



advanced FLOW engineering

Instruction Manual P/N: 77-83028

Make: **Ford** Model: **F-150** Year: **2018-2020** Engine: **V6-3.0L (td) Power Stroke**



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.
- Do not attempt to work on your vehicle when the engine is hot.

Emission note: 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	R77-83028
B	1	LED Switch	05-70013
C	1	Bypass Plug	05-70017
D	1	Harness	AFE-10-242
E	2	Velcro (2 Inches)	05-01244
F	5	Cable Ties	05-60167
G	2	Double Sided Tape	07-90001



SLEEP MODE

Figure A

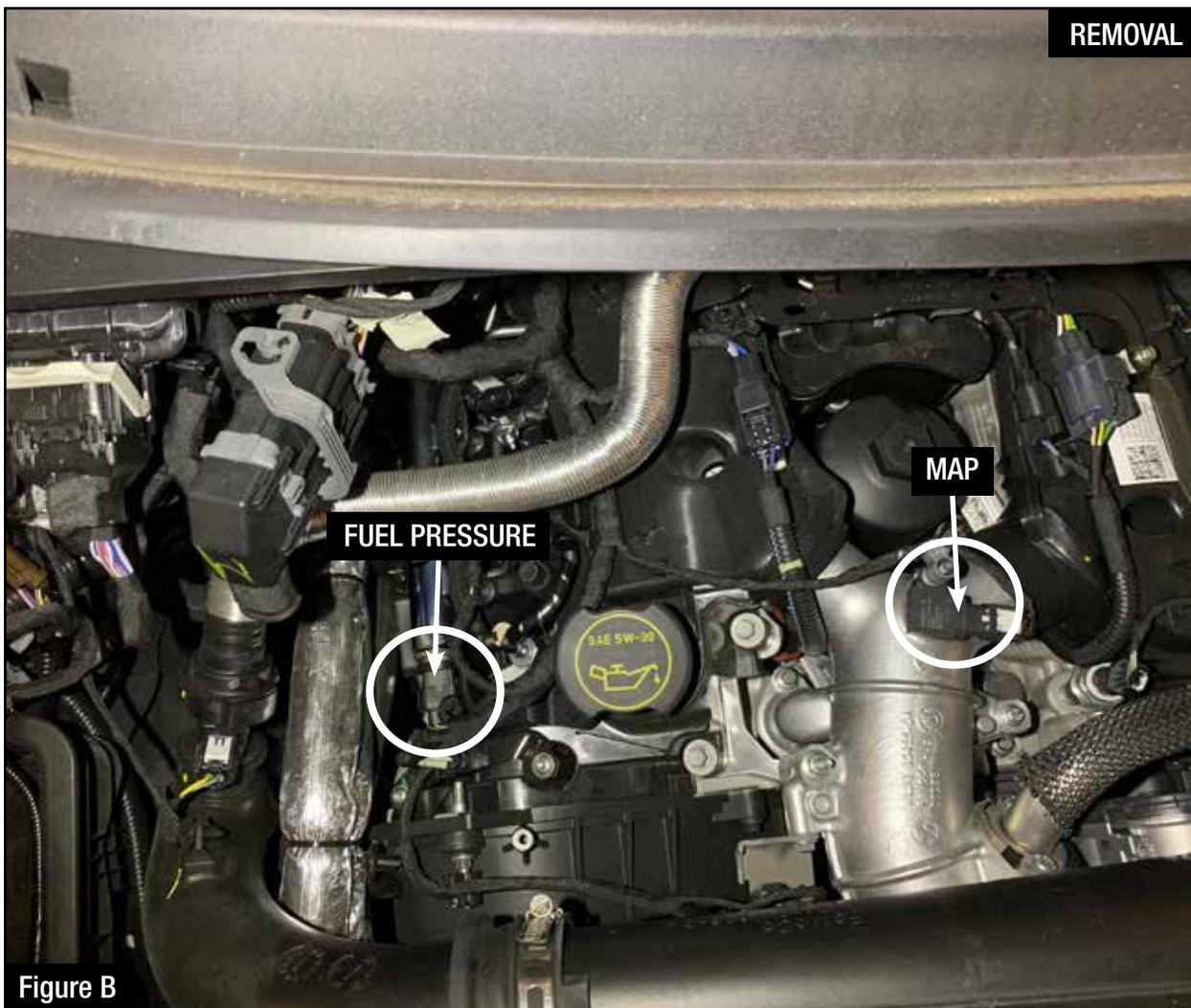
Refer to Figure A for Step 1.

Step 1: Before installing the aFe POWER Module you must place your vehicle's ECU in sleep mode. In order to place your vehicles ECU in sleep mode 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



Do NOT open the doors or start the vehicle when one of the sensor is disconnected. This could create a check engine light.



Refer to Figure B for Steps 2-4.

Step 2: Remove the engine cover and insulation foam to gain access to the MAP and Fuel Pressure sensors.

Step 3: Locate the MAP sensor, it is on top of the intake manifold.

Step 4: Locate the Fuel Pressure sensor, it is at the end of the fuel rail, to the left of the MAP sensor.



Refer to Figures C for Steps 5-6.

Step 5: Disconnect the MAP sensor, by sliding the white locking tab back and pressing down on it while sliding the connector out of the sensor.

Step 6: Locate the section of the aFe POWER 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 to the female connector of the engine harness.



Figure D

Refer to Figure D for Step 7.

Step 7: Check with the picture to make sure the connectors are correctly connected.



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

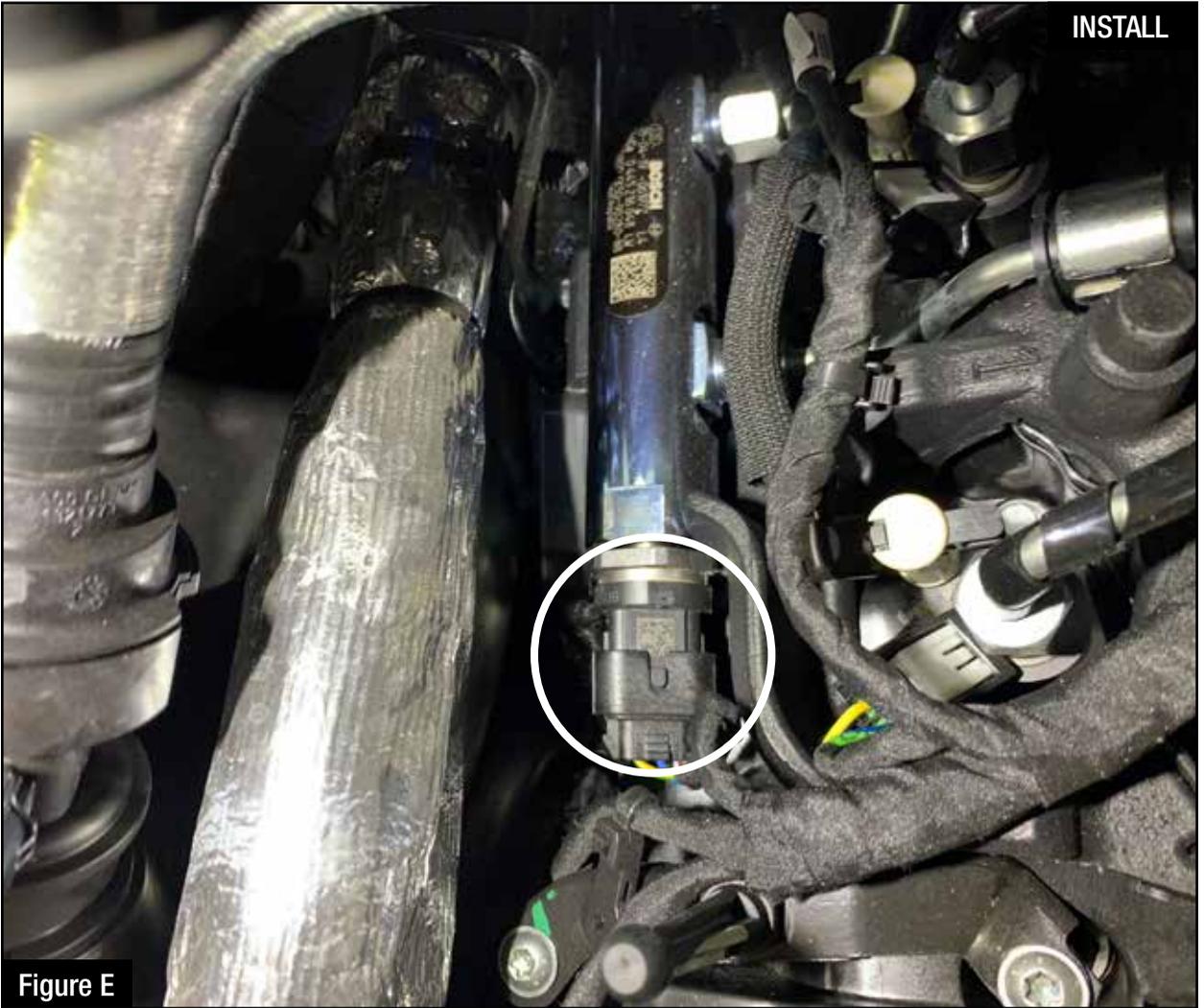


Figure E

Refer to Figure E for Steps 8-9.

- Step 8: Locate and disconnect the fuel pressure sensor connector, by pressing down on the locking tab and sliding the connector out of the sensor.
- Step 9: Locate the section of the aFe POWER harness labeled "Fuel". Plug the female connector of the aFe POWER harness into the fuel pressure sensor, then take the male connector of the module and connect to the female connector of the engine harness.

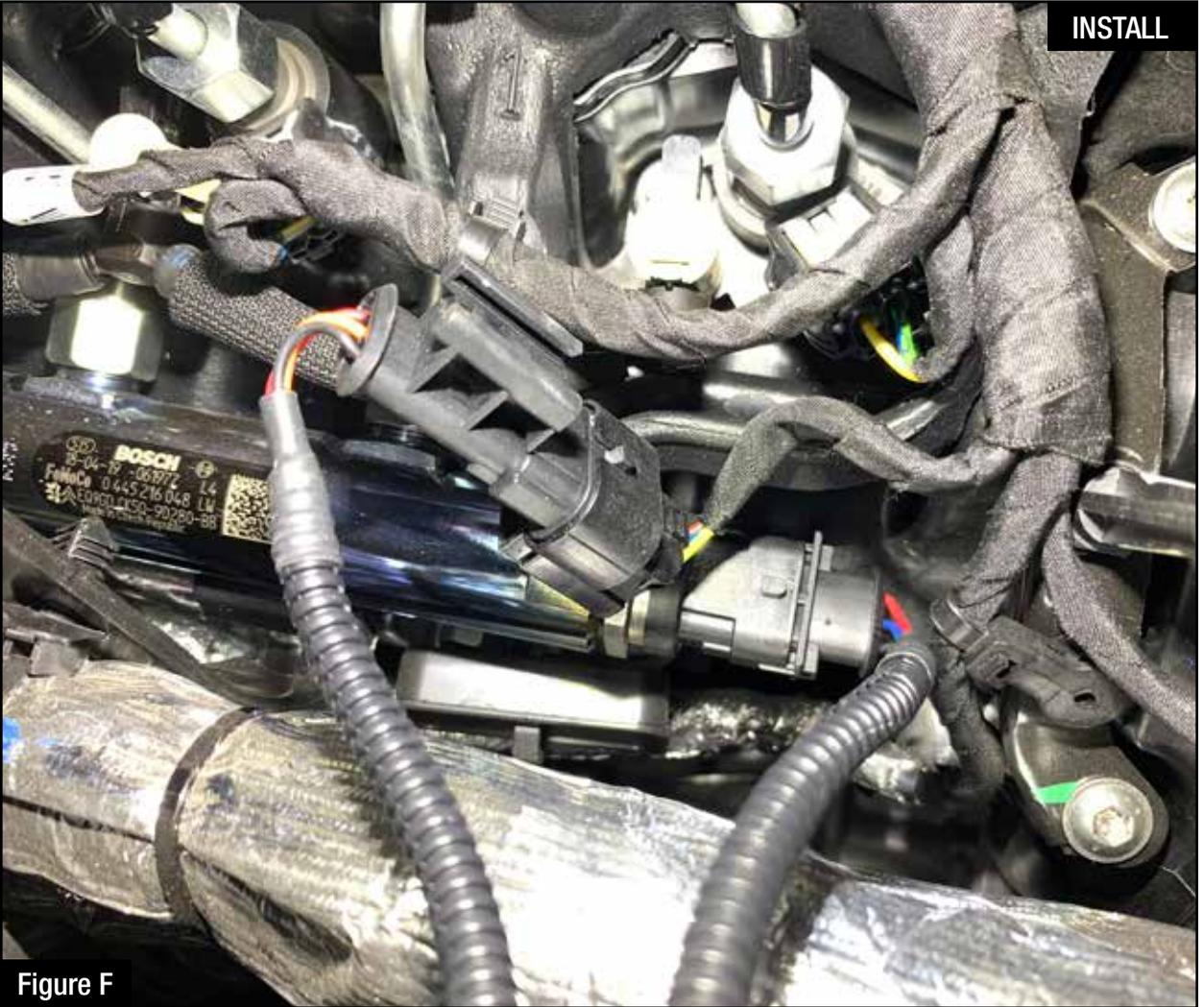


Figure F

Refer to Figure F for Step 10.

Step 10: Check with the picture to make sure the connectors are correctly connected.



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



Figure G

Refer to Figure G for Steps 11-12.

- Step 11: Connect the black ground terminal cable on the aFe POWER module to the negative battery post by removing the 13mm nut and placing the terminal and then reinstalling the nut.
- Step 12: Connect the red power terminal cable on the aFe POWER module to the positive battery post by removing the 10mm nut and placing the terminal and then reinstalling the nut.



Figure I

Refer to Figure I for Steps 15-16.

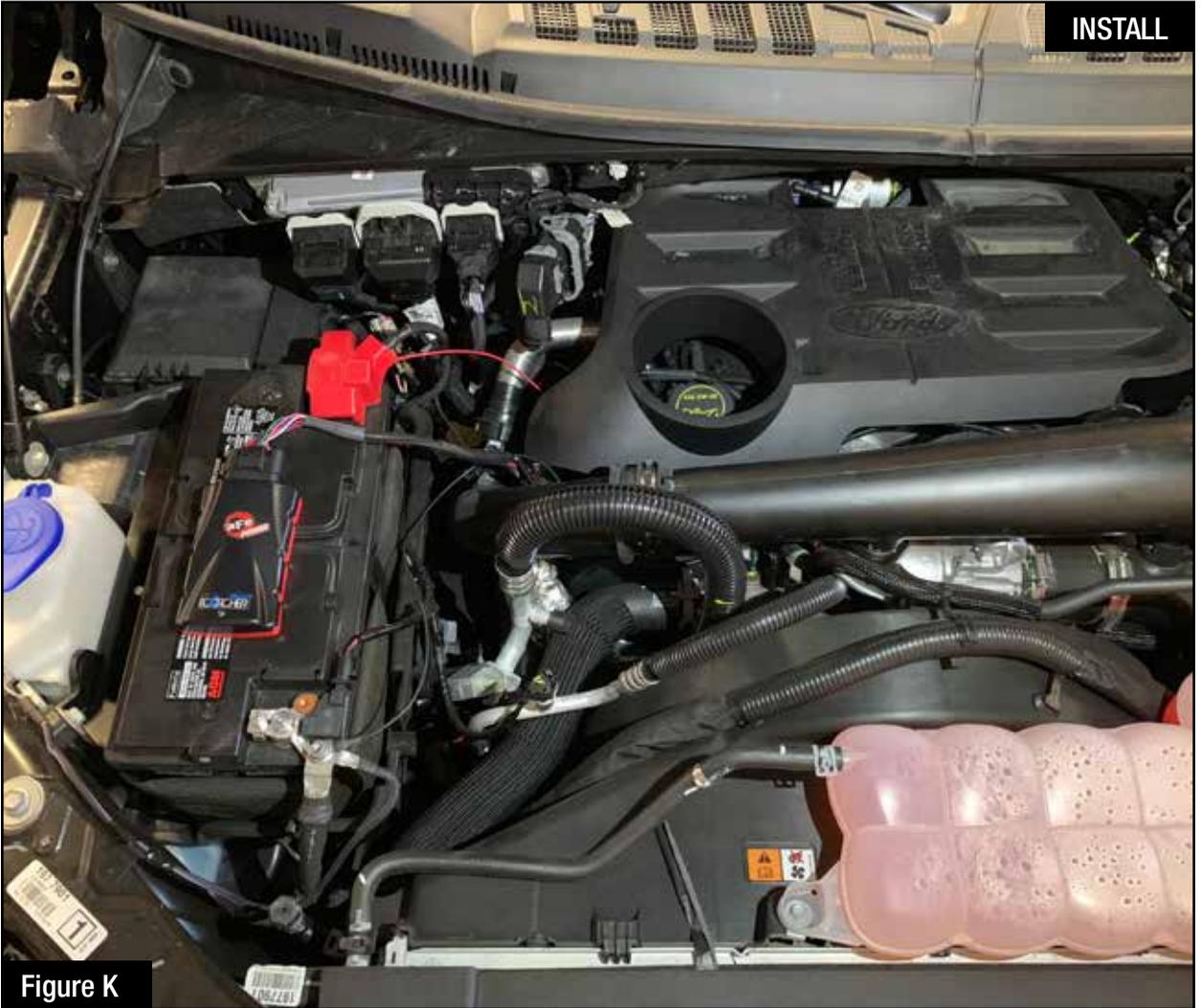
Step 15: Select the desired location of the LED switch and route the cable through the top or bottom of the switch.

Step 16: Use the provided double sided tape to secure the LED switch in the desired location.

**Figure J****Refer to Figure J Steps 17-18.**

Step 17: Carefully route the switch cable behind steering wheel cover or cabin trim cover.

Step 18: Route the switch cable through firewall and into the engine bay. Follow the main harness through the grommet into the firewall.

**Figure K****Refer to Figure K for Steps 19-21.**

Step 19: Plug the end of the switch cable to the harness inside the engine compartment.

Step 20: Secure the wires away from any extreme heat and moving parts with the provided ties. Make sure all connections are secured and fully engaged.

Step 21: Reinstall the foam insulation engine cover removed in Step 2.



The installation of the module itself is now completed. Keep reading the install instruction to learn how to use all its features.



Figure L

Refer to Figure L.

(Picture is for reference)

The blue LED light will start flashing once the module is connected to the truck and the ECU on. The blue LED will become solid if the module gets connected through Bluetooth to a device.



Figure S

Refer to Figure S (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 moment while the unit is on. The LED switch can be used at the same time of the Bluetooth app.

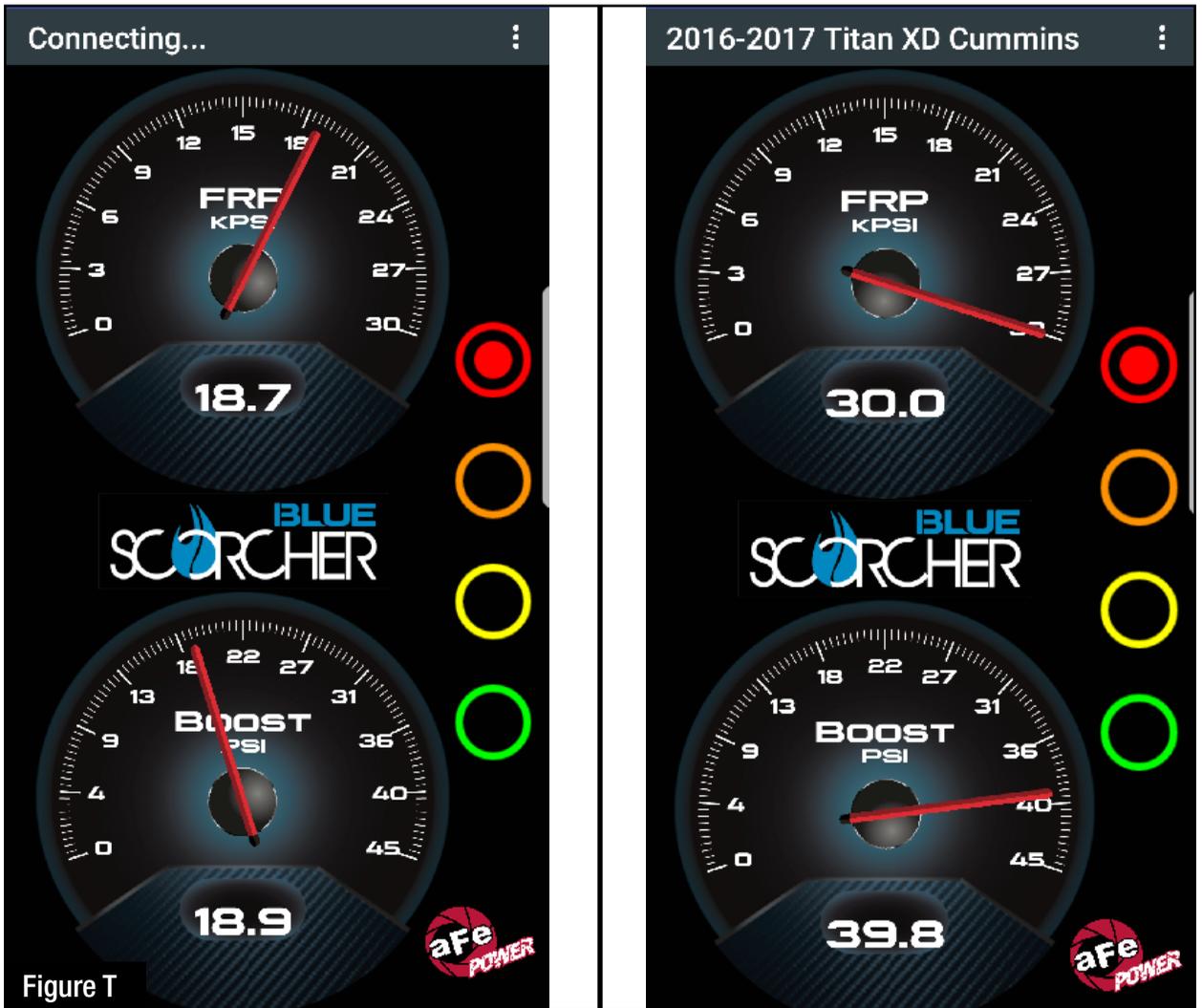


Figure T

Refer to Figure T (app connection - iOS).

For iOS device, download the app from the apps store. Make sure the Bluetooth is activated on your device. Open the app and it will automatically connect through Bluetooth to the SCORCHER BLUE module when the vehicle and module are on. When connected, the vehicle description will show up on top of the screen and the gauges will show current data.

The blue LED light on the module will become solid once connected to a Bluetooth device. Simply tap on the green, yellow, orange and red button to switch between the modes.

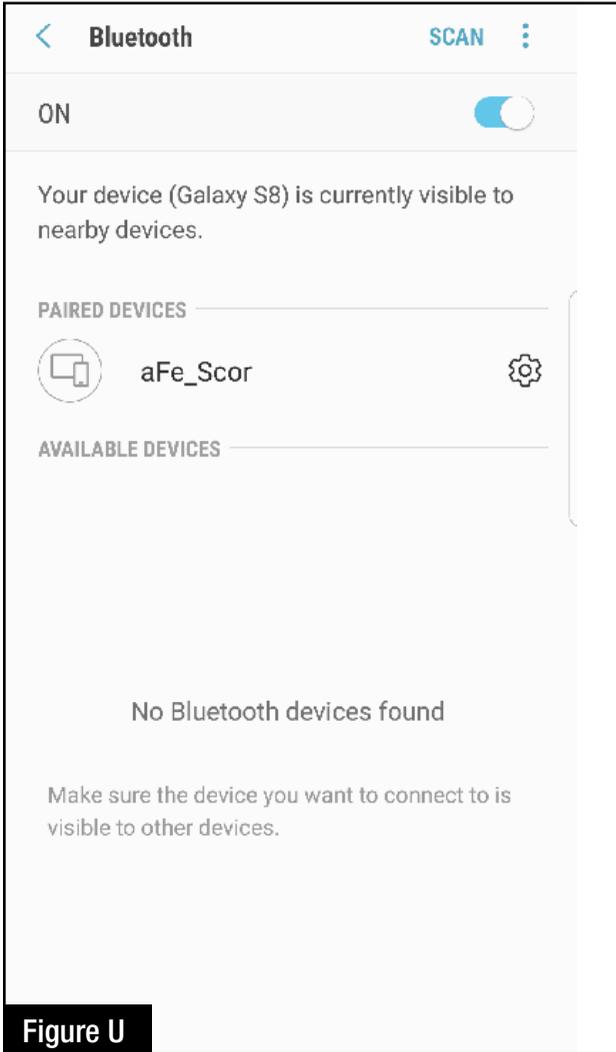


Figure U

Refer to Figure U (app connection- Android).

For Android device, download the app from the play store. For the first connection, go to the Bluetooth settings of your device, turn on Bluetooth and scan for available devices. Select “aFe SCOR” and pair with device. The vehicle needs to be on and the module connected. Once shown as paired device, open the app on your device and it will automatically connect to the vehicle. The vehicle description will appear on top of the screen and the gauges will show current data.

The blue LED light on the module will become solid once connected to a Bluetooth device. Simply tap on the green, yellow, orange and red button to switch between the modes.

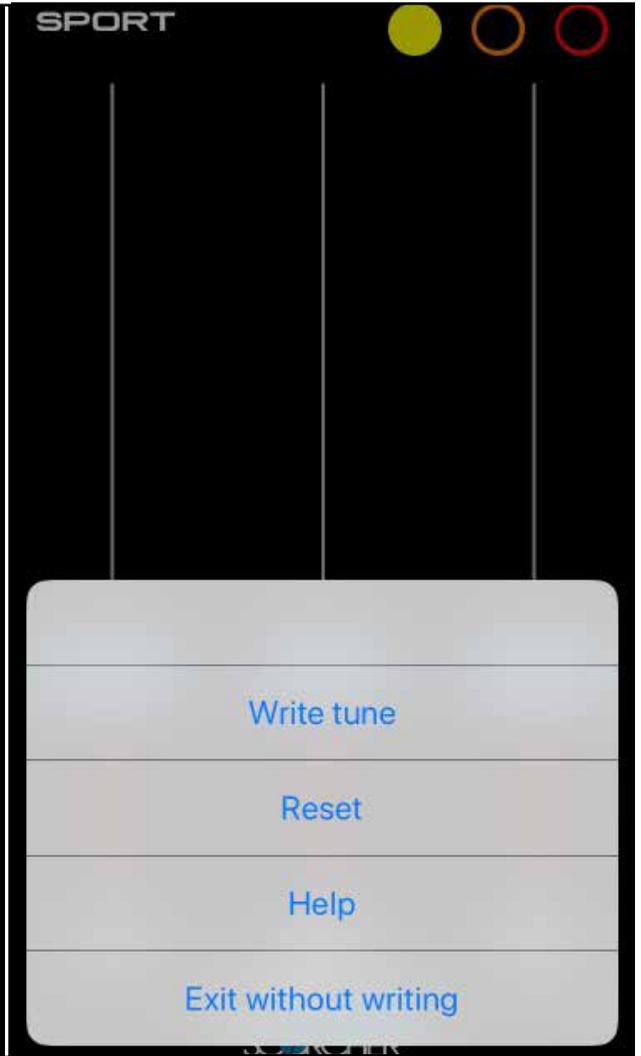
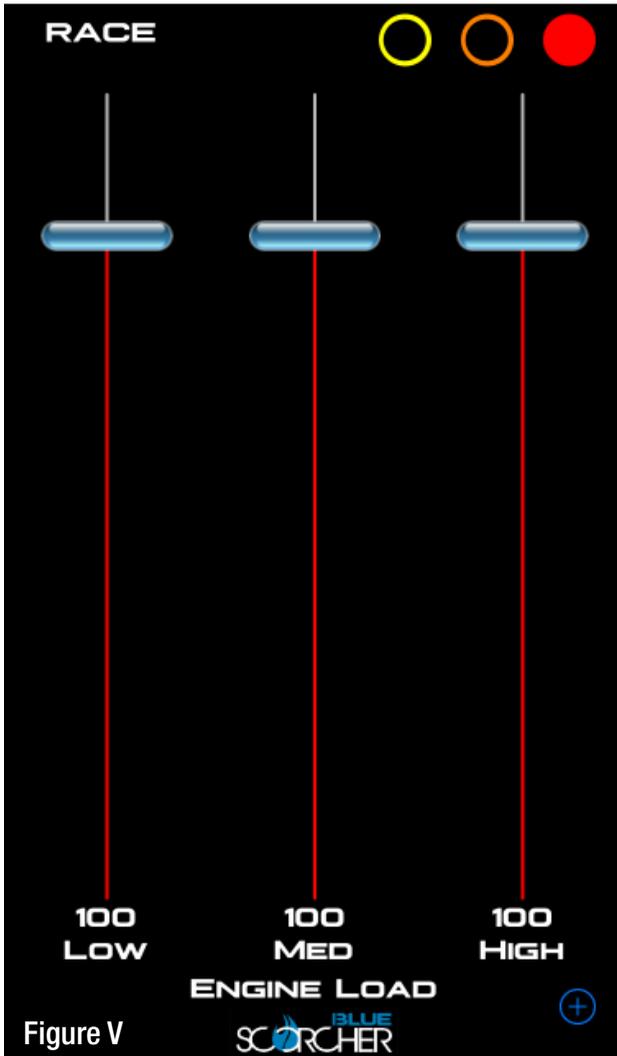


Figure V

Refer to Figure V (Custom Tuning).

The aFe POWER SCORCHER BLUE app offers the capability to custom tune the different modes. Go to the menu on the top right corner and select “Tune”. Select the mode you would like to custom tune and adjust the sliders at low, medium and high load. You can either write the tune or exit without writing.



Disclaimer: Custom tuning should only be performed with the ignition in the “run” position and engine off. Configuring the tunes outside the default values may cause drivability issues and /or check engine lights to occur.

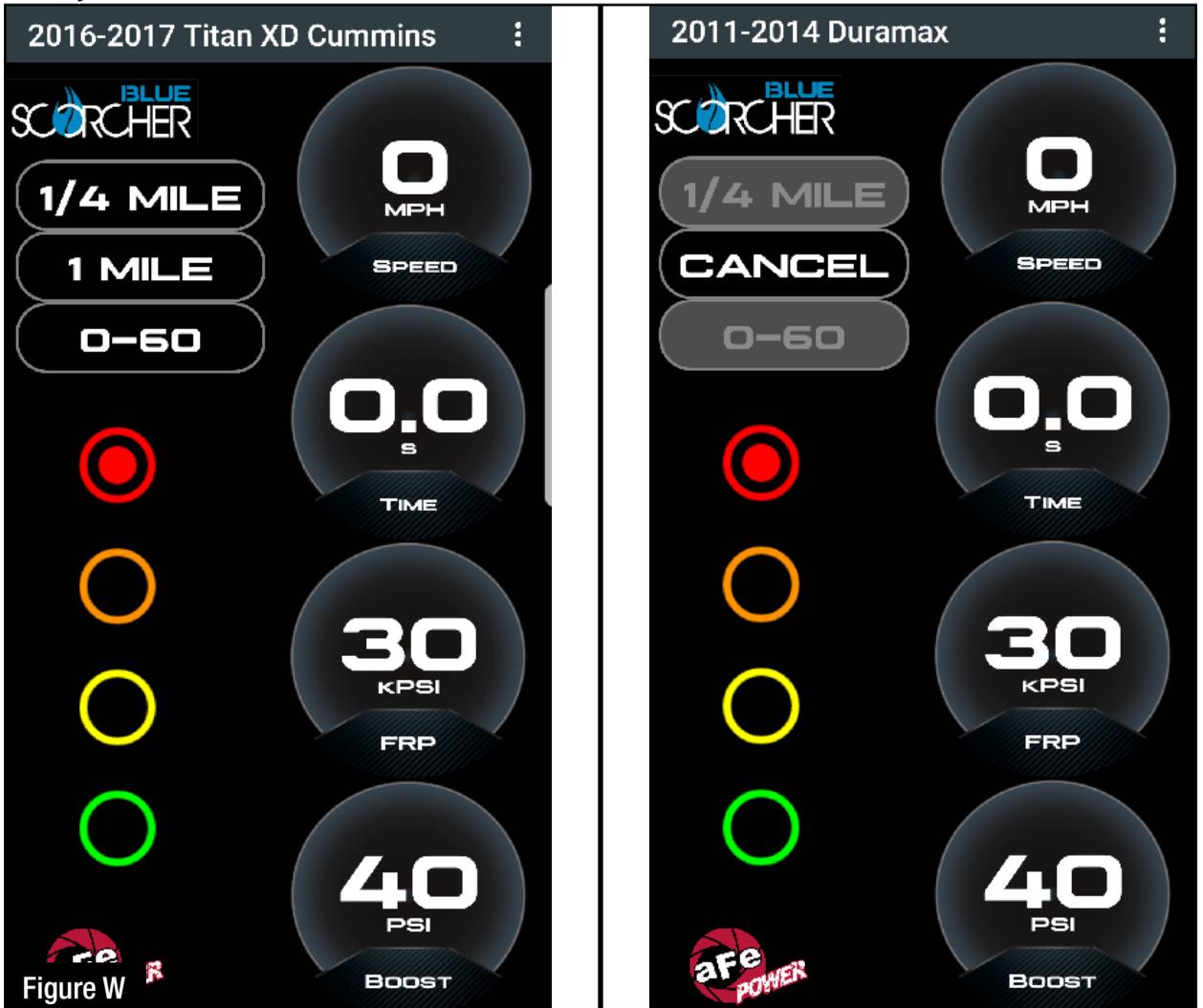


Figure W

Refer to Figure W (Vehicle Performance Screen).

On the gauges screen, swipe to the left to get to the vehicle performance screen. When the vehicle is not moving, select the test you are wanting to attempt (0-60mph, ¼ mile or mile). The app will automatically detect the movement of the vehicle and the timer will start. Once you reach the speed or distance, the timer will stop. If you select a new mode it will reset and you can start again. If you need to stop the test at any point, hit the cancel button and leave the screen.



Use the aFe POWER SCORCHER BLUE app responsibly. Always drive safely and obey traffic laws. aFe POWER is not responsible for any accidents, injuries, or property damage that may occur during its use.



Figure X

Refer to Figure X (Bypass Plug).

A bypass plug is included in the kit. The plug can be connected to the harness instead of the module. Once the bypass plug is connected the vehicle will run in factory settings. Make sure the plug is fully engaged when connected to the harness. Thank you for choosing aFe POWER!



The vehicle needs to be in sleep mode when the module gets disconnected and the bypass plug connected. Wait for the blue LED on the module to stop flashing to make sure the truck is in sleep mode.

OE Replacement Air Filter



P/N: 30-10162 (P5R)
31-10162 (PDS)

Momentum HD Air Intake



P/N: 50-70023T (P10R)
50-70023D (PDS)

Intercooler Tubes



P/N: 46-20364-B

Intercooler w/ Tubes



P/N: 46-20362-B

Sprint Booster V3



P/N: 77-13001

DPF-Back Exhaust System



P/N: 49-43106-B (Blk. Tip)
49-43106-P (Pol. Tip)

Rebel Series DPF-Back Exhaust



P/N: 49-43108-B (Blk. Tips)
49-43108-P (Pol. Tips)

Rear Differential Cover



P/N: 46-70152-WL (w/ Oil)
46-70152 (Blk./Mach.)

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)493-7100. 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	21, 24, 72, TF	2 years
Air Intake Systems	50, 51, 54, 55, 75, TR, TA, TL	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
Fluid Filters	44	90 days
Pre-Filters	28	2 years
Heavy Duty OE Replacement	70	2 years
PowerSports OE Replacement	81, 87	2 years
PowerSports Intake Systems	85	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.



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