

**advanced FLOW engineering**

**Instruction Manual** P/N: 77-46310

Make: **BMW** Model: **M3/M4 (F80/F82/F83)** Year: **2015-2019** Engine: **L6-3.0L (tt) S55**

Make: **BMW** Model: **M2 Competition (F87)** Year: **2019** Engine: **L6-3.0L (tt) S55**

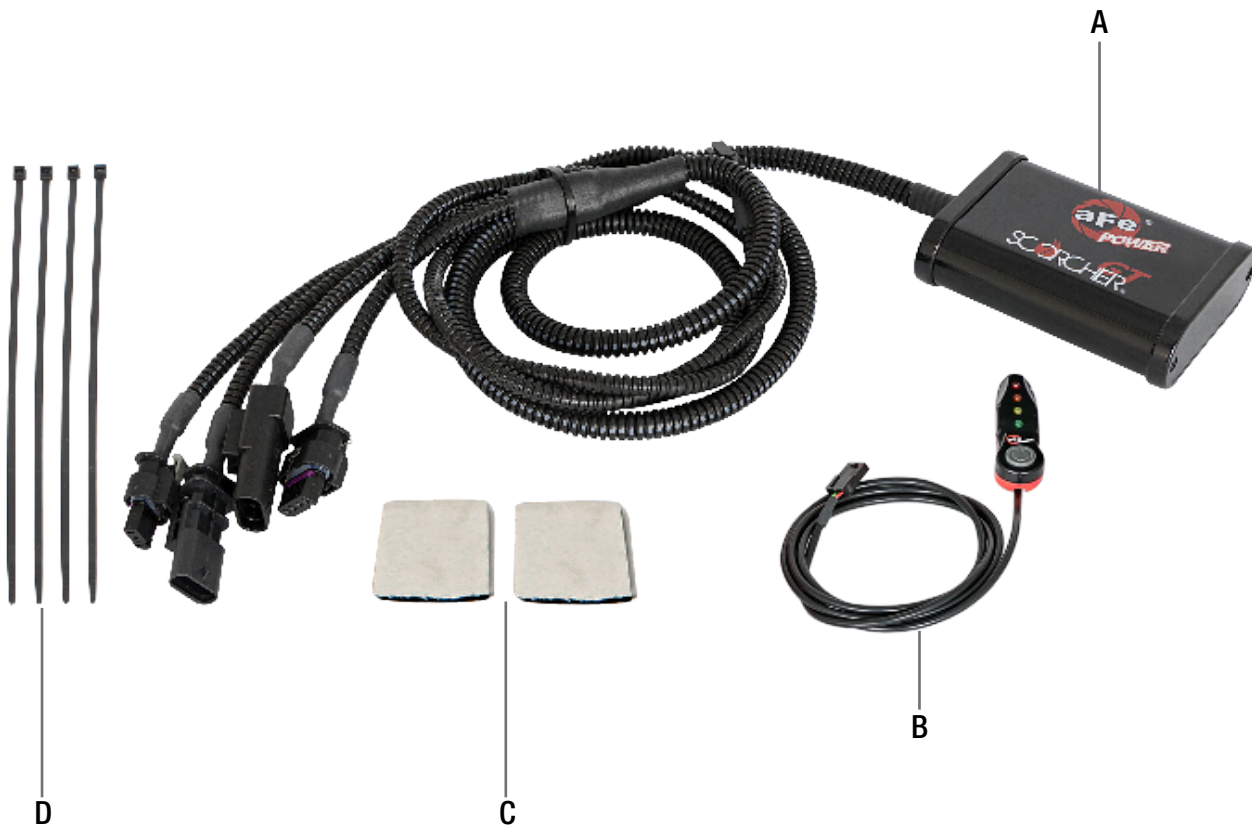
Note: **Includes M3 CS, M4 CS & GTS Models.**



- 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 951-493-7100.
- Ensure you have all necessary tools before proceeding.
- Do not attempt to work on your vehicle when the engine is hot.
- Disconnect the negative battery terminal before proceeding.
- Retain factory parts for future use.

Label	Qty.	Description	Part Number
A	1	Module	R77-46310
B	1	LED Switch	05-70029
C	2	Velcro (2 Inches)	05-01244
D	4	Cable Ties	05-60167

Note: Legal in California for use on race vehicles only. The use of this device on vehicles used on public streets or highways is strictly prohibited in California and others states that have adopted California emission regulations.





# SLEEP MODE

Figure A

## **Refer to Figure A for Step 1.**

Step 1: Before installing your aFe module, you will have to place your vehicles 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.

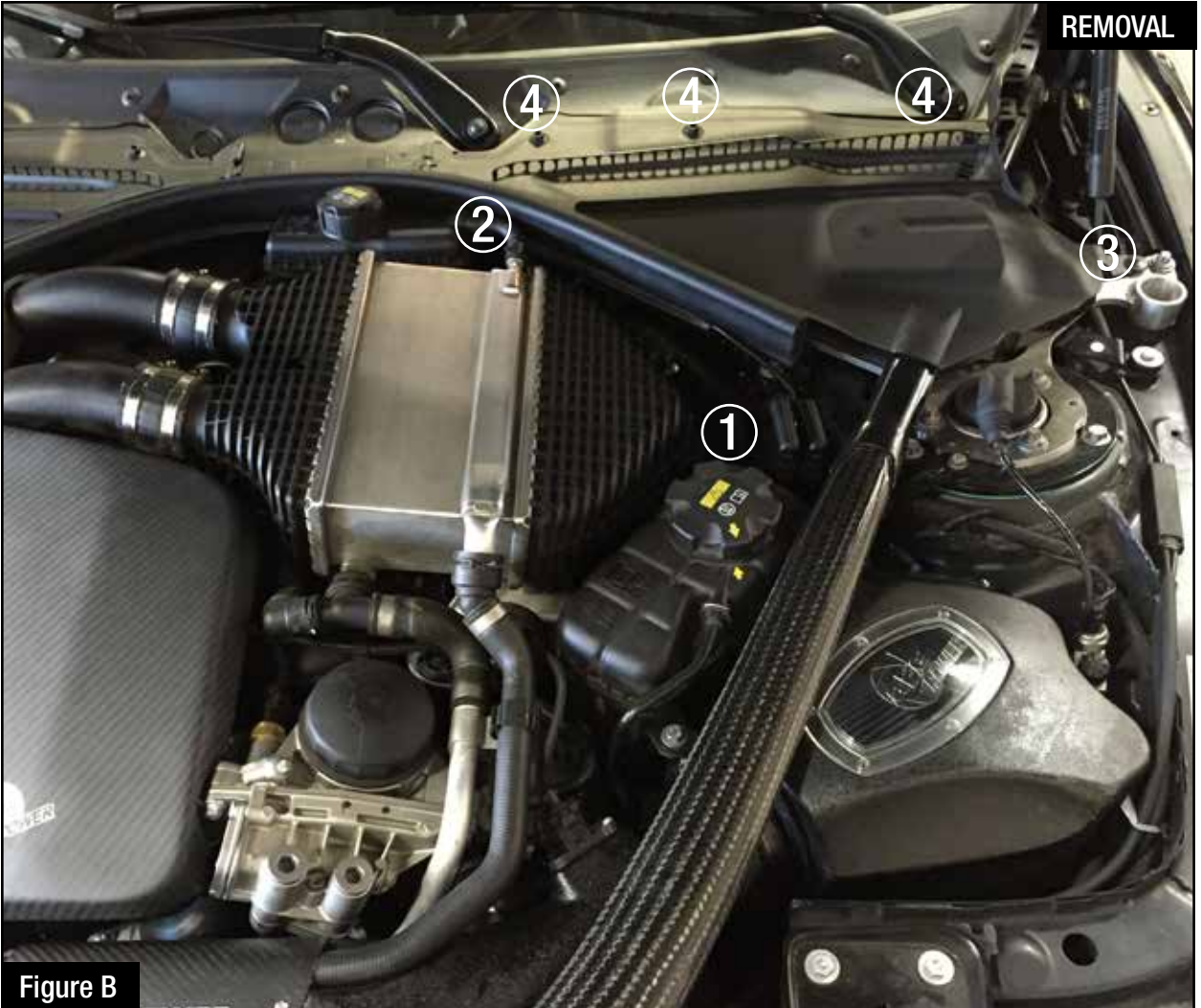


Figure B

**Refer to Figure B for Steps 2-5.**

Step 2: Locate the TMAP ① and MAP sensors ②. The TMAP sensor is located driver side on charge pipe, the MAP sensor is located on top of the intake manifold, behind the charge-air cooler and under the expansion tank.

Step 3: Remove the push clip on the driver side windshield cover. ③

Step 4: Unlock the three 10mm nuts retaining the windshield cover and remove. ④

Step 5: Remove the two T27 screws off the top expansion tank and pop off grommet.



Figure C

**Refer to Figure C for Steps 6-7.**

Step 6: Pass the aFe module harness through frame brace.

Step 7: Pop off the trim seal of the frame brace to allow more space.



### **Refer to Figures D for Steps 8-9.**

Step 8: Disconnect the MAP sensor, 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 module. This is the longer harness with 4 wires in the connectors. Plug the female connector of the module into the MAP sensor, then the male connector of the module into the female connector of the engine harness.



**Note: Make sure connections are fully engaged. Usually, connectors make a snapping sound when fully engaged.**

**Figure E****Refer to Figure E for Steps 10-11.**

Step 10: Locate and disconnect the TMAP sensor, by pressing down on the locking tab and sliding the connector out of the sensor.

Step 11: Locate the TMAP sensor jumper harness on the aFe module. This is the shorter harness with 3 wires in the connectors. Plug the female connector of the module into the TMAP sensor, then plug the male connector of the module into to the female connector of the engine harness.





Figure F

**Refer to Figure F for Steps 12-13.**

Step 12: Carefully route the switch cable behind steering wheel cover.

Step 13: Mount the Switch on an open, flat surface



Figure G

**Refer to Figure G for Steps 14-16.**

Step 14: Remove the two 10mm nuts holding the foot trim panel.

Step 15: Route the switch cable through firewall and into the engine bay. Follow the main harness through the grommet into the firewall. Plug the end of the cable to the module.

Step 16: Re-install foot trim panel.



Figure H

**Refer to Figure H for Steps 17-18.**

Step 17: Mount the module in a safe location, using the supplied Velcro strip. Then, secure the wires and module away from any extreme heat and moving parts, with the provided ties.

Step 18: Re-install the windshield cover and expansion tank. Refer to steps 2-4.



**Note: Make sure connections are fully engaged. Usually, connectors make a snapping sound when fully engaged.**



**Refer to Figure H for Step 19.**

Step 19: When turning on the vehicle, each LED will flash. 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.

Thank you for choosing aFe POWER!

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**OE Replacement Air Filter**



P/N: 30-10238 (P5R)  
31-10238 (PDS)

**Air Intake System**



P/N: 52-76305 (PDS/P5R)

**Sprint Booster V3**



P/N: 77-16302

**Engine Cover**



P/N: 79-13003

**Cat-Back Exhaust System**



P/N: 49-36323-1C (C/F Tip)  
49-36323-1P (Pol Tip)

**Axle-Back Exhaust System**



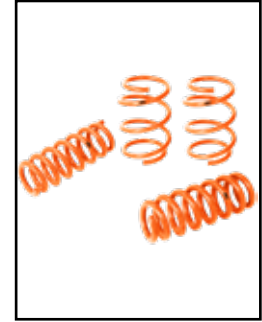
P/N: 49-36324-1B (C/F Tip)  
49-36324-1P (Pol Tip)

**Exhaust Down-Pipes**



P/N: 48-36312-1 (Street)  
48-36313 (Race)

**Lowering Springs**



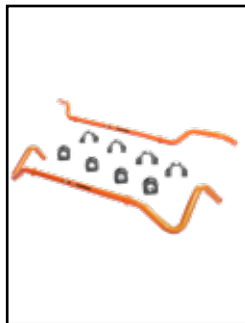
P/N: 410-503001-N

**Coilovers**



P/N: 430-503001-N

**Sway Bar Set**



P/N: 440-503001-N

To purchase any of the items above, view airflow charts, dyno graphs, photos, and video please go to [aFepower.com](http://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](mailto: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.

<b>Product Category</b>	<b>P/N Prefix</b>	<b>Warranty duration</b>
Direct OE Replacement Filters	10, 11, 30, 31, 71, 73	Life of the vehicle
Racing Filters	18	1 year
Universal	21, 23, 24, 72,TF	2 years
Air Intake Systems	50, 51, 53, 54, 55, 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
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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