

advanced FLOW engineering Magnum FORCE Stage-2 Air Intake System

Instruction Manual P/N: 51-12642-1B / 54-12642-1B / 52-12642-1H

Make: **Ford** Model: **F-150** Year: **2015-2021** Engine: **V6-2.7L (tt) EcoBoost**

Make: **Ford** Model: **F-150** Year: **2015-2016** Engine: **V6-3.5L (tt) EcoBoost**
(CARB exempt 15-16 under D-550-28 only)



- 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.

NOTE: Retain factory parts for future use.

Label	Qty.	Description	Part Number
A1	2	Air Filter (Pro DRY S)	21-90069 (51-12642-B/52-12642-H)
A2	2	Air Filter (Pro 5R)	24-90069 (54-12642/52-12642-H)
B1	1	Tube #1 of 2	05-12642B1 (For 51/54-12642-B)
B2	1	Tube #2 of 2	05-12642B2 (For 51/54-12642-B)
B3	1	Tube #1 of 2	05-12642H1 (For 52-12642-H)
B4	1	Tube #2 of 2	05-01242H2 (For 52-12642-H)
C1	1	Housing	05-12642B3 (For 51/54-12642-B)
C2	1	Housing	05-12642L3 (For 52-12642-H)
D	1	Coupling, Straight	05-01242
E	1	Coupling, Reducer	05-01358
F	1	Coupling, Reducer	05-01331
G	2	Clamp #060	03-50002
H	1	Clamp #072	03-50010
I	2	Clamp #032	03-50016
J	1	Clamp #052	03-50008
K	1	Grommet	03-50050
L	1	Seal Trim (23")	05-00072
M	1	Cover	05-12188-B (*Optional)
N	3	Screws	03-50113 (*Optional)
O	1	Vent Insert	05-01405 (For V6-3.5L (tt) only)

Installation will require the following tools:

8mm Nut Driver, Flat Head Screwdriver

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



**Figure A****Refer to Figure A for steps 1-4**

Step 1: Disconnect the Manifold Air Pressure (MAP) sensor plug from stock airbox. ①

Step 2: Loosen the OE intake clamps using an 8mm nut driver from the left and right side runners. ②

Step 3: Unclamp the top portion of the OE airbox. ③

Step 4: Remove the OE intake and the top portion of the OE airbox by pulling straight up and out of the vehicle.



Refer to Figure B for step 5

Step 5: Carefully remove plastic wire harness clips from back edge of lower airbox.



Figure C

Refer to Figure C for steps 6-7

Step 6: Install aFe housing and fasten clips.

Step 7: Insert filters and place clamps loosely.



Refer to Figure D for steps 8-9

Step 8: Remove the MAP sensor from the OE intake 1/4 turn counter-clockwise.

Step 9: Install the MAP sensor on the rear aFe intake tube using the provided grommet. The grommet can be held inside the tube to give support while inserting.



Figure E

Refer to Figure E for steps 10-14

Step 10: Install the small straight coupling on the cross over tube, install clamps, but do not tighten.

Step 11: Fit tubes into the remaining couplers. Adjust for best fit and tighten all clamps.

Step 12: Connect sensor harness.

Step 13: Install edge trim on housing if no cover is to be used.

Step 14: Remove trim if using optional cover.

NOTE: Proceed to the following pages for vent insert on V6-3.5L (tt) models.

Vent insert installation:

INSTALL



Refer to Figure F for Step 15 (For V6-3.5L (tt) only, not necessary on V6-2.7L (tt))

(These procedures should be done with the inlet tubes installed on the engine. It is shown off the vehicle for better illustration.)

Step 15: Locate the o.e. plastic tube feeding the driver's side turbo inlet.



Figure G

Refer to Figure G for Step 16 (For V6-3.5L (tt) only, not necessary on V6-2.7L (tt))

Step 16: Locate the valve cover vent tube that feeds into driver's side turbo inlet. It is not necessary to remove the engine cover.



Figure H

Refer to Figure H for Step 17 (For V6-3.5L (tt) only, not necessary on V6-2.7L (tt))

Step 17: Note the release clip on the vent tube connectors. Apply pressure against the exposed tail and pull vent fitting off of the turbo inlet tube. It is not necessary to disconnect at the valve cover end. There is a sensor and wire harness on this vent tube. Do not damage or remove these components.



Figure I

Refer to Figure I for Step 18 (For V6-3.5L (tt) only, not necessary on V6-2.7L (tt))

Step 18: Insert vent fitting with slash cut facing turbo inlet. It should not be a loose fit. It is direction dependent and must not rotate once installed.



Refer to Figure J for Steps 19-20 (For V6-3.5L (tt) only, not necessary on V6-2.7L (tt))

Step 19: Reconnect the vent fitting. It will snap over without having to release the plastic clip.

Pull up slightly to confirm installation.

Step 20: Installation is complete. Any codes can be cleared with a code reader or by disconnecting the battery. You will lose any radio presets with battery disconnection.

If removal of the vent insert is required, it can be pulled out with internal snap ring pliers.

NOTE: Retighten all connections after approximately 100-200 miles.

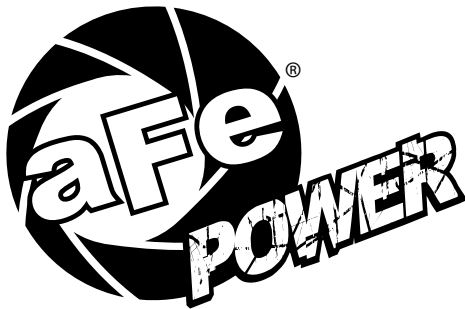
Place the included CARB EO sticker on or near the device on a smooth, clean surface.

EO identification is required to pass the smog inspection.



PAGE LEFT BLANK INTENTIONALLY

PAGE LEFT BLANK INTENTIONALLY



advanced FLOW engineering, inc.
252 Granite Street Corona, CA 92879
<https://afepower.com/contact>