



advanced FLOW engineering

Instruction Manual

P/N: 77-43044

SCORCHER GT POWER MODULE

Make: Ford
Make: Ford

Model: F-150
Model: F-150

Year: 2021
Year: 2021

Engine: V6-2.7L (tt) Ecoboost
Engine: V6-3.5L (tt) Ecoboost



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.

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	R77-43044
B	1	LED Switch	05-70029
C	2	Velcro (2" Inches)	05-01244
D	4	Cable Ties	05-60167





SLEEP MODE

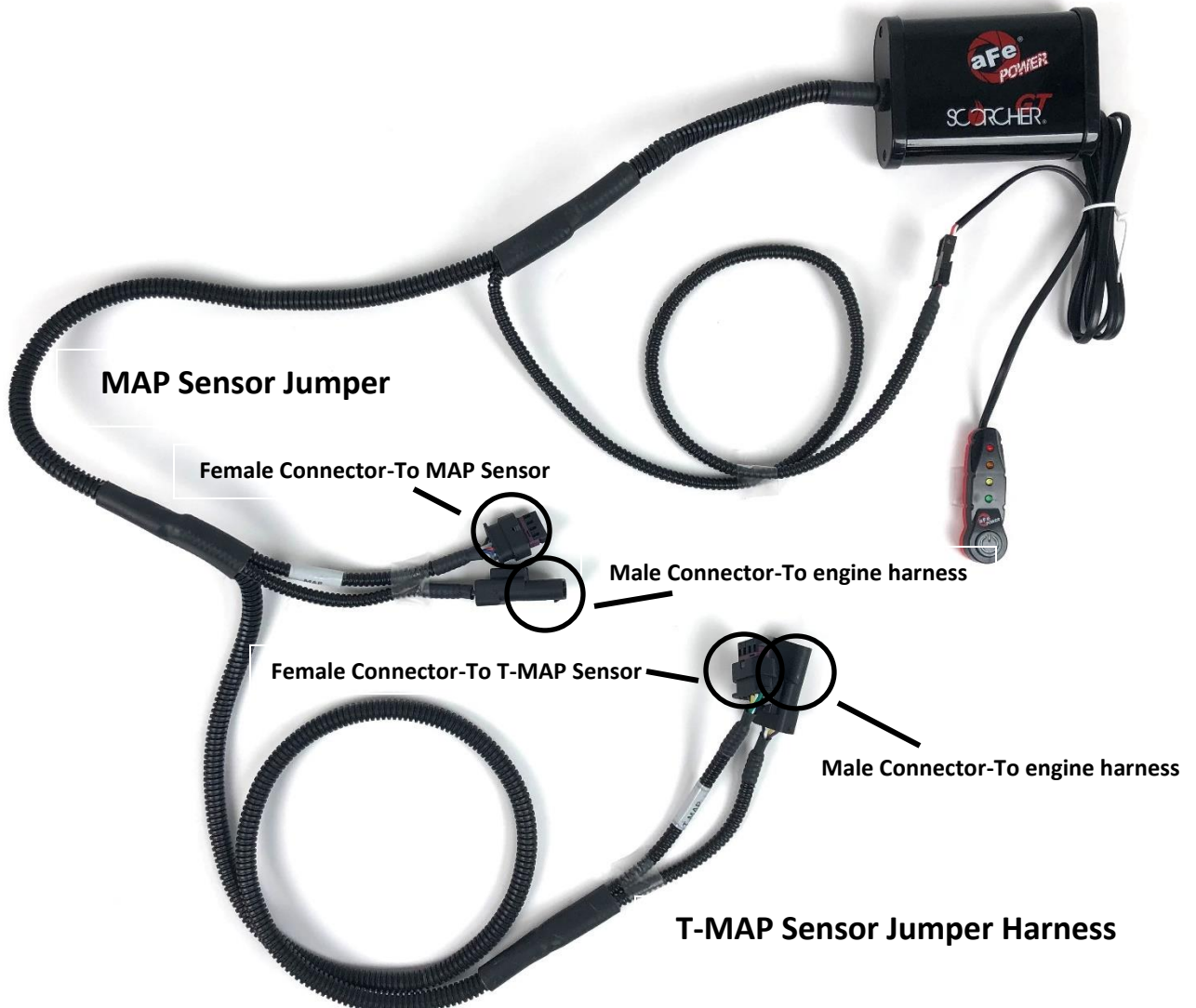
Figure A

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**

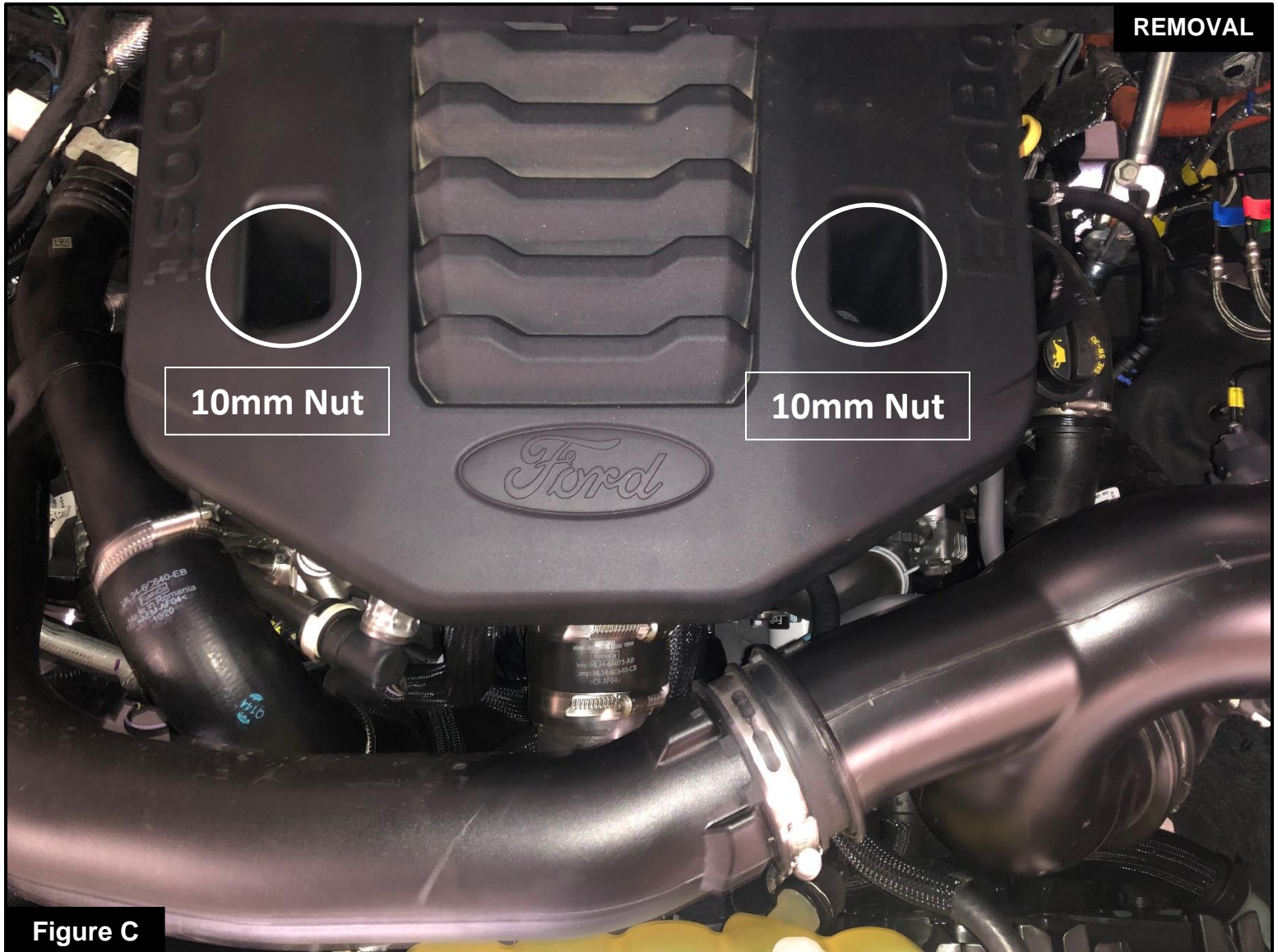
Refer to Figure B for Step 2

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 shorter set of wires.
- The T-MAP sensor jumper harness will be the longer set of wires.

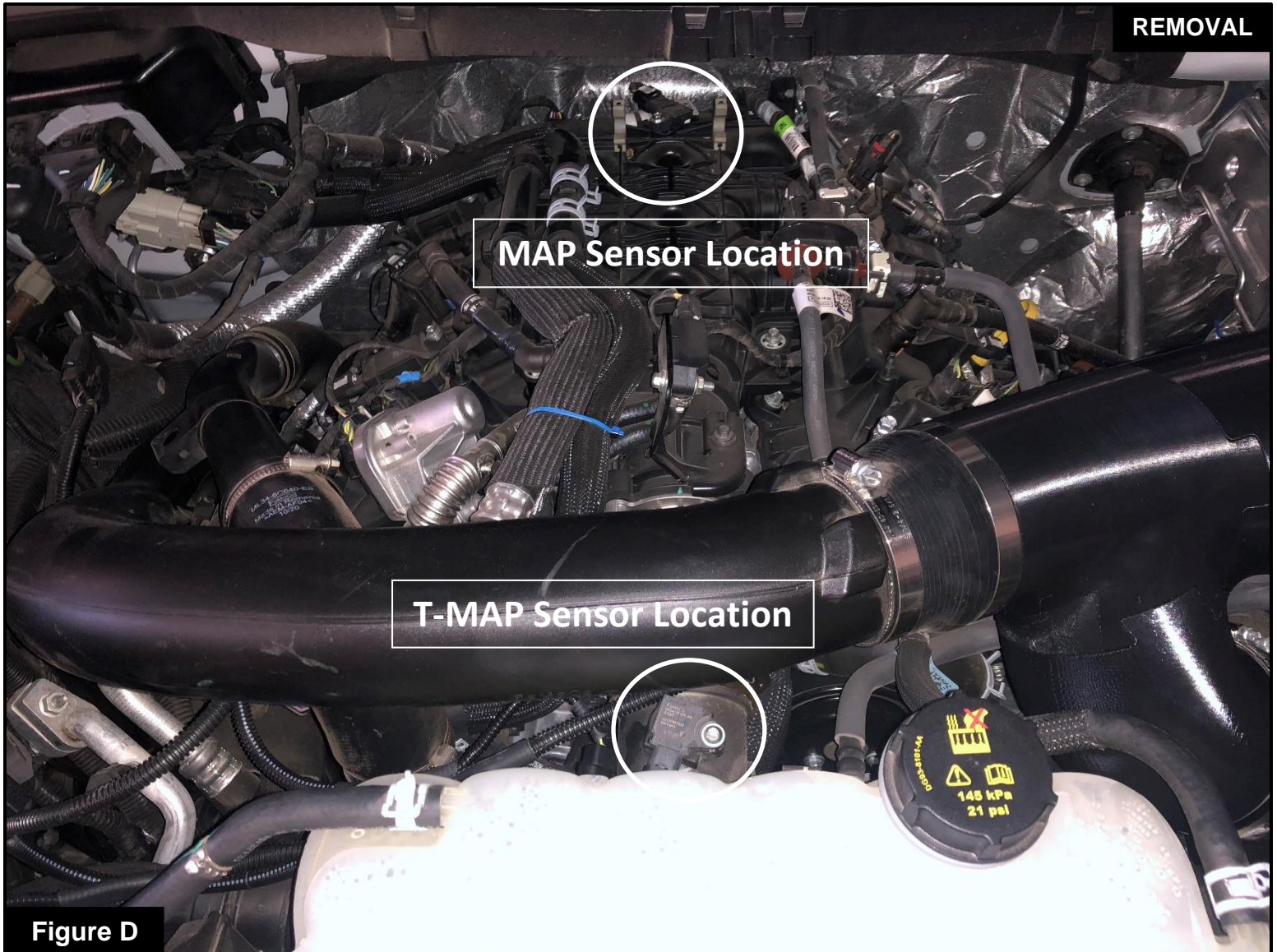


Installation on 2021 F-150 V6-3.5L (tt) is shown. Installation will be exactly the same for the V6-2.7L (tt) engine, except for the MAP sensor being centrally located on the intake manifold and there is no engine cover.



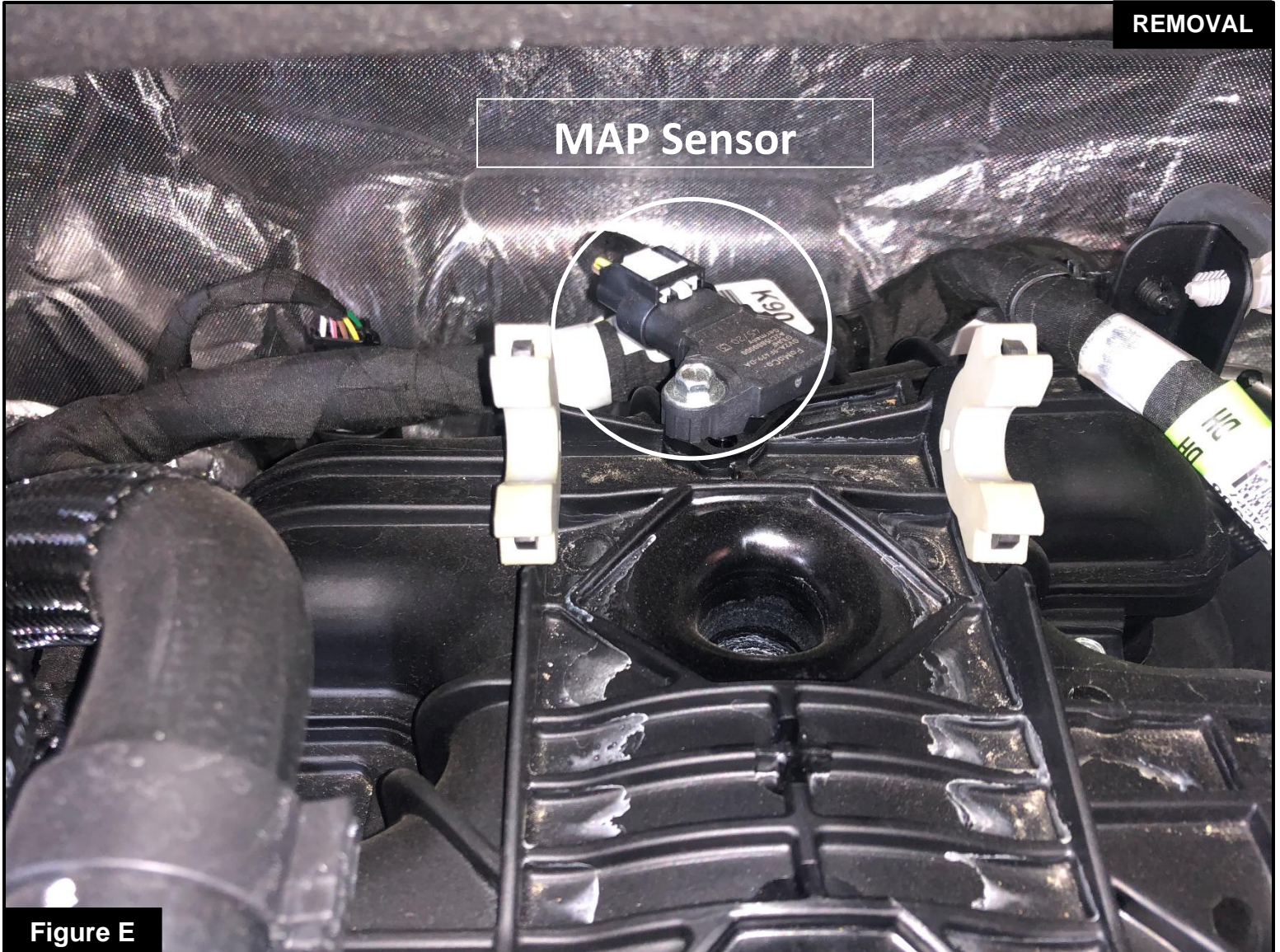
Refer to Figure C for Step 3

Step 3: Remove the engine cover by first removing the two 10mm nuts, then lifting up the cover.

**Figure D****Refer to Figure D for Steps 4-5**

Step 4: 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.

Step 5: The T-MAP sensor is located on the charge pipe, towards the front of the engine bay. It also has a 4-wires connector and a white locking tab.



Refer to Figure E for Step 6

Step 6: Disconnect the MAP sensor by pulling back on the locking tab, pressing down on the connector and sliding it out of the sensor.

MAP Sensor Connectors



Figure F

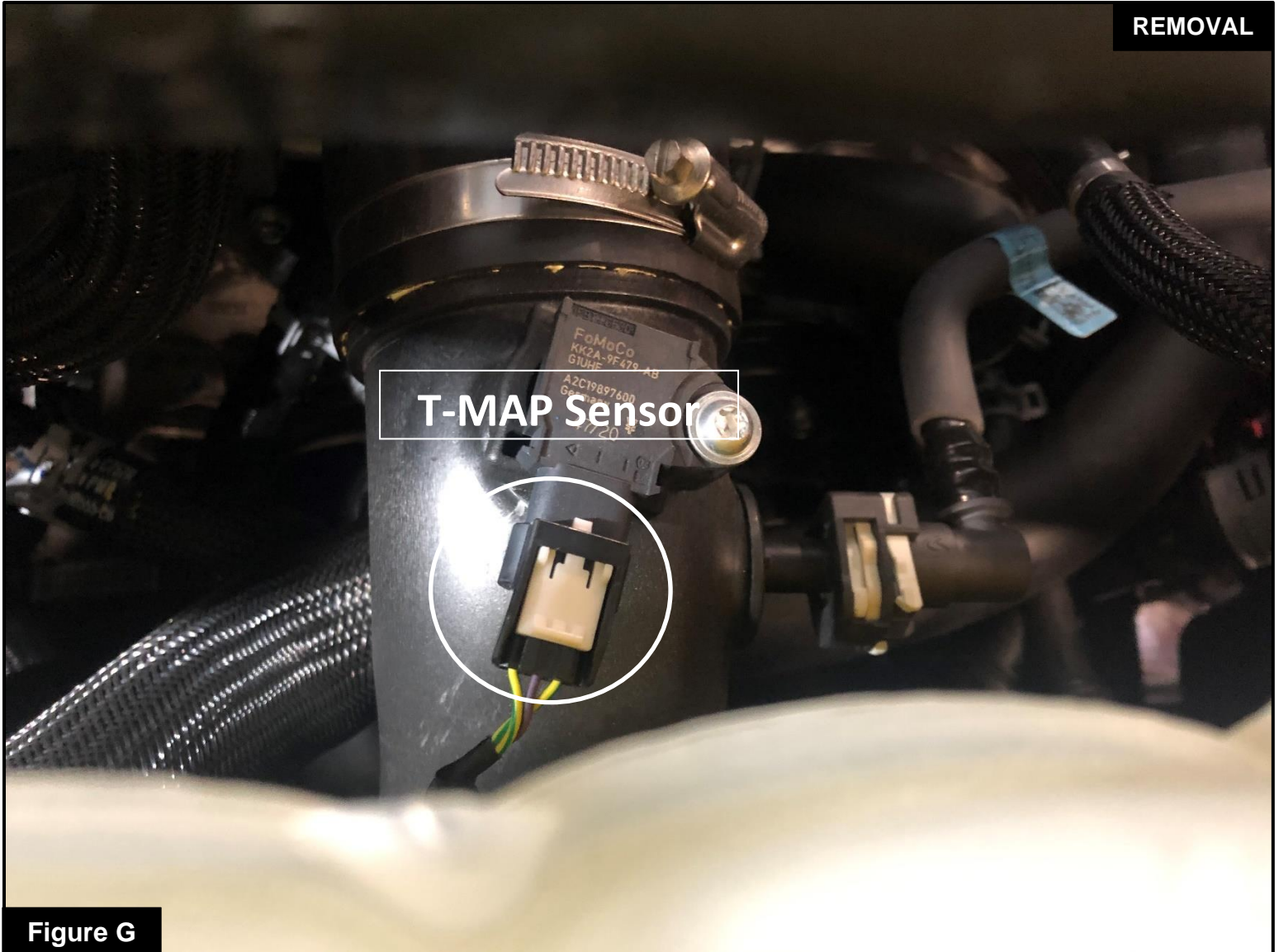
Refer to Figure F for Steps 7-9

Step 7: Locate the MAP sensor jumper harness on the aFe POWER harness. It is the first, shorter set of connectors coming out of the aFe Power module. It is labeled "MAP".

Step 8: 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 9: Check with the picture to make sure the connectors are fully seated and that the locking tab is slid back into place.

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

**Figure G****Refer to Figure G for Steps 10-11**

Step 10: Locate the T-MAP sensor on the charge pipe towards the front of the engine bay.

Step 11: Disconnect the T-MAP sensor by pulling back the white locking tab, then pressing down on the connector and sliding it out of the sensor.

T-MAP Sensor Connectors

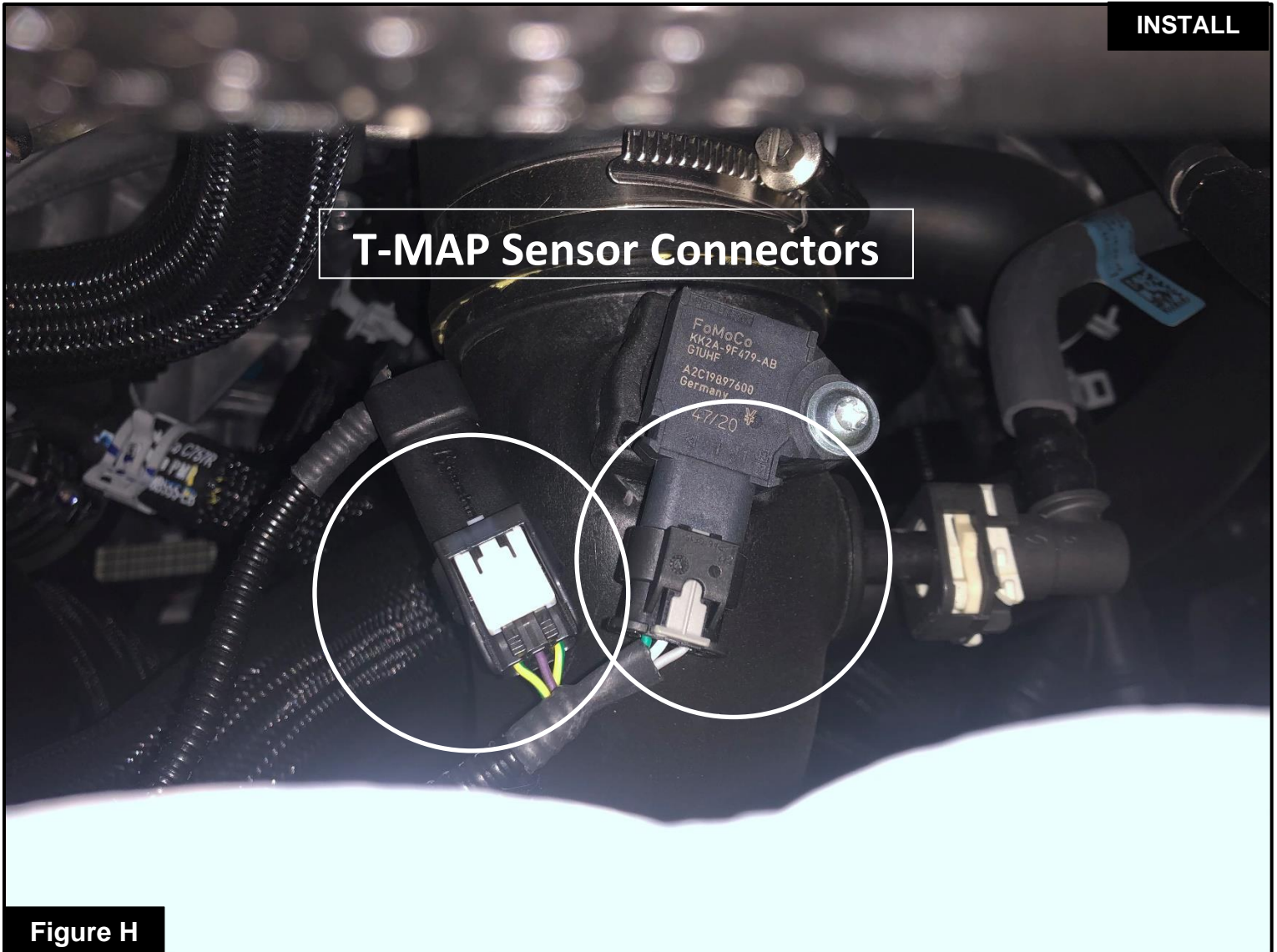


Figure H

Refer to Figure H for Steps 12-14

Step 12: Locate the T-MAP sensor jumper harness on the aFe POWER harness. It is the longer, second set of connectors coming out of the aFe Power module. It is labeled “T-MAP”.

Step 13: 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 14: Check with the picture to make sure the connectors are fully seated and that the locking tab is slid back into place.

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



Figure I

Refer to Figure I for Steps 15-18

Step 15: Select a location to mount the Scorch GT. We recommend that the module be mounted in a place that is dry, away from extreme heat and moving parts.

Step 16: For our installation, we found the best location to be on the side of the airbox located on the driver side of the vehicle.

Step 17: Route the harness wires and secure them using the included zip ties for a neat installation.

Step 18: Reinstall the engine cover and the two 10mm nuts.

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

**Figure J****Refer to Figure J for Steps 19-20**

Step 19: 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 20: Use the provided double sided tape to secure the LED switch in the desired location.



Figure K

Refer to Figure K for Steps 21-23

Step 21: 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 switch wire between the trim panels.

Step 22: Locate the engine bay wiring access slot below the driver side kick panel.

Step 23: Route the switch cable through the firewall and into the engine bay using this slot.

**Figure L****Refer to Figure L for Steps 24-25**

Step 24: Plug the end of the LED switch cable to the aFe POWER harness inside the engine compartment.

Step 25: 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 M

Refer to Figure M (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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Rapid Induction Air Intake



P/N: 52-10010D/R

Magnum Force Air Intake System



P/N: 54-13061R/D

Sprint Booster



P/N: 77-13001

Magnum FLOW P5R Filter



P/N: 30-10215

Dynamic Air Scoop



P/N: 52-10010S

aFE POWER Bank



P/N: 40-10198

aFe POWER Tactical Backpack



P/N: 40-33205-B

aFe POWER Tactical Duffel



P/N: 40-33206-B

To purchase any of the items above, view airflow charts, dyno graphs, photos, and video; please go to aFepower.com



Warranty

General Terms:

- aFe warrants their products to be free from manufacturer's defects due to workmanship and material.
- This warranty applies only to the original purchaser of the product and is non-transferrable.
- Proof of purchase of the aFe product is required for all warranty claims.
- Warranty is valid provided aFe instructions for installation and/or cleaning were properly followed.
- Proper maintenance with regular inspections of product is required to insure warranty coverage.
- Damage due to improper installation, abuse, unauthorized repair or alteration is not warranted.
- Incidental or consequential damages or cost, including installation and removal of part, incurred due to failure of aFe product is not covered under this warranty.
- All warranty is limited to the repair and/or replacement of the aFe part. To request Return Goods Authorization ("RGA"), email RGA@afepower.com or call (951)493-7185. Upon receipt of the RGA, you must return the product to the address provided in the RGA, freight prepaid and accompanied with a dated proof of purchase and the RGA. Upon receipt of the defective product and upon verification of proof of purchase, aFe will either repair or replace the defective product within a reasonable time, not to exceed thirty days.

Product Category	P/N Prefix	Warranty duration
Direct OE Replacement Filters	10, 11, 30, 31, 71, 73	Life of the vehicle
Racing Filters	18	1 year
Universal	20, 21, 23, 24, 72, TF	2 years
Air Intake Systems	50, 51, 53, 54, 55, 56, 57, 58, 75, TR, TA, TL, TM	2 years
Exhaust Systems	49	2 years
Intercoolers & Intercooler Tubes	46-2	2 years
Intake Manifolds	46-1	2 years
Differential Cover	46-7	Life of the vehicle
Exhaust Manifolds	46	2 years
Throttle Body Spacers	46-3	2 years
Turbochargers	46-6	2 years*
Fluid Filters	44	90 days
Pre-Filters	28	2 years
Heavy Duty OE Replacement	70	2 years
PowerSports OE Replacement	81, 87	2 years
Tuners	77	1 year

No other warranty expressed or implied applies nor is any person or advanced FLOW engineering authorized to assume any other warranty. Some States do not allow the exclusion or limitation of incidental or consequential damages or do not allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.

*See turbocharger warranty for more info



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