

advanced FLOW engineering Stage-2 Air Intake

Instruction Manual P/N: 51-32972-B / 54-32972-B / 75-32972-B

Make: **Ford** Model: **F-150** Year: **2017-2018** Engine: **V6-3.5L (tt) EcoBoost**
Make: **Ford** Model: **F-150 Raptor** Year: **2017-2018** Engine: **V6-3.5L (tt) EcoBoost**

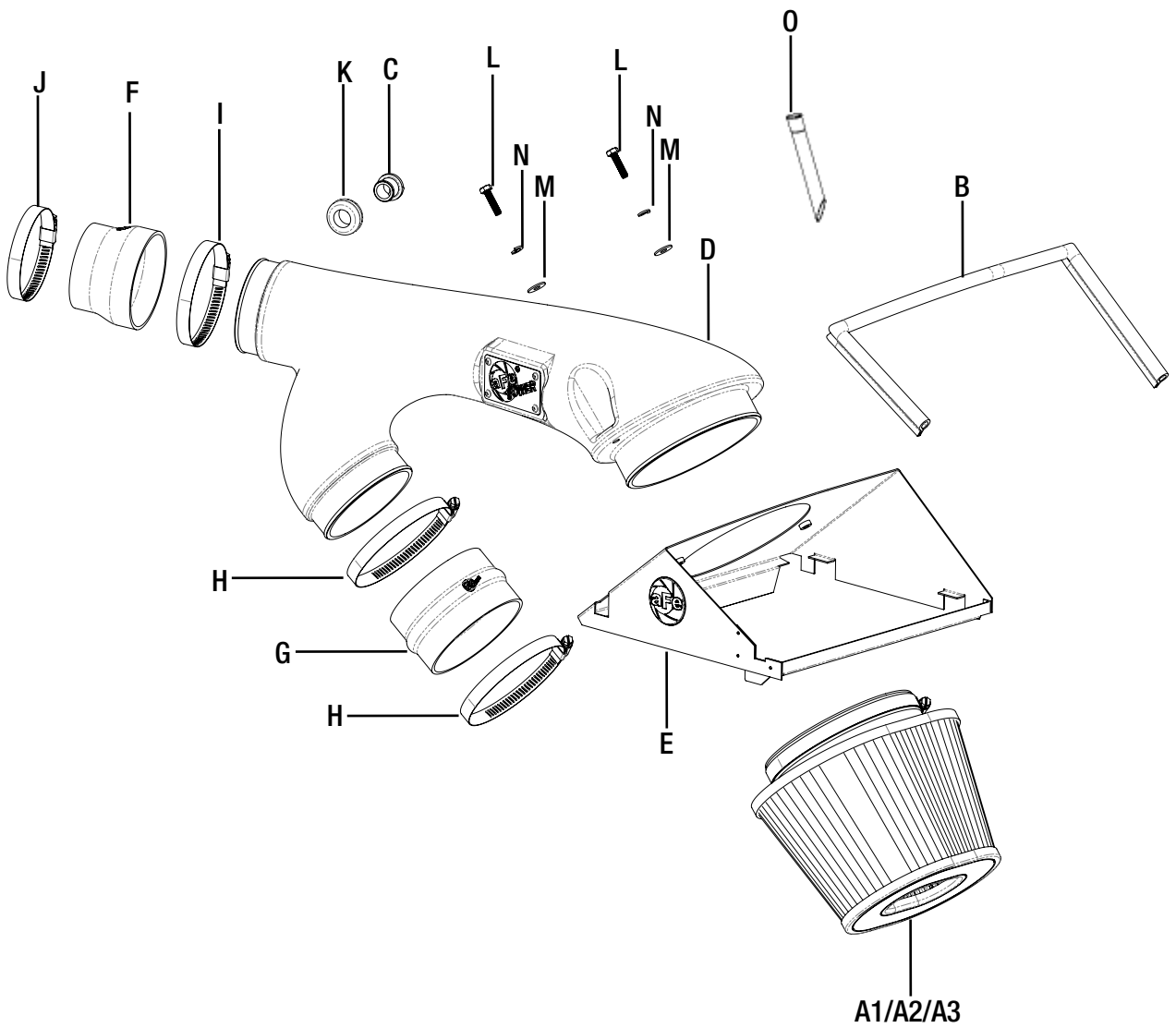


- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- Ensure you have all necessary tools before proceeding.
- Do not attempt to work on your vehicle when the engine is hot.
- Disconnect the negative battery terminal before proceeding.
- Retain factory parts for future use.

| Label | Qty. | Description | Part Number |
|-------|------|----------------------------|-------------|
| A1 | 1 | Air Filter (Pro DRY S) | 21-91040 |
| A2 | 1 | Air Filter (Pro 5R) | 24-91040 |
| A3 | 1 | Air Filter (Pro-GUARD 7) | 72-91040 |
| B | 1 | Seal, Trim (23" inches) | 05-00072 |
| C | 1 | Fitting, Air Temp Sensor | 05-01454 |
| D | 1 | Tube | 05-32972B1 |
| E | 1 | Housing | 05-32642B2 |
| F | 1 | Coupling, Silicone Reducer | 05-01331 |
| G | 1 | Coupling, Silicone Hump | 05-01332 |
| H | 2 | Clamp, 2-1/2" - 4-1/2" | 03-50006 |
| I | 1 | Clamp, 2-13/16" - 3-3/4" | 03-50008 |
| J | 1 | Clamp, 2-5/16" - 3-1/4" | 03-50019 |
| K | 1 | Grommet | 03-50167 |
| L | 2 | Screw: M6 | 03-50114 |
| M | 2 | Washer, Flat: M6 | 03-50070 |
| N | 2 | Lock Washer: M6 | 03-50071 |
| O | 1 | Vent Insert | 05-01405 |

Tools required: 7mm nut driver, 8mm nut driver, 10mm socket & driver, & flat blade screw driver.

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.



**Figure A****Figure 1****Refer to Figure A for Steps 1-3**

Step1: Rotate ① temperature sensor counter clockwise 1/4 quarter turn then pull it out of the tube.

Step 2: Untighten the three ② clamps on the air intake tube. Pull the tube out of the truck.

Step 3: Unclip the top of airbox and remove the top half of the box and the air filter from the truck.



Figure B

Refer to Figure E for Steps 4-5

Step 4: Install the grommet into hole on the back side of the intake tube then push the plastic fitting into it. ③

Step 5: Install couplings and clamps onto tube ends. Do not tighten any of the clamps yet.

Secure the intake tube to the housing using the provided bolts, lock washers, and flat washers.



Figure C

Refer to Figure C for Steps 6-7

Step 6: Install the air filter onto the tube, align the flat edge with the top of the airbox, and tighten the clamp.

Step 7: Install trim seal onto housing.



Figure D

Refer to Figure D for Steps 8-9

Step 8: Install the complete assembly into the truck by first lining up the tabs on the airbox and then lining up the couplings.

Step 9: Clip the airbox into place. ④

FIGURE 2



INSTALL



Figure E

Refer to Figure E for Steps 10-11

Step 10: Secure the temperature sensor into the plastic fitting by turning clockwise 1/4 turn.

Important: Make sure the plastic tab clips over the ramp on the top of the fitting.

Step 11: Make sure all clamps and screws are tight.

Vent insert installation:



Refer to Figure F for Step 12

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

Step 12: Locate the o.e. plastic tube feeding the driver's side turbo inlet.



Refer to Figure G for Step 13

Step 13: 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 14**

Step 14: 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.

INSTALL



Figure I

Refer to Figure I for Step 15

Step 15: 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 16-17

Step 16: Reconnect the vent fitting. It will snap over without having to release the plastic clip. Pull up slightly to confirm installation.

Step 17: 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.



Pro DRY S Air Filter



P/N: 21-91040

Pro 5R Air Filter



P/N: 24-91040

Pro-GUARD 7 Air Filter



P/N: 72-91040

SCORCHER GT Module



P/N: 72-91040

Y-Pipe Exhaust



P/N: 48-43010 (Street)
48-34011 (Race)

Cat-Back Exhaust System



P/N: 49-43070-B (Blk. Tips)
49-43070-P (Pol. Tips)

Cat-Back Exhaust System



P/N: 49-43069-B (Blk. Tip)
49-43069-P (Pol. Tip)

Rear Differential Cover



P/N: 46-70152-WL (w/ Oil)
46-70152 (Blk./Mach.)
46-70150 (RAW)

Oil Filter



P/N: 44-LF038