

## advanced FLOW engineering

### Instruction Manual P/N: 77-42008

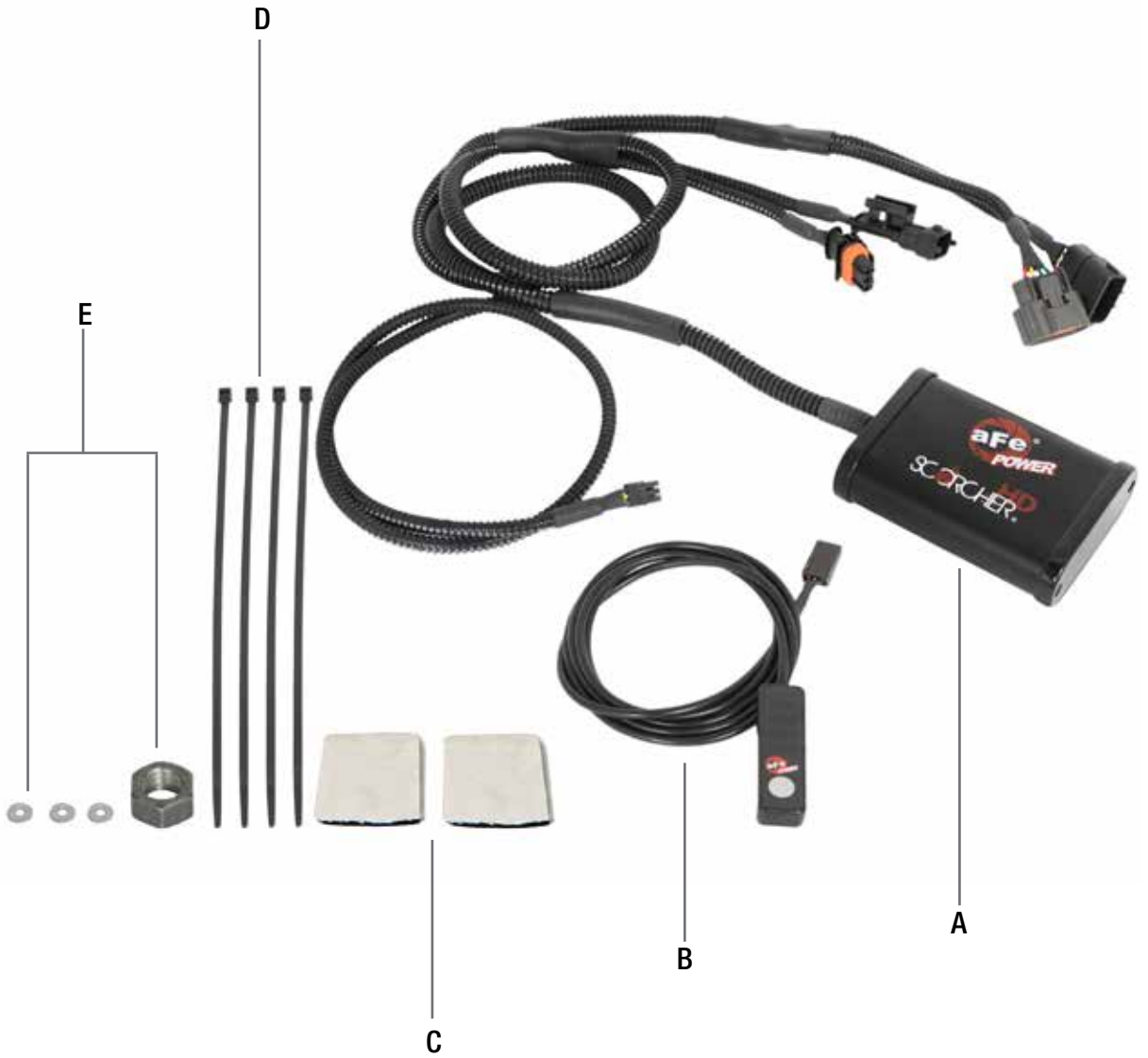
Make: **Dodge/RAM** Model: **2500/3500 HD** Year: **2007.5-2012** Engine: **L6-6.7L (td)**

[Performance Chips](#)



- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- 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	R77-42008
B	1	LED Switch	05-70001
C	2	Velcro (2 Inches)	05-01244
D	4	Cable Ties	05-60167
E	1	Shim, Kit	03-50504



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

Step 1: Locate the MAP and Fuel Pressure sensor. The Fuel Pressure sensor ① is located at the end of the fuel rail close to the firewall. The MAP sensor ② is located on the intake manifold under the EGR.



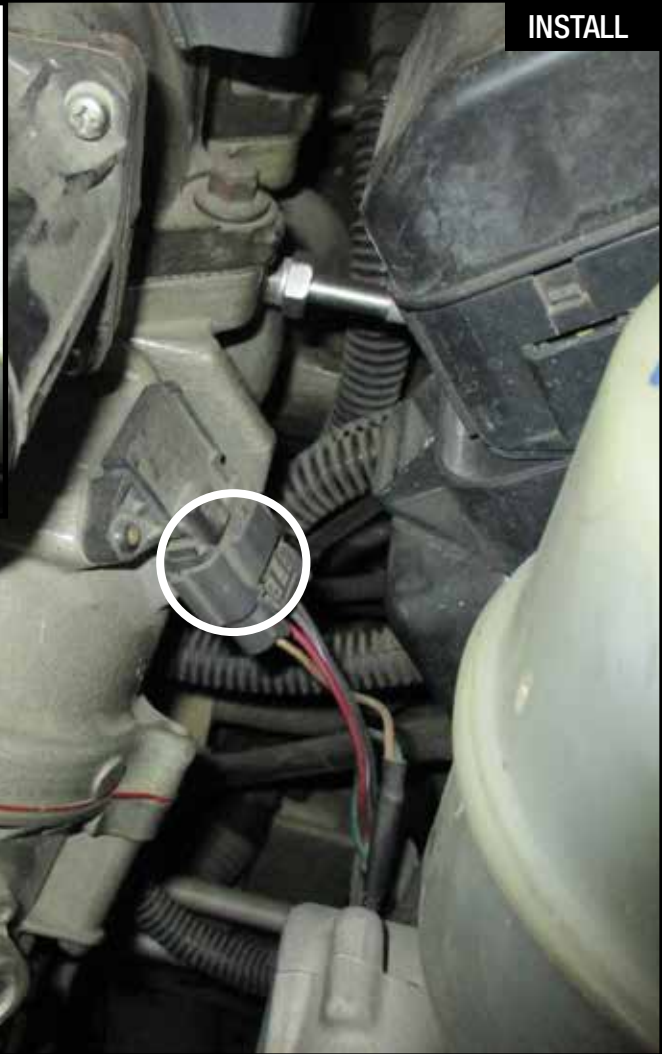
Figure B

**Refer to Figure B for Steps 2-3.**

Step 2: Locate and disconnect the fuel pressure sensor

Step 3: Locate the fuel pressure sensor jumper harness on the aFe module. This is the shorter harness with a small black/orange connectors. Plug the male connector of the module to the stock fuel pressure sensor, then take the female connector of the module and connect to the male connector of the engine harness.

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



INSTALL

Figure C

**Refer to Figures C for Steps 4-5.**

Step 4: Disconnect the MAP sensor.

Step 5: Locate the MAP sensor jumper harness on the aFe module. This is the longer harness with a large grey/orange connector. Plug the female connector of the module to the male connector of the engine harness, then the male connector of the module to the stock map sensor of the engine.



Figure D

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

Step 6: Remove the engine cover by taking off the four 8mm screws (3) and taking out the oil dip stick.

Step 7: Remove the 10mm screw (4) holding the dip stick tube and tilt the tube away from the fuel rail to gain access to the fuel relief valve.

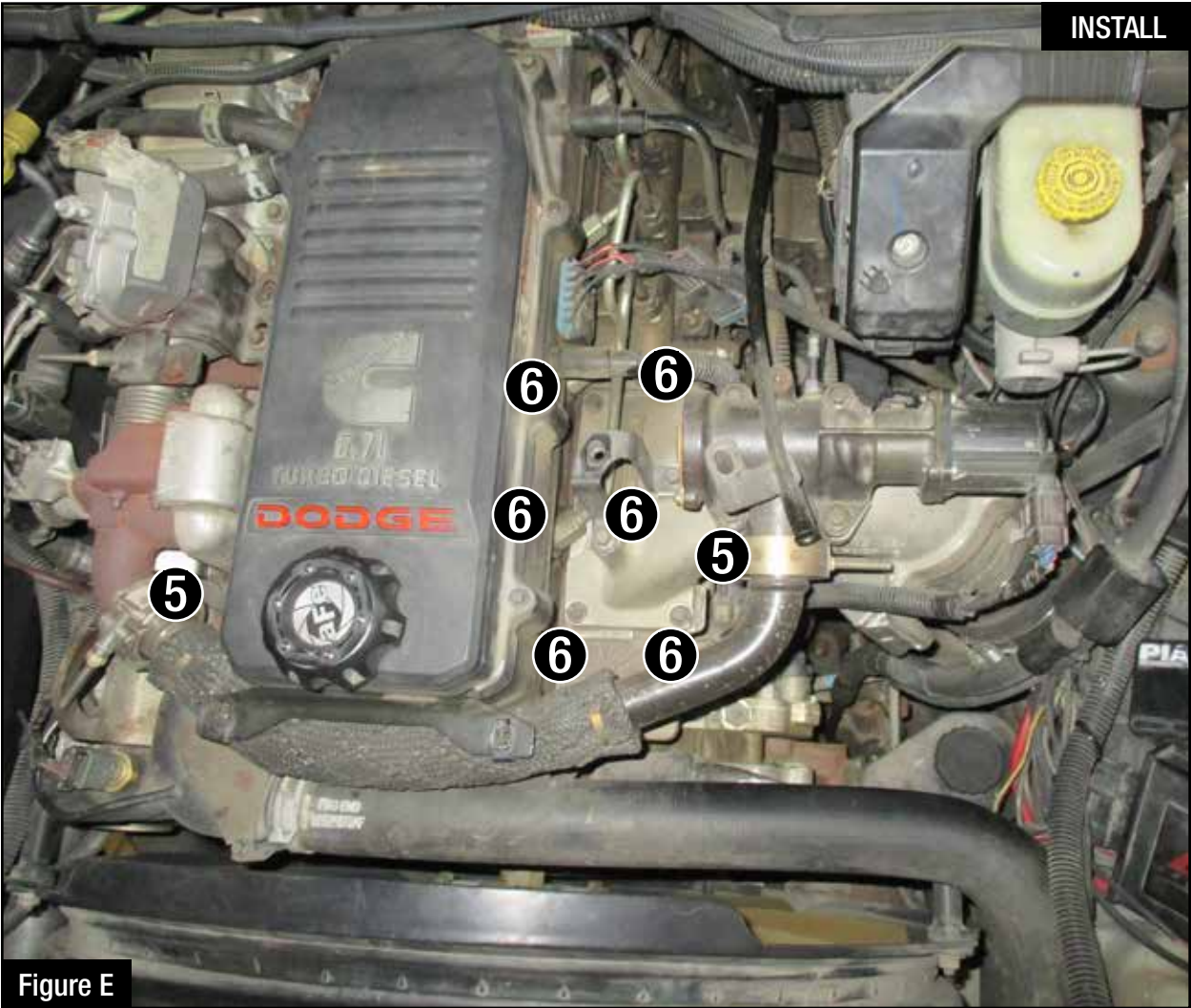


Figure E

**Refer to Figure E for Steps 8-9.**

Step 8: Remove the v-band clamps off the EGR (5) tube in front of the valve cover and rotate away from the intake manifold.

Step 9: Remove the six 10mm bolts (6) securing the intake manifold and move away from the fuel rail to gain access of the fuel relief valve.





Figure F

**Refer to Figure F for Step 10.**

Step 10: With an 18mm wrench remove the fuel relief valve (7).

**Figure G****Refer to Figure G for Steps 11-13.**

Step 11: Thread the removal tool onto the fuel relief valve.

Step 12: Place the tip of the fuel relive valve on the edge of a vise and tighten.

Step 13: Turn the removal tool clockwise towards the vise to split the fuel relief valve.

**Note: Be cautious and hold the end of the fuel relive valve it is spring loaded and not mixing the components alignment is very important. Located behind the 3 hole washer is a very small pin that should not be moved or lost, losing it will cause the vehicle to not start.**

**Figure G****Refer to Figure G for Step 14.**

Step 14: Remove the small spring (8) and place the 3 shims in the fuel relief valve and re-insert the spring.

**Figure H****Refer to Figure H for Steps 15-19.**

- Step 15: Assuring no components were lost or misaligned reinsert the tip into the fuel relief valve.
- Step 16: Place the fuel relief valve into the vise and compress back together.
- Step 17: With a small punch re-punch the 3 small indentations securing the tip of the fuel relive valve to the body.
- Step 18: : Place the fuel relief valve back into the fuel rail and tighten to 75 ft-lbs of torque, or fuel can leak out.
- Step 19: Refer to steps 6-10 to re-install all the components removed to access the fuel relief valve.
- Note: Using a piece of wood between the tip and the vice will insure the tip does not get damaged.**



Figure 1

**Refer to Figure 1 for Steps 20-21.**

Step 20: Carefully rout the switch behind steering wheel cover.

Step 21: Mount the Switch on an open, flat surface.



Figure J

**Refer to Figure J for Step 22.**

Step 22: 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.

**Figure K****Refer to Figure K for Step 23.**

Step 23: 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. Make sure all connections are secured and fully engaged.



**Refer to Figure L for Step 24.**

Step 24: When turning on the vehicle, the switch will go through the light. It will stop at it's 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!





### Intercooler w/ Tubes



P/N: 46-20032 ('07.5-'09)  
46-20132-B ('13-'16')

### Rear Differential Cover



P/N: 46-70012-WL (w/ Oil)  
46-70012 (Blk)  
46-70010 (RAW)

### Diesel Fuel System



P/N: 42-12031 (Full-time)  
42-12033 (Boost Act.)

### Air Intake System



P/N: 50-72005 (P10R)  
51-72005 (PDS)  
75-72005 (PG7)

### Air Intake System



P/N: 50-72003 (P10R)  
51-72003 (PDS)

### Exhaust System



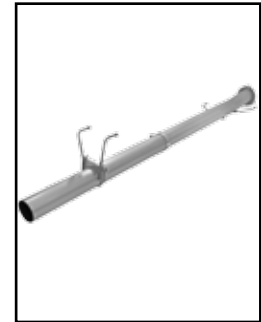
P/N: 49-42054-B (Blk Tip)  
49-42054-P (Pol Tip)

### Exhaust Manifold



P/N: 46-40054

### Exhaust Race Pipe



P/N: 49-42055

### Intercooler Tubes



P/N: 46-20034-B ('07.5-'09)  
46-20084-B ('10-'12)  
46-20134-B ('13-'15)

### OER Air Filter



P/N: 30-10102 (P5R)  
31-10102 (PDS)  
73-10102 (PG7)

### Intake Manifold



P/N: 46-10073-1

### Fuel Filter



P/N: 44-FF016

# 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.

<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, 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	Contact aFe

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.