



**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.
- Disconnect the negative battery terminal before proceeding.

**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

**Installation will require the following tools:**

8mm Nut Driver, Flat Head Screwdriver



**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 2016 models.**

## Vent insert installation:

**INSTALL**



**Figure F**

### **Refer to Figure F for Step 15**

(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.



**Refer to Figure G for Step 16**

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**

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.



**Refer to Figure I for Step 18**

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**

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.**



Pro DRY S Air Filters



P/N: 21-90069M

Pro 5R Air Filters



P/N: 24-90069M

Pro-GUARD 7 Air Filters



P/N: 72-90069M

Pre-Filter Set



P/N: 28-10213M

Pro DRY S Restore Kit



P/N: 90-59999

Pro 5R Restoe Kit



P/N: 90-50501

Pro-GUARD 7 Restore Kit



P/N: 90-50050

Intake System Cover



P/N: 54-12188

SCORCHER PRO Tune



P/N: 77-33010

SCORCHER GT Module



P/N: 77-43016

Intercooler w/ Tubes



P/N: 46-20212-B

Exhaust Cat-Back System



P/N: 49-43068-B (Blk. Tip)  
49-43068-P (Pol. Tip)

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.

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	2 years
Air Intake Systems	50, 51, 54, 55, 75	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

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.



**advanced FLOW engineering, inc.**  
252 Granite Street Corona, CA 92879  
TEL: 951.493.7155 • TECH: 951.493.7134  
E-Mail: [Tech@aFepower.com](mailto:Tech@aFepower.com)