

advanced FLOW engineering

Cold Air Intake System

Instruction Manual P/N: 54-13080R / 54-13080D

Make: FORD

Model: F-150 RAPTOR R

Year: 2023-2024

Engine: V8-5.2L(S/C)



- 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.

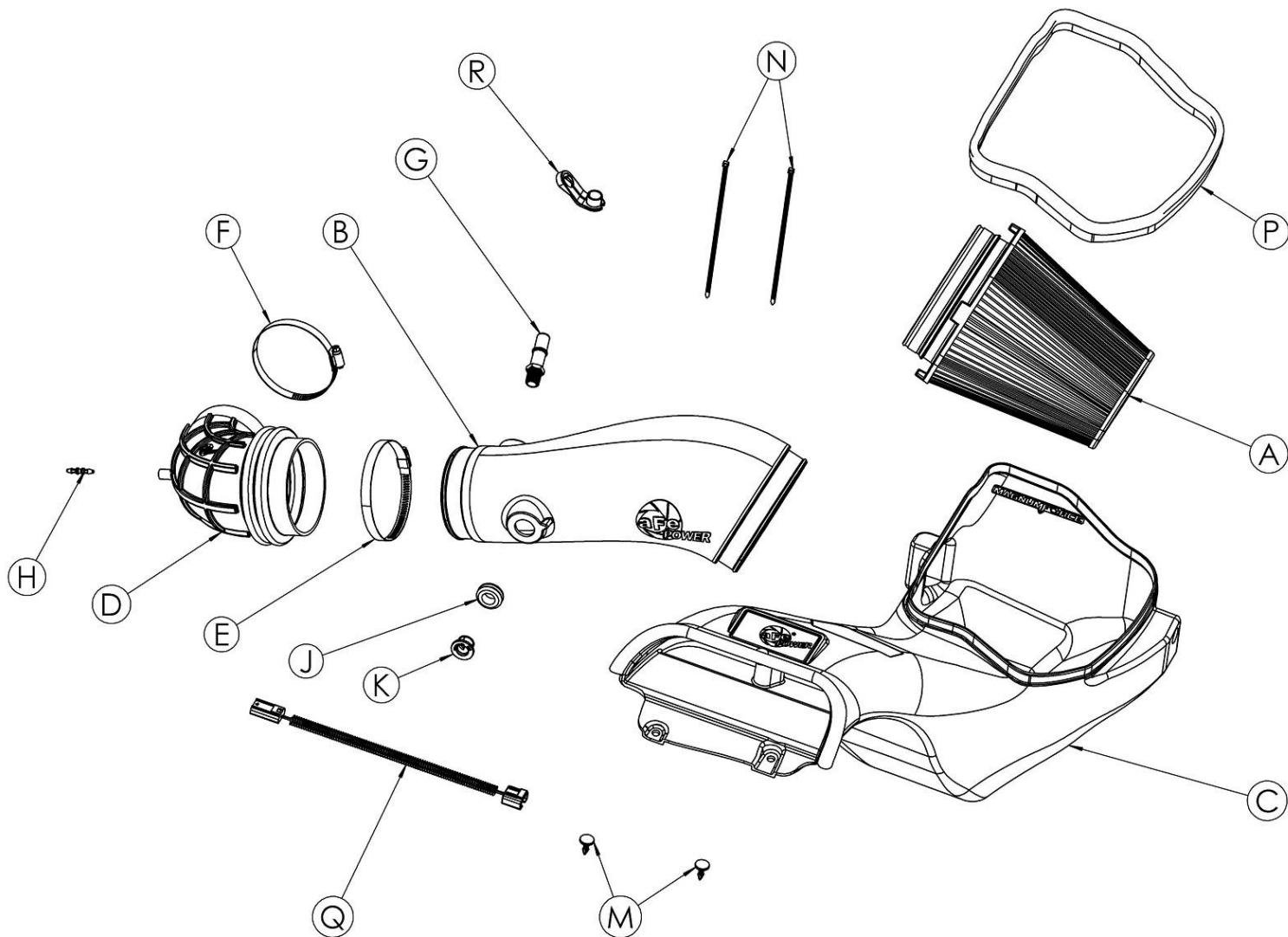
Label	Qty.	Description	Part Number
A	1	Air Filter (Pro 5R) For 54-13080R	24-90204R
A	1	Air Filter (Pro DRY S) For 54-13080D	24-90204D
B	1	Tube, Rotomold	05-5413080B1
C	1	Housing, Rotomold	05-5413080B2
D	1	Coupling, Elbow Reducer	05-01723
E	1	Clamp, 072 (3" – 5")	03-50010
F	1	Clamp, 060 (3-5/16" – 4-1/4")	05-50002
G	1	Fitting, SAE 15.82 (5/8") to 3/8" NPT	05-01339
H	1	Fitting, 3/16" Straight	03-50150
J	1	Grommet, Rubber	03-50167
K	1	Fitting, Air Temperature Sensor	05-01454
M	2	Retainer Clip, Push-In Style	03-50773
N	2	Cable ties, Nylon	05-60167
P	1	Seal, Trim: 13/32" Double Bulb 41.5" Length	05-01534
Q	1	Extension Harness, Air Temperature Sensor	05-70023
R	1	Quick Disconnect tool: 5/8"	05-01720

Installation will require the following tools:

7mm, 8mm, 11mm and 13mm Nut Drivers or Ratchet and Sockets, Flat Head Screwdriver, 20mm wrench or adjustable wrench

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

Emissions Disclaimer: This product is not currently CARB exempt and is not available for purchase in California or for use on any vehicle registered with the California Department of Motor Vehicles.





Refer to Figure A for Steps 1-2

Step 1: Remove the 14mm screw securing the factory housing to the fender. Keep for later use.

Step 2: Then remove the two (2) panel clips securing the factory scoop.

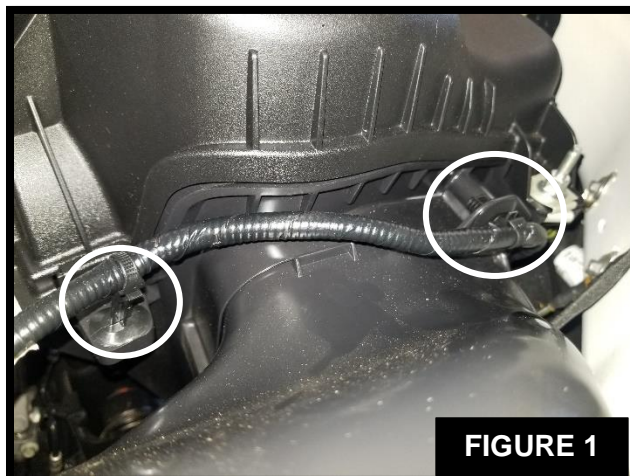


FIGURE 1

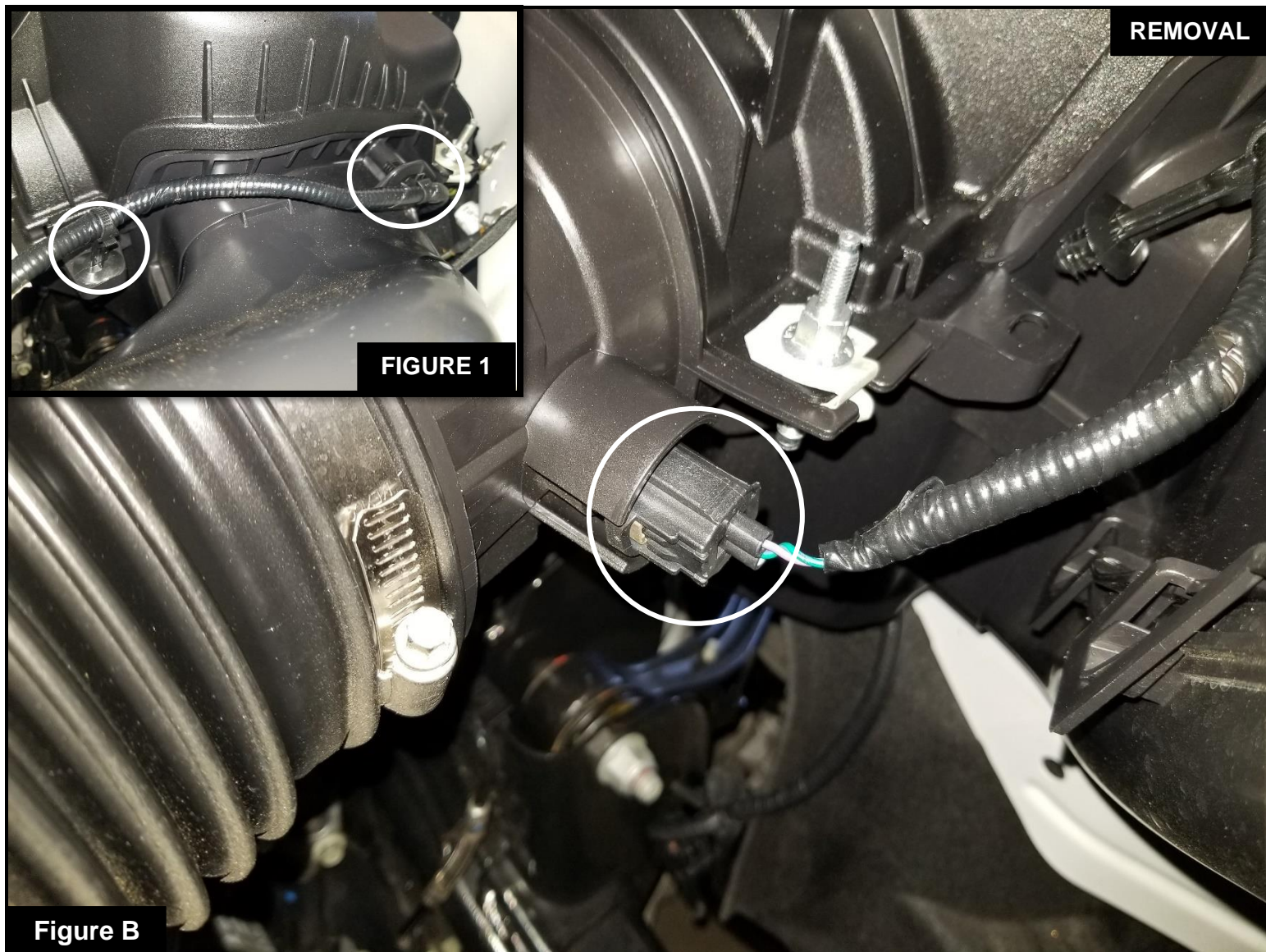


Figure B

Refer to Figure B for Steps 3-4

Step 3: Disconnect the Intake Air Temperature (IAT) Sensor harness connector.

Step 4: Detach the two (2) clips holding the IAT harness to the Factory housing. Refer to **Figure 1**.



Refer to Figure C for Steps 5-6

Step 5: Loosen the clamp on the throttle body.

Step 6: Carefully disconnect the vacuum hose on the factory tube.


Figure D

Refer to Figure D for Steps 7-8

Step 7: Disconnect the crankcase hose connector from the factory intake by sliding the supplied 5/8" quick disconnect tool over the fitting and push it inside of the fitting. Rotate it and pull on the fitting at the same time.

Step 8: Then remove the factory intake system by lifting all in one piece out of the vehicle.



Refer to Figure E for Step 9

Step 9: Transfer the metal sleeve and rubber grommet from the factory housing to the aFe POWER housing.

Refer to **Figure 2**.

**Figure F****Refer to Figure F for Steps 10-11**

Step 10: Remove the filter clamp from the aFe POWER air filter. Slide the air filter into the aFe POWER housing from the top opening. Then guide the filter flange through the round opening in the housing and snap in the filter. Orient the filter to have the longer dimension of the flange horizontal. Place the filter clamp over the filter flange but do not tighten at this time.

Step 11: Install the provided seal trim on the edge of the aFe POWER housing.



Figure G

Refer to Figure G for Steps 12-13

Step 12: Attach the provided harness extension to the factory IAT sensor harness.

Step 13: Using the provided zip tie to secure the harness to avoid damage.


Figure H

Refer to Figure H for Step 14

Step 14: : Install the grommet into the hole on the aFe POWER tube. Press in the plastic fitting and orient it like on the picture to make sure the temperature sensor is clocked correctly.



Figure I

Refer to Figure I for Step 15

Step 15: Remove the temperature sensor from the factory intake tube. Transfer it to the fitting onto the aFe POWER intake tube. Turn it clockwise until the tab locks it into place.



Figure J

Refer to Figure J for Step 16

Step 16: Install the NPT fitting onto the aFe POWER tube. This is a NPT connection, do not overtighten it.

The small space between the hex part and the tube is normal.

**Figure K****Refer to Figure K for Steps 17-18**

Step 17: Install the aFe POWER housing into the truck by pushing it into the factory mounting grommets.

Step 18: Secure it using the factory bolt removed at step 1.



Figure L

Refer to Figure L for Step 19

Step 19: Secure the front of the housing with the two (2) provided plastic retainer clips.

INSTALL



Figure M

Refer to Figure M for Step 20

Step 20: Press the provided small fitting into the coupling.



Figure N

Refer to Figure N for Steps 21-22

Step 21: Install the coupling and clamps onto the throttle body, but do not tighten clamps yet.

Step 22: Reattach the vacuum line from step 6.



Figure O

Refer to Figure O for Step 23

Step 23: Slide the aFe POWER intake tube into the filter flange then into the coupling. Align the tube and couplings then tighten all clamps.



Figure P

Refer to Figure P for Steps 24-25

Step 24: Connect the crankcase hose to the aFe POWER tube. Make sure the quick disconnect makes a snapping noise when fully engaged.

Step 25: Reconnect the IAT sensor harness to the IAT sensor.



INSTALL

Figure Q

Refer to Figure Q for Step 26

Step 26: Verify all clamps and connections are secured. Your installation is now complete. Thank you for choosing aFe POWER!



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