

# advanced FLOW engineering

Intake Manifold

**Instruction Manual** P/N: 46-10071-1/46-10073-1

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Make: Dodge Model: RAM 2500/3500 Year: 2007.5-2018 Engine: L6-6.7L (td)



- 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.

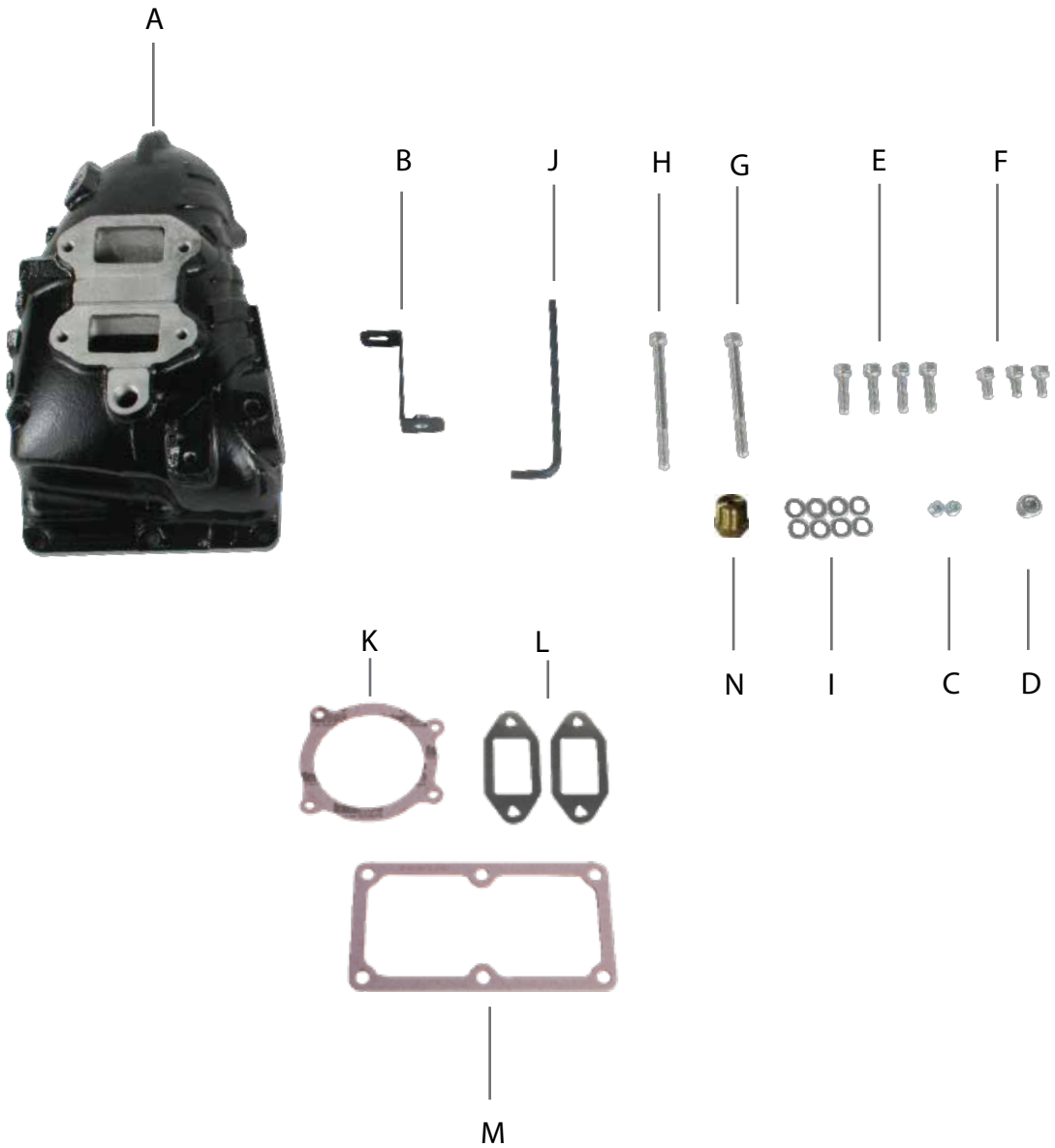
## Retain factory parts for future use.

Label	Qty.	Description	Part Number
A	1	Manifold, Intake	05-60086
B	1	Bracket	05-60131
C	2	Plug, Hex Hd Socket: 1/8"	03-50029
D	1	Plug, Hex Hd Socket: 3/8"	03-50158
E	4	Screw, Socket Hd Cap: M8 x 1.25 x 30	03-50225
F	2	Screw, Socket Hd Cap: M8 x 1.25 x 16	03-50171
G	1	Screw, Socket Cap: M8 x 1.25 x 90	03-50257
H	1	Screw, Socket Cap: M8 x 1.25 x 100	03-50156
I	8	Washer, Flat S/S	03-50228
J	1	Tool (6mm Hexagon Rod, 6 in. length)	03-50161
K	1	Gasket, Throttle Body (46-10073 Only)	05-60209
L	2	Gasket, EGR Valve (46-10073 Only)	05-60208
M	1	Gasket, Manifold (46-10073 Only)	05-60146
N	1	Brass Fitting, 3/8	03-50434

Warranty Information available at: <https://afepower.com/contact#warranty>

Installation will require the following tools:

7/16 Deep socket, 10 mm deep socket, 8mm socket, 3/16 allen wrench, 5/16 allen wrench, 6mm allen, 6mm socket, Flat head screwdriver or T15 Torx Driver, panel popper.



**FigureA**

### Refer to Figure A for steps 1-2

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

1. Disconnect batteries before installation.
2. Remove engine cover by removing the oil dipstick and the four screws circled in white using an 8mm socket.

Note: Let engine completely cool before working on it.



FigureB

Refer to Figure B for steps 3-4

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

3. Disconnect the two sensor plugs (1 & 2). NOTE: Plug 1 has a red tab that needs to be pushed to the side to unlock it. Then it will be easy to remove from sensor plug
4. Remove the wire retainer from the bolt using panel poppers (3).



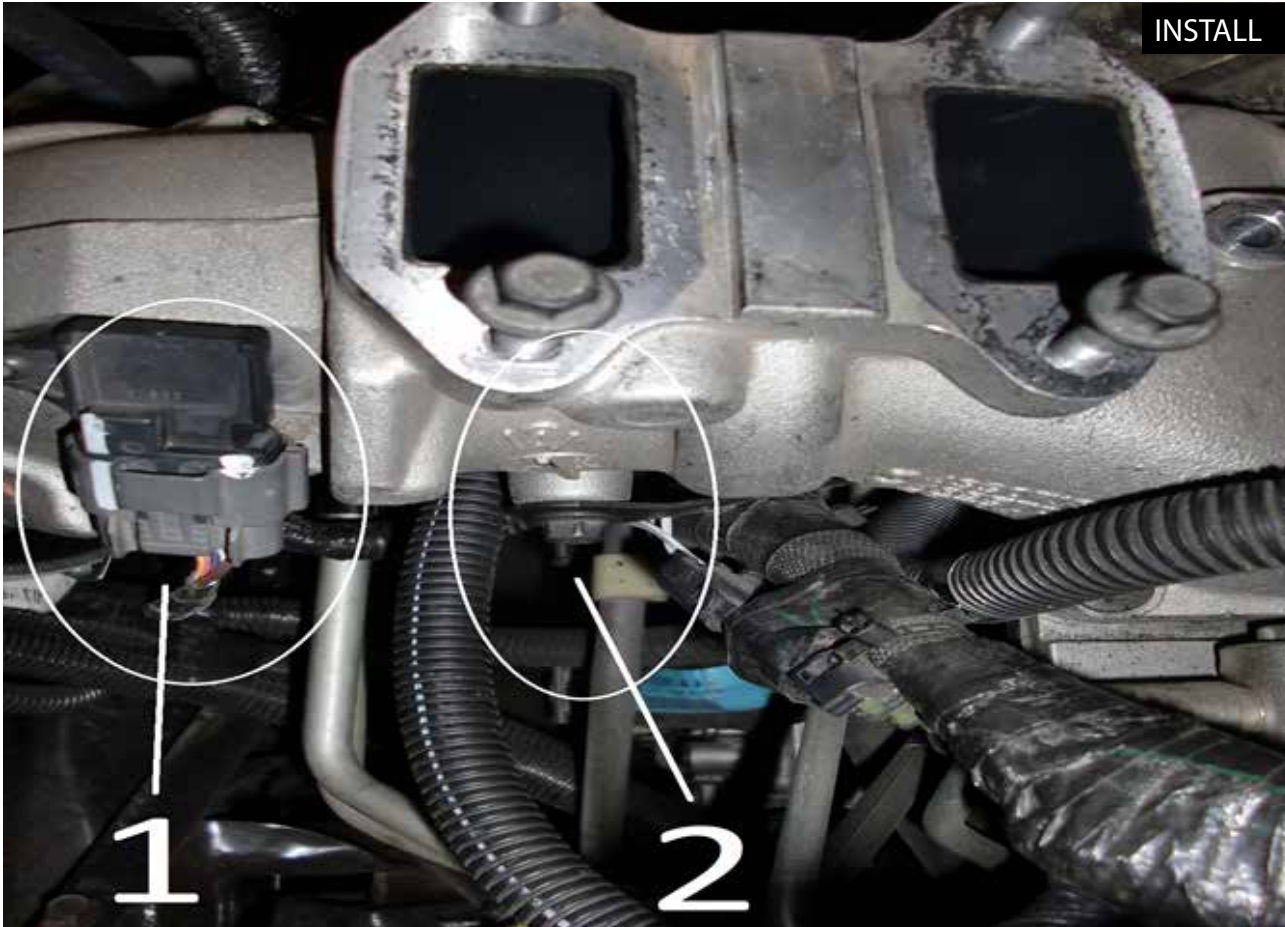


Figure C

Refer to Figure C for step 5-6

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

5. Disconnect the sensor harness located on the back of the intake manifold (1).
6. Using a 10mm socket or wrench, remove the bolt holding the wiring harness from the manifold. You may need to use a panel popper on some of the wiring harnesses to gain access to the bolt head (2).

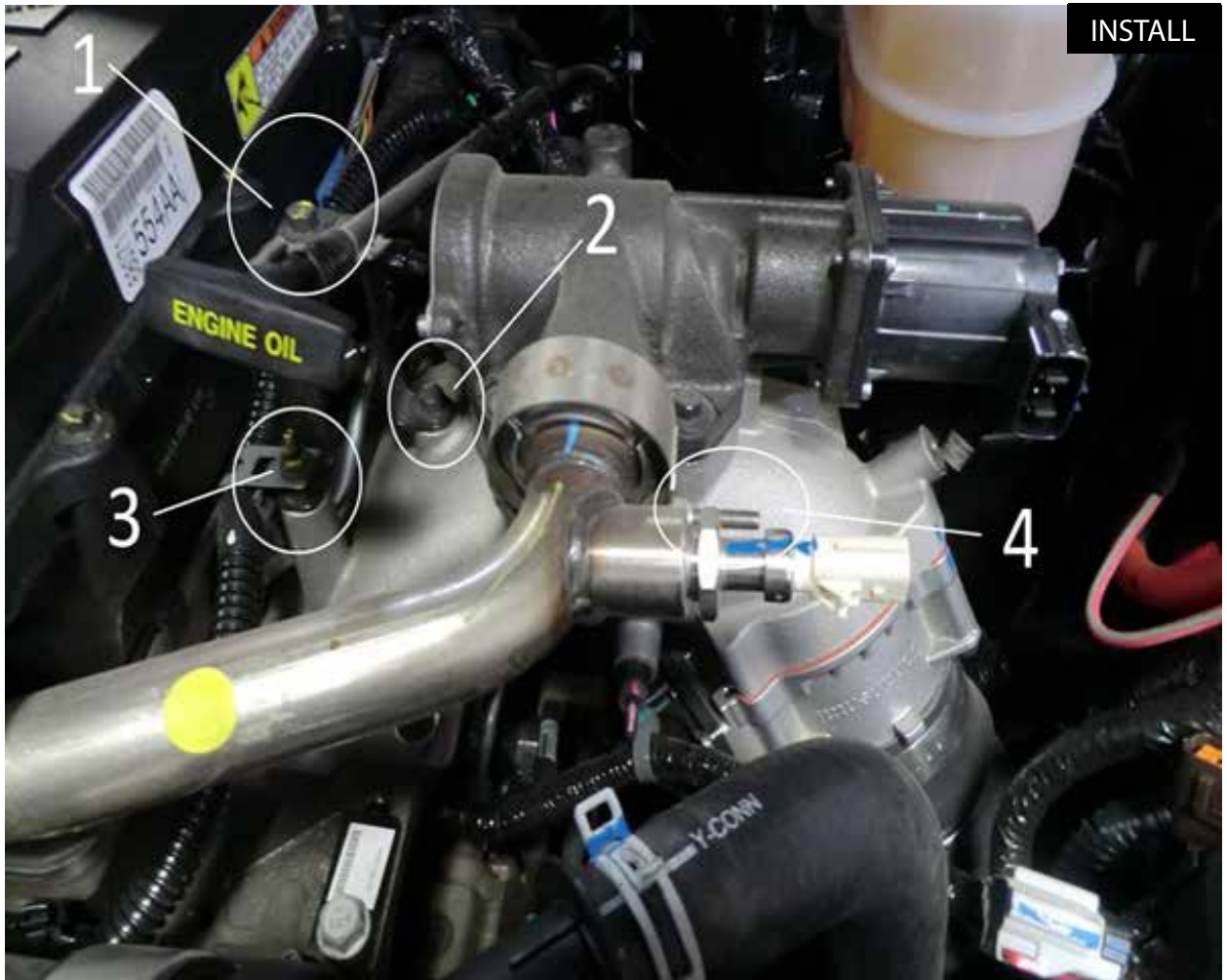


Figure D

Refer to Figure D for step 7-9

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

7. Using a 10mm socket, remove the bolt from the dipstick tube (1).
8. Using a 10mm socket remove the bolts which retain the dipstick tube bracket (2)&(3).
9. Using a 7/16 deep socket, loosen the EGR tube clamp on the passenger side and remove. Remove the gasket. Loosen the clamp on the passenger side. This will allow you to pull the tube away from the manifold. Save the gasket and the clamp. They will be reused.



FigureE

Refer to Figure E for step 11-12

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

10. Using a 10mm socket, remove the four bolts from the EGR valve and remove (1).
11. Using a 7/16 deep socket, loosen the clamp connecting the hump hose to the intake manifold. Disconnect the boost tube from the intake manifold (2).





FigureF

Refer to Figure F for steps 13-14

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

**\*Please Read this carefully before you start**

12. Using a 10mm socket, remove the five bolts from the intake manifold and remove the manifold slowly. There is a group of wires still connected to the Manifold. As you pull the manifold out of the engine bay, turn it over and unplug the wires from the intake butterfly gate (1).



FigureG

Refer to Figure G for step 11-12

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

13. Using a flat head screwdriver or a T15 Torx driver remove the MAP sensor from the manifold (1). Save this part as it will be reused.
14. Using a 10mm deep socket remove the stud from the manifold (2). On some manifolds there will be two studs. Remove both. Save these parts as they will be reused.
15. Using an 8mm Socket remove the four bolts on the butterfly gate from intake manifold (3). Save these parts as they will be reused.



FigureH

### Refer to Figure H for steps 16-19

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

16. Using a 10mm socket install the stud(s) in the aFe intake manifold (1).
17. Install the stock butterfly gate to the aFe Intake Manifold using a gasket and the stock bolts.  
Tighten bolt using an 8mm socket.
18. With a 3/16 allen wrench, Install the two 1/8" npt plugs on the aFe Intake manifold (opposite side is shown).
19. Install the MAP sensor using the stock hardware and tighten using a T15 torx driver or flat head screwdriver.



Figure I

Refer to Figure I for step 20

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

20. Clean and prep the mating surface using a scraper or scotch bright.





Figure J

Refer to Figure J for steps 21-22

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

**\*Read this instruction before installation**

21. Install the gasket to the aFe intake manifold outlet.

22. Place one M8x1.25x30mm and one washer in the aFe Intake Manifold before installation.

Insert the bolt through the top of the center hole of the manifold. Insert the washer in the bottom of the manifold and slide the bolt through. Use the supplied long 6mm allen key to hold it in place.



INSTALL

FigureK

Refer to Figure K for step 23-24

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

23. Plug the butterfly gate into the stock wire harness before installing the aFe Intake Manifold into the truck
24. Use the 6mm allen key to start the bolt installed in Step 22. Install the aFe Intake Manifold in the truck using the supplied three M8x1.25x30mm, one M8x1.25x90mm, one M8x1.25x100mm and five washers. Tighten all six bolts using a 6mm allen wrench.

\*For 2007.5-2009 trucks please read step 25 &26 and skip step 27

\*For 2010-2014 please skip to Step 27



Figure L

Refer to Figure L for steps 25-26

For 2007.5- 2009 trucks please read these instructions.

25. Apply teflon tape to the brass 3/8 npt plug and install into the manifold and tighten. Install the EGR temperature sensor removed from the stock manifold into the brass fitting and tighten.
26. You may need to lengthen the wires for the EGT temperature sensor by removing them from the factory wiring harness. Pull them back to the y-intersection in the split loom.



Figure M

Refer to Figure M for step 27-32

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

27. For 2010 –Current trucks: Install the 3/8 npt plug and tighten with a 5/16 allen wrench.
28. Plug in the MAP sensor. Slide the factory wire harness retainers over the studs on the aFe Intake Manifold.
29. Install the EGR valve onto the aFe Intake Manifold using the stock hardware and tighten.
30. Install the Gasket pulled out in Step 9 on the EGR tube. Slide the EGR tube back on the EGR valve and tighten the clamp using a 7/16 deep socket. (THE CLAMP MUST LOOK LIKE THE PICTURE FOR THE ENGINE COVER TO FIT PROPERLY). Tighten the clamp on the passenger side (1)
31. Plug in the EGR Temperature Sensor. Lock the Tab on the plug (2).
32. Plug in the EGR Valve Connector (3).





Figure N

Refer to Figure N for steps 33-34

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

33. Install the Dipstick Bracket on the aFe Intake Manifold using the two M8x1.25x16mm and two washers. Tighten the bolts using a 6mm allen wrench (make sure the dipstick is removed) (1).
34. Slide the hump hose over the inlet of the aFe Intake Manifold. Tighten the clamp using a 7/16 deep socket (2).



Figure O

Refer to Figure O for step 35-38

Shown vehicle in the picture is 2010-2014 model truck (there are slight differences between 2007.5-2009 and the 2010-2014).

35. Install the engine cover. Use the four stocks bolts and tighten with a 8mm socket (1).
36. Install the oil dipstick (2).
37. Reconnect the batteries.
38. Your Installation is now complete. Please check all electrical connections and all hardware.

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