the connections are fully engaged and not reversed. Usually, connectors make a snapping sound when fully engaged.

**Figure J**

Refer to Figure J for Steps 15-18

- Step 15: Find the desired location to mount and secure the Scorch HD PLUS module using the included Velcro and/or zip ties.
- Step 16: Use the included zip ties to secure the Scorch HD PLUS harness away from all moving parts and components that will get hot when the engine is running.
- Step 17: Plug the aFe POWER harness into the module.
- Step 18: Remove the engine oil cap, and then reinstall the engine cover along with the two 10mm mounting bolts, and then reinstall the oil cap. Pay particular attention to how the cap screws on, as it is very easy to cross thread the oil cap and not making a tight seal.

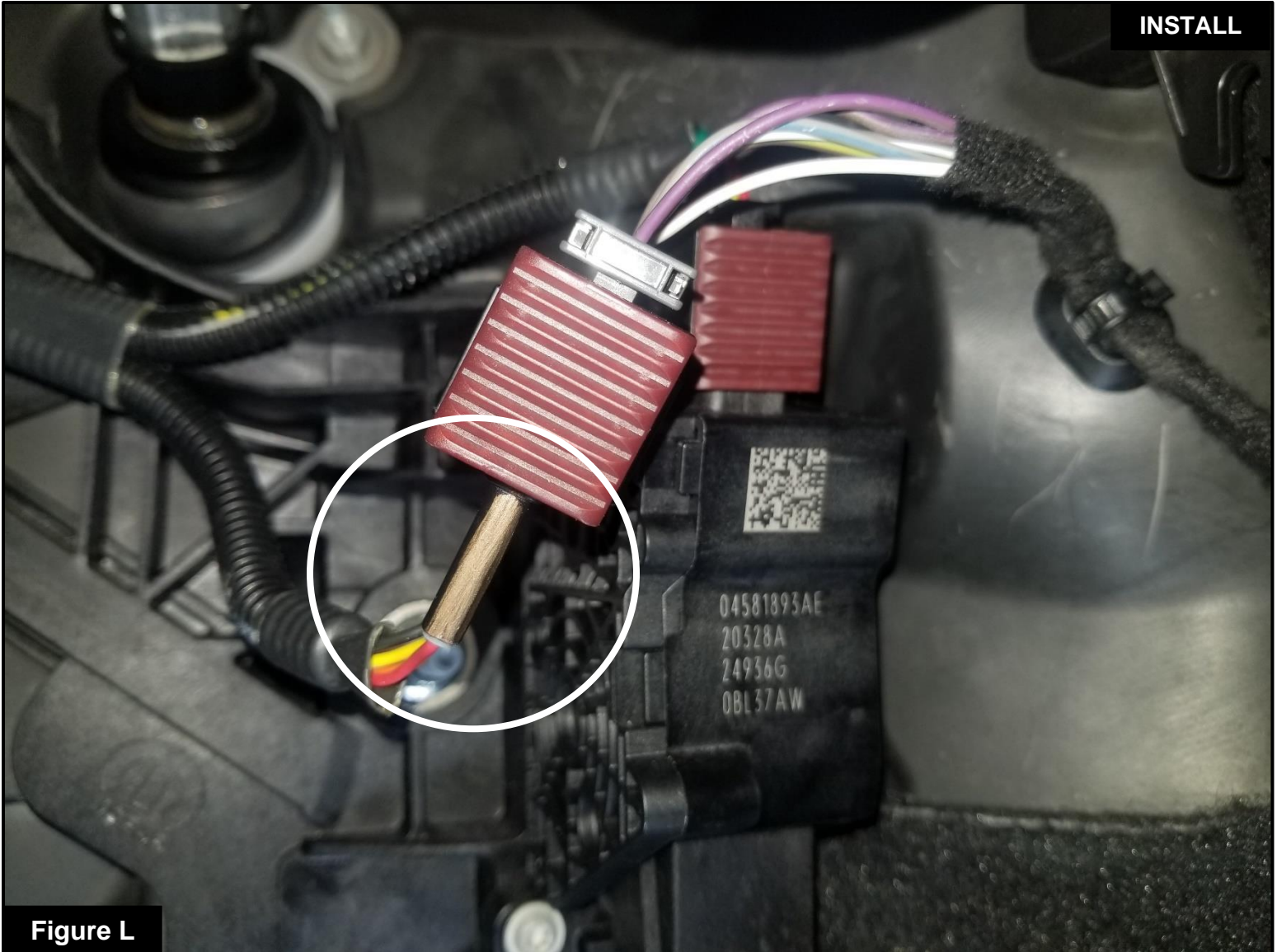
The doors can now be opened to install the Gas Pedal Harness and the LED Switch.



Refer to Figure K for Steps 19-20

Step 19: Locate the connector for the gas pedal. It is located at the top of the gas pedal assembly.

Step 20: Disconnect the gas pedal harness by pulling out on the red locking tab and lifting up on the connector.

**Figure L****Refer to Figure L for Steps 21-23**

Step 21: Locate the gas pedal harness on the aFe Scorcher HD PLUS. Plug the female connector of the aFe POWER harness into the male connector of the gas pedal assembly. Then plug the male connector of the aFe POWER harness into the female connector of the gas pedal harness.

Step 22: Push the red locking tabs on both the stock harness and the aFe POWER harness back into place.

Step 23: Use the provided cable ties to secure the harness and make sure it does not interfere with your foot or the gas pedal.


 **The male connector on the aFe POWER harness will have a silver marking. Make sure this marking faces the same direction as the red locking tab on the factory gas pedal connector.**



Figure M

Refer to Figure M for Steps 24-25

Step 24: Select the desired location for the LED switch. Route the cable on the back of the switch to exit towards the top or the bottom of the switch.

Step 25: Use the provided double sided tape to secure the LED switch in the desired location.

**Figure N****Refer to Figure N for Steps 26-27**

Step 26: Locate the engine bay wiring access slot below the driver side kick panel.

Step 27: Route both the gas pedal harness wiring and the LED switch cable through the firewall and into the engine bay using this slot.

**Figure O****Refer to Figure O for Steps 28-30**

Step 28: Plug the end of the LED switch cable to the aFe POWER harness inside the engine compartment.

Step 29: Plug the end of the gas pedal harness into the white connector of the aFe POWER harness inside the engine compartment.

Step 30: Secure all wires away from any extreme heat and moving parts with the provided zip ties. Make sure all connections are secured and fully engaged.

The installation of the module itself is now complete. Keep reading the installation instructions to learn how to use all of its features.



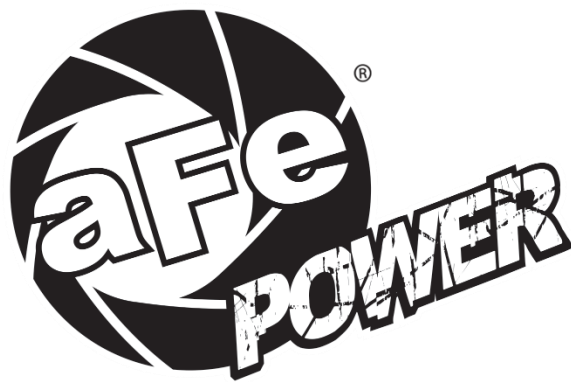
Figure P

Refer to Figure P (LED Switch)

When turning on the vehicle, each LED will flash, and it will stop at its last setting. The LED on the switch represents the different level of power.

- Green LED: Stock
- Yellow LED: Sport
- Orange LED: Sport+
- Red LED: Race

Use the grey button to select the desired setting. Power adjustments can be done at any time while the unit is on.



advanced FLOW engineering, inc.

Corona, CA 92879

<https://afepower.com/contact>