advanced FLOW engineering

Instruction Manual

P/N: 77-46326 SCORCHER GT POWER MODULE

Make: **BMW** Model: **M3/M3 Competition (G80)** Year: **2021-2022** Engine: **L6-3.0L (tt) S58**

Make: **BMW** Model: **M4/M4 Competition (G82/G83)** Year: **2021-2022** Engine: **L6-3.0L (tt) S58**

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:

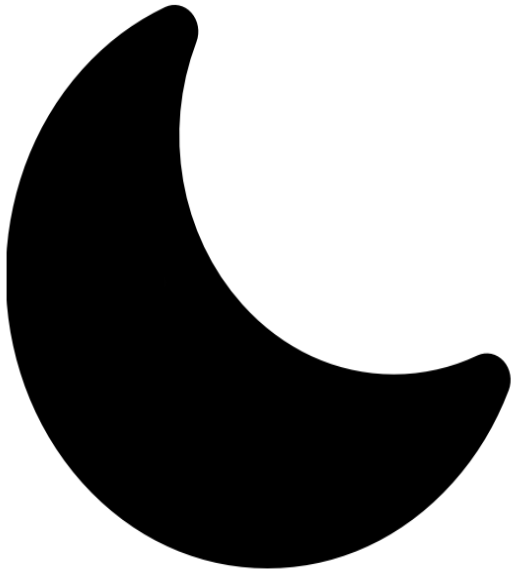
- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 951-493-7185.
- Ensure you have all necessary tools before proceeding. Do not attempt to work on your vehicle when the engine 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	R77-46326
B	1	LED Switch	05-70029
C	2	Velcro (2” Inches)	05-01244
D	4	Cable Ties	05-60167

REMOVAL



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

REMOVAL

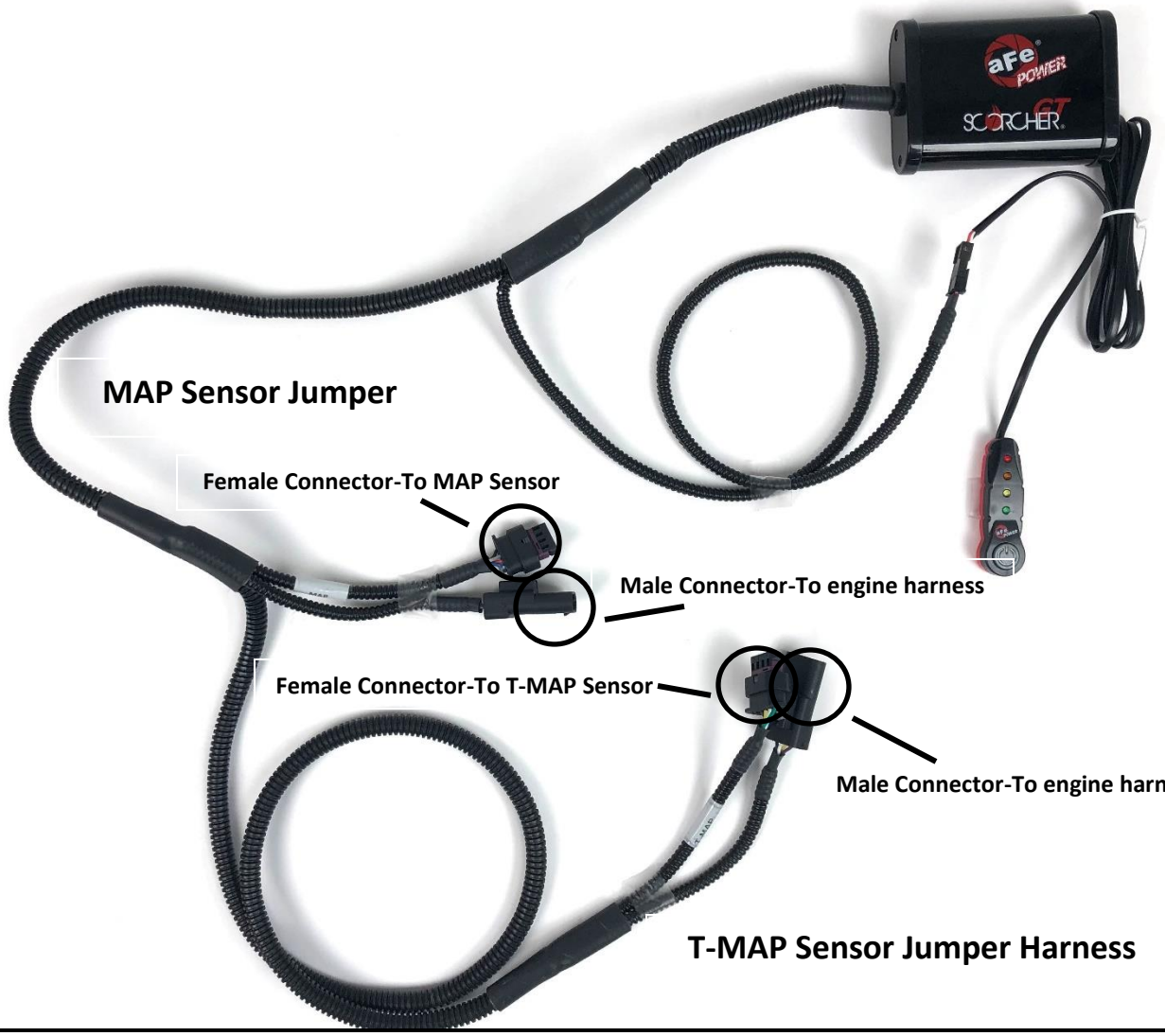


Figure B

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 shorter set of wires. It has a 4 wires connector.
- The T-MAP sensor jumper harness will be the longer set of wires. It has a 3 wires connector.

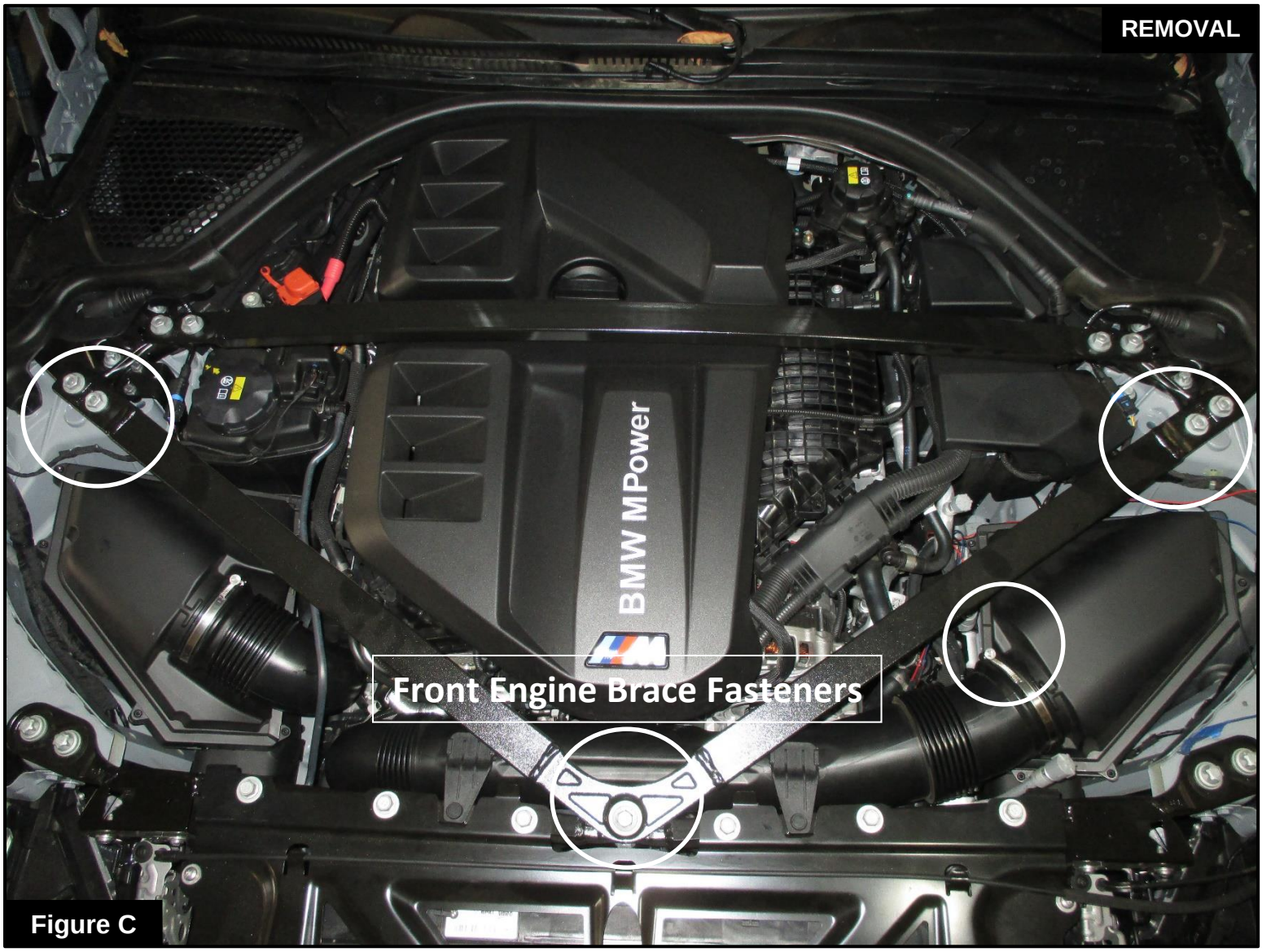


Figure C

Refer to Figure C for Steps 3-5

Step 3: Remove the front engine brace by removing the 5 circled bolts in Figure C.

Step 4: Lift the front engine brace out of the engine bay to gain access to the driver side air intake housing.

Step 5: Loosen the clamp between the tube and the driver side air filter housing, then remove the air filter housing in order to reach the T-MAP sensor.

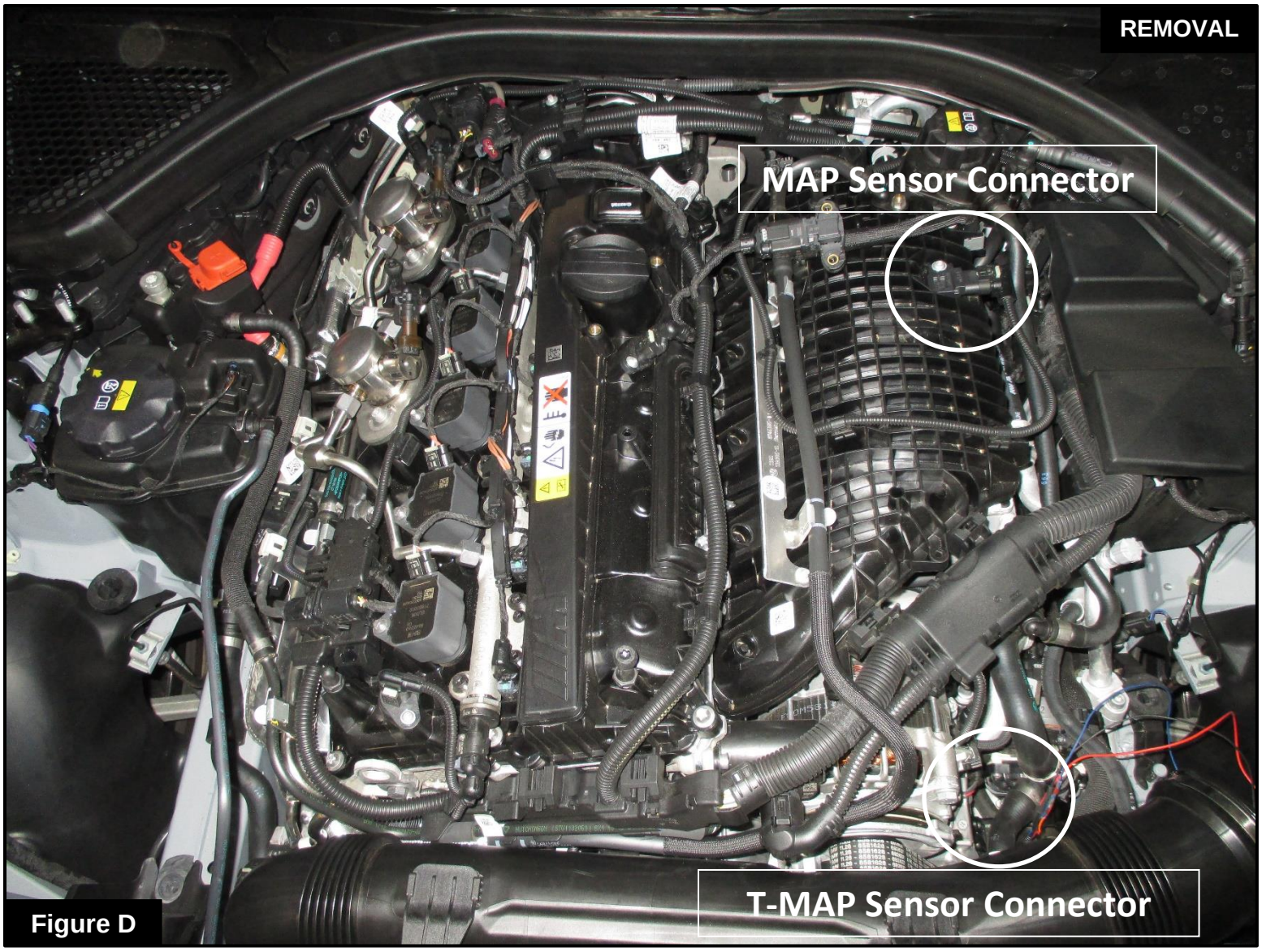


Figure D

Refer to Figure D for Steps 6-7

Step 6: Locate the T-MAP sensor. The T-MAP sensor is located on top of the charge pipe and sits below the alternator. It is overlapped by a coolant hose attached to a bracket that can be moved to the side for easier access (See Page 8). The sensor has a 3-wires connector and a white locking tab.

Step 7: Locate the MAP sensor. The MAP sensor is located on top of the intake manifold. It has a 4-wires connector and a white locking tab.

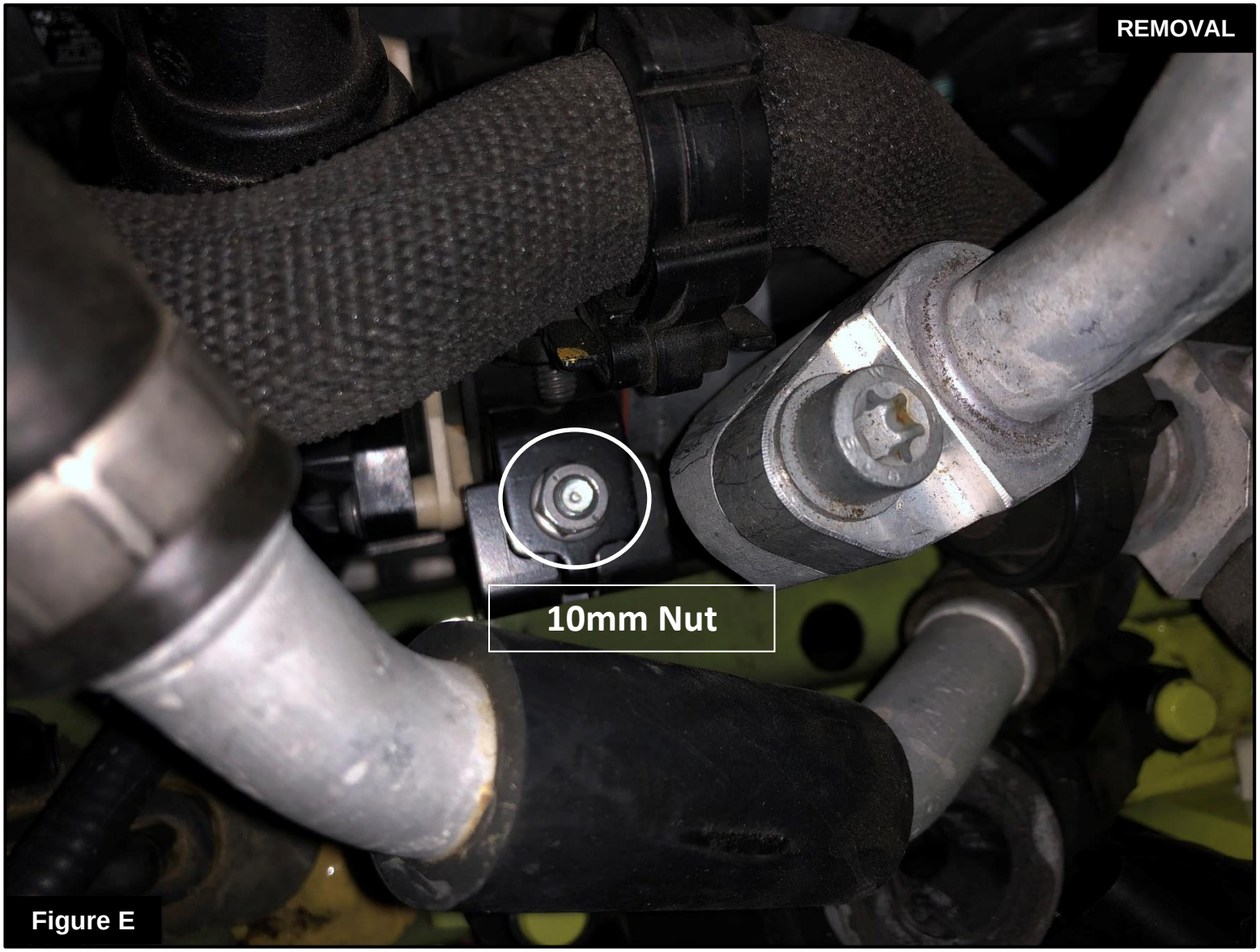


Figure E

Refer to Figure E for Step 8

Step 8: In order to reach the T-MAP sensor easily, remove the 10mm nut that attaches the coolant line clamp to the bracket and lift the coolant line out of the way.

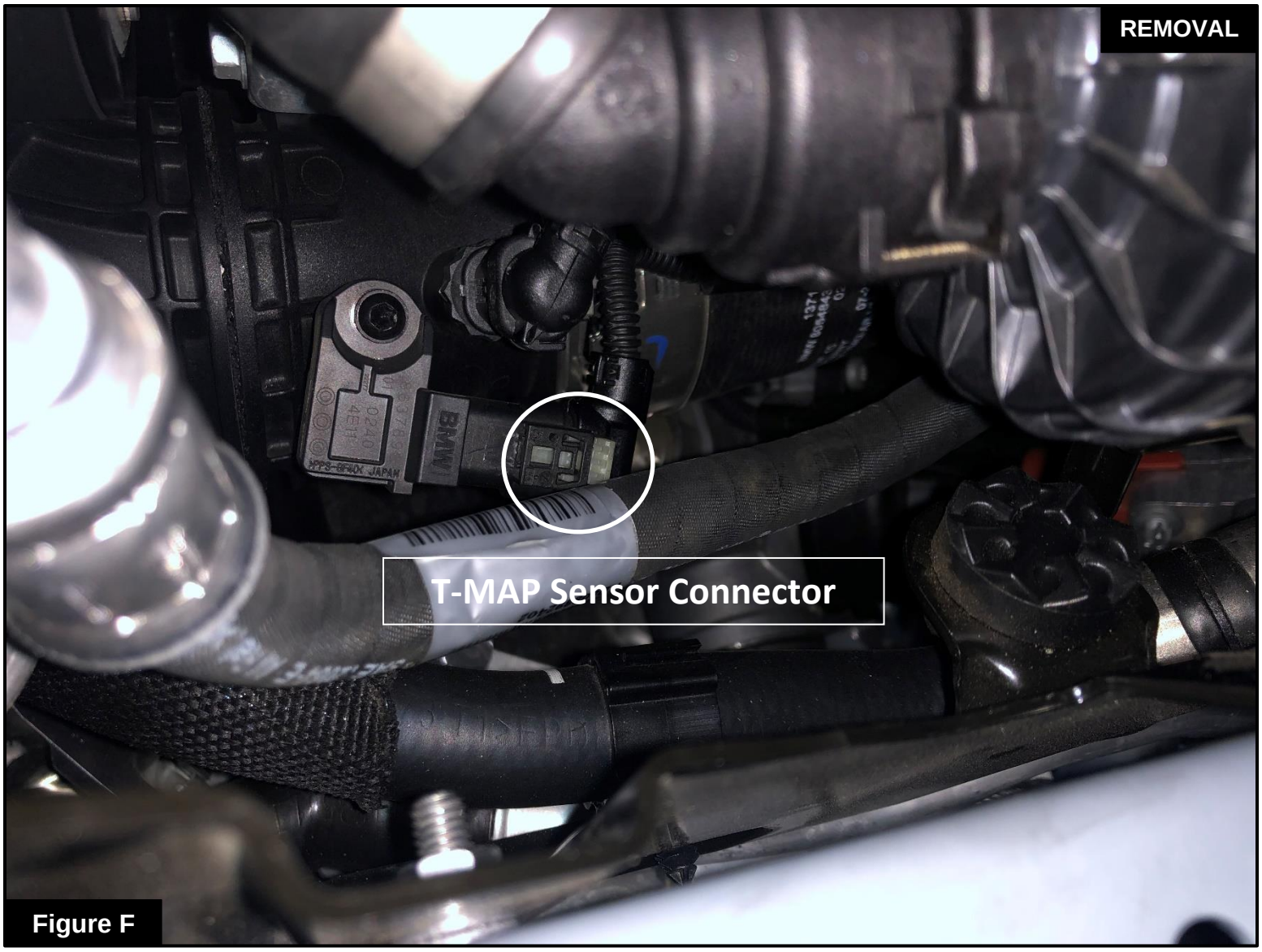


Figure F

Refer to Figure F for Step 9

Step 9: Disconnect the T-MAP sensor by pulling back on the locking tab, pressing down on the connector and sliding it out of the sensor.

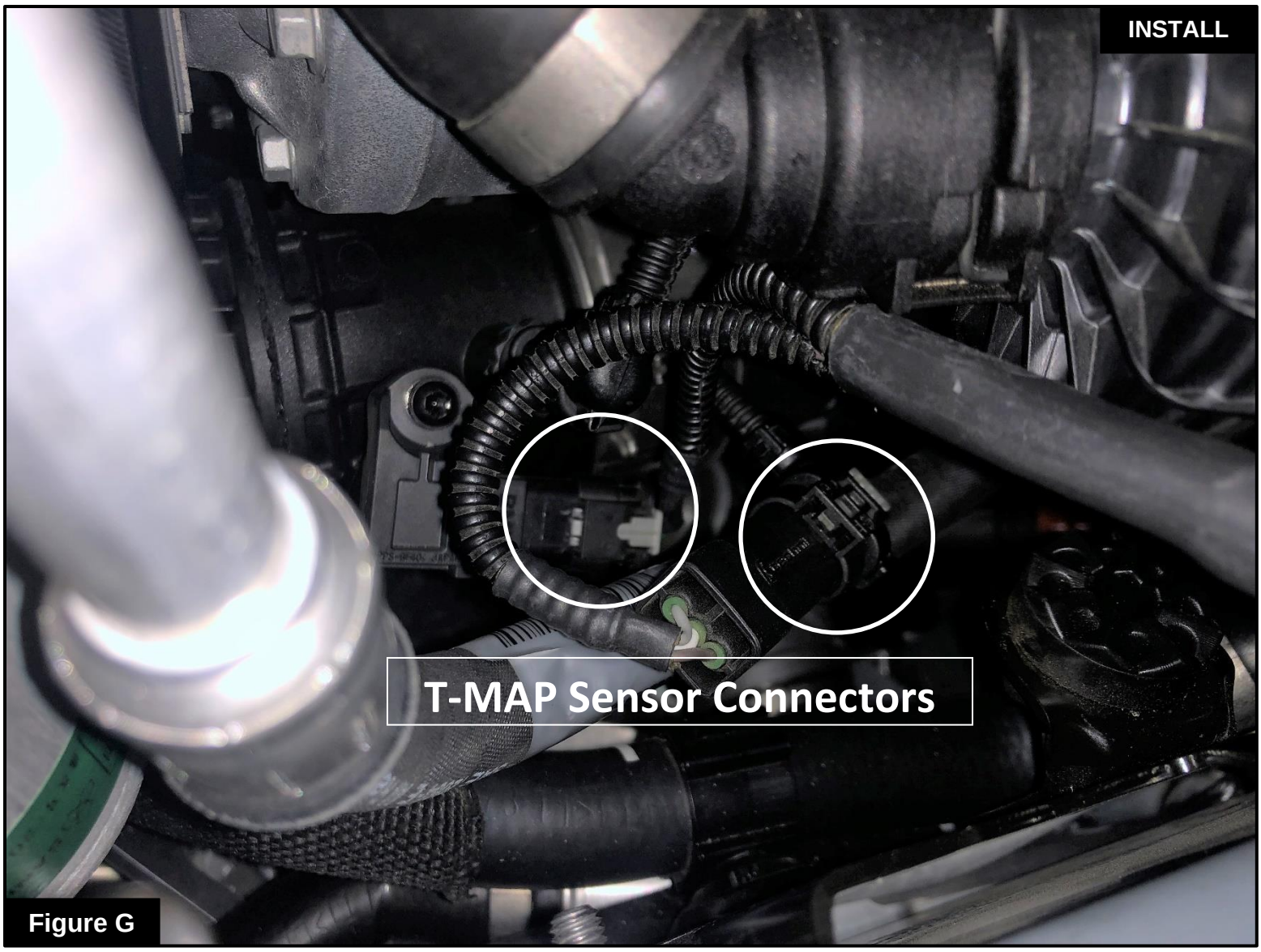


Figure G

Refer to Figure G for Steps 10-13

Step 10: Locate the T-MAP sensor jumper harness on the aFe POWER harness. It is the second, longer set of connectors coming out of the aFe POWER module. It is labeled “T-MAP”.

Step 11: Plug the female connector of the aFe POWER harness to the T-MAP sensor, then take the male connector of the aFe POWER harness and connect it to the female connector of the engine harness.

Step 12: Check with the picture to make sure the connectors are fully seated and that the locking tab is slid back into place.

Step 13: Reinstall the 10mm nut for the coolant hose clamp. Then reinstall the driver side air intake housing and tighten the clamp between the tube and housing.

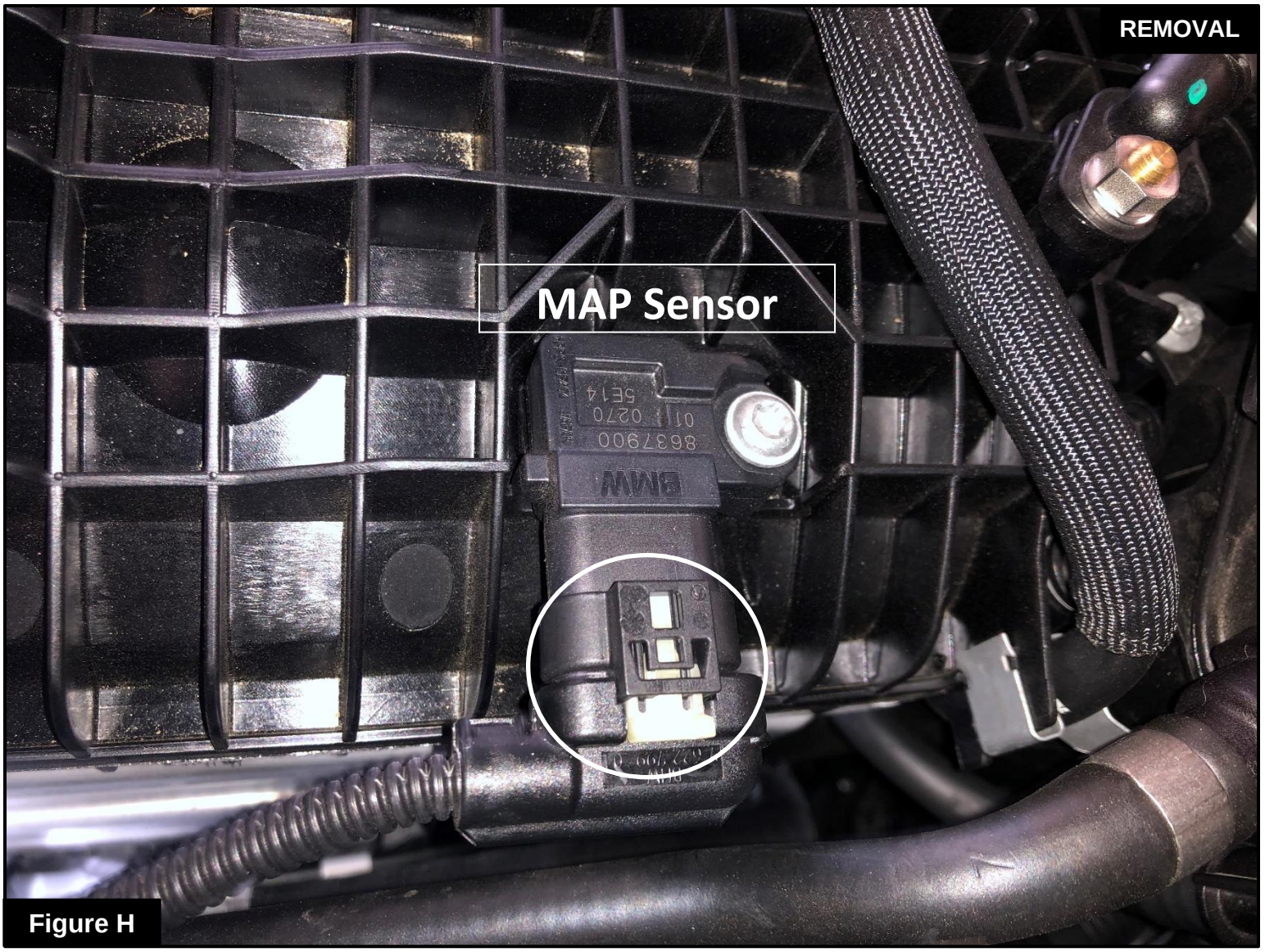


Figure H

Refer to Figure H for Steps 14-15

Step 14: Locate the MAP sensor on the intake manifold. It has a 4-wires connector and a white locking tab.

Step 15: Disconnect the MAP sensor by pulling back the white locking tab, then pressing down on the connector and sliding it out of the sensor.

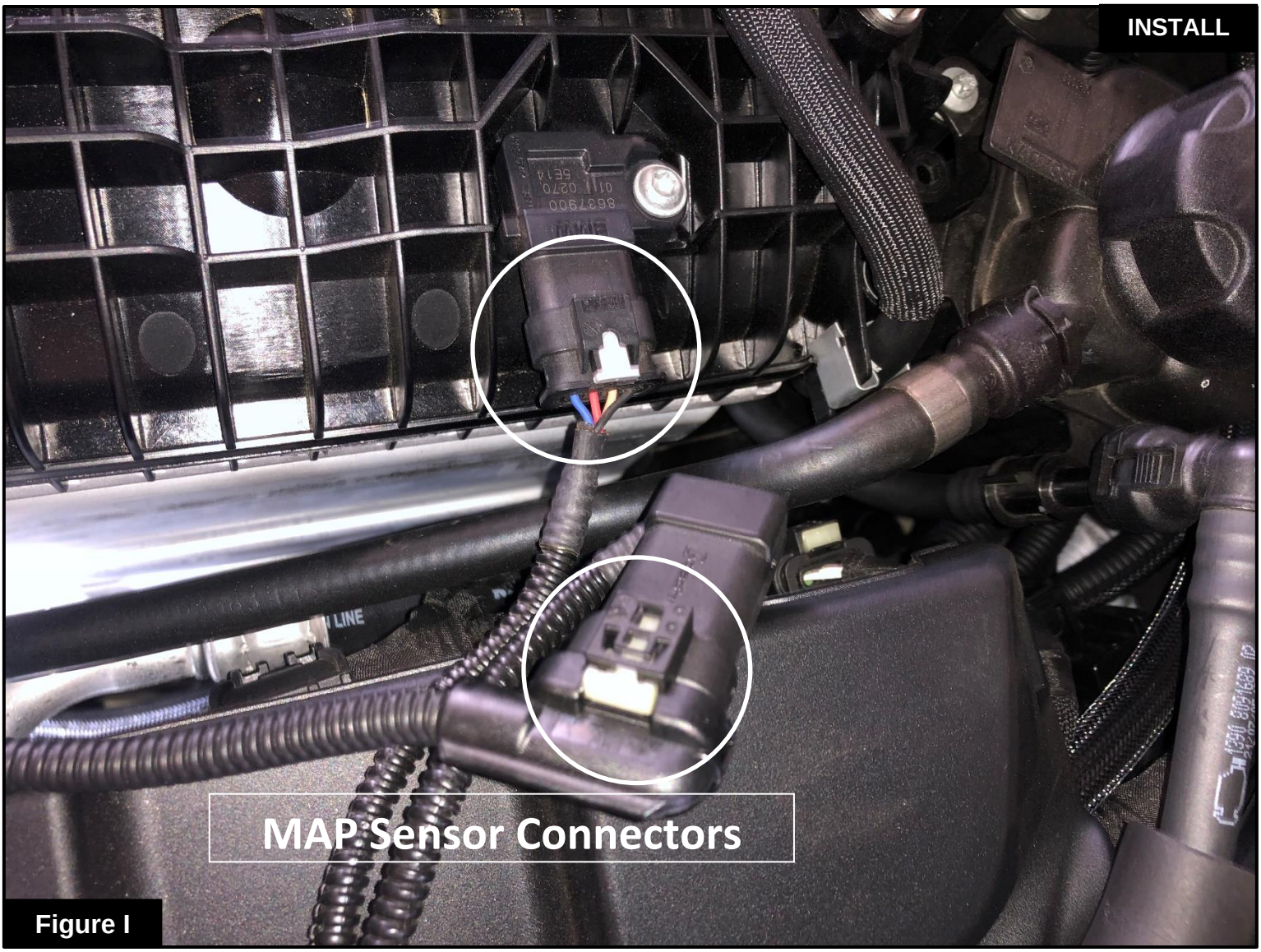


Figure I

Refer to Figure I for Steps 16-19

Step 16: Locate the MAP sensor jumper harness on the aFe POWER harness. It is the shorter, first set of connectors coming out of the aFe POWER module. It is labeled “MAP”.

Step 17: 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.

Step 18: Check with the picture to make sure the connectors are fully seated and that the locking tab is slid back into place.

Step 19: Reinstall the front engine brace and tighten the 5 fasteners that were removed in Step 3.

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 20-22

Step 20: Select a location to mount the Scorcher GT. We recommend that the module be mounted in a place that is dry, away from extreme heat and moving parts.

Step 21: For our installation, we found the best location to be on the inside of the driver's side cowel panel cover.

Step 22: Route the harness wires and secure them using the included zip ties for a neat installation.

The doors can now be opened to install the LED Switch.

Figure K

Refer to Figure K for Steps 23-24

Step 23: 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 24: Use the provided double sided tape to secure the LED switch in the desired location.

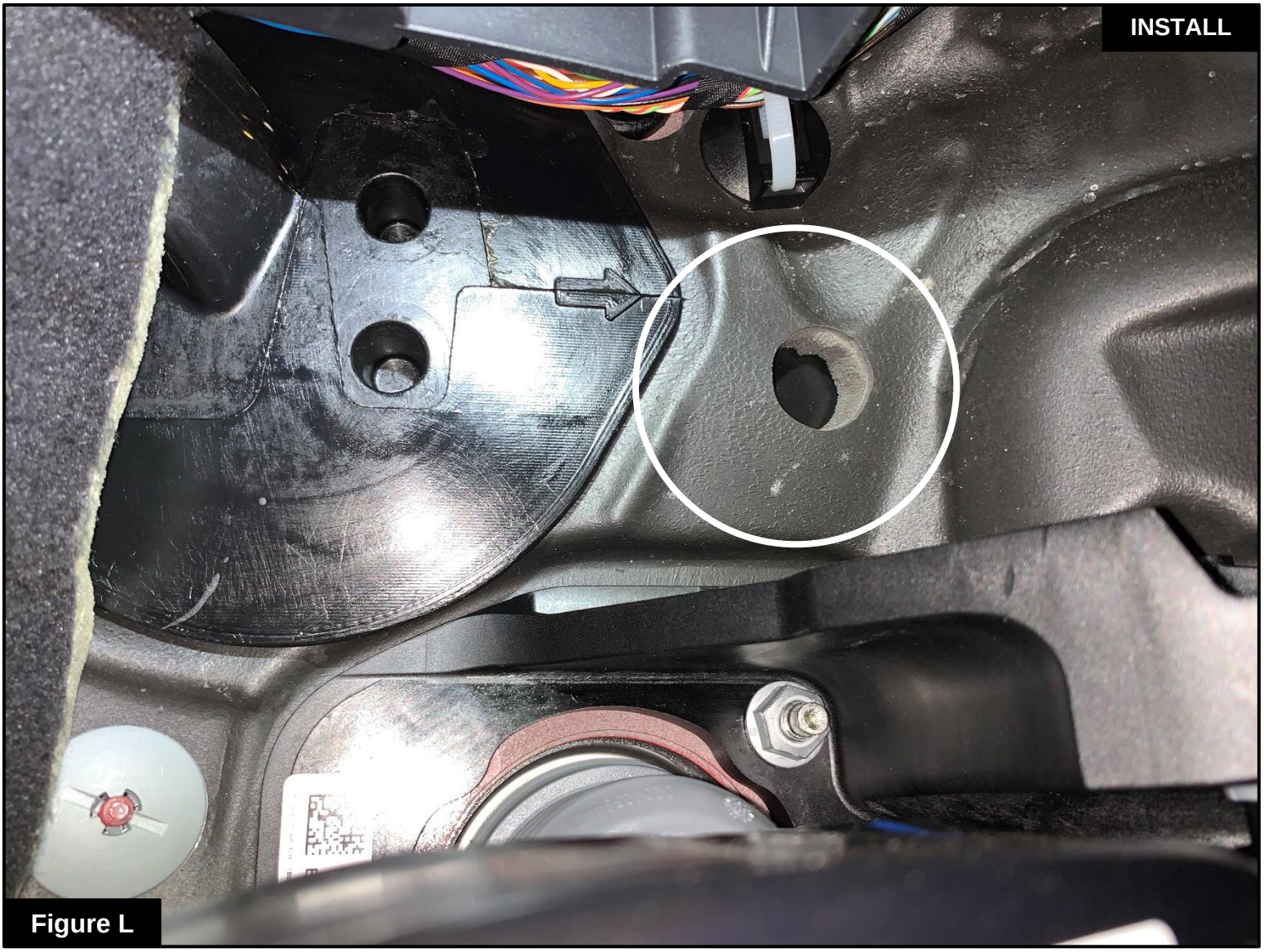


Figure L

Refer to Figure L for Steps 25-27

Step 25: Carefully route the switch cable behind the steering wheel cover or cabin trim cover. For the cleanest install, partially remove the cabin trim cover and run the LED swith wire between the trim panels.

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

Step 27: Route the switch cable through the firewall and into the engine bay using this slot.

Figure M

Refer to Figure M for Steps 28-29

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

Step 29: 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 N

Refer to Figure N (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 levels 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.

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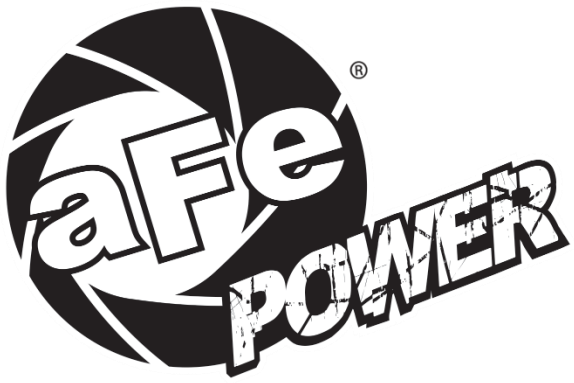

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