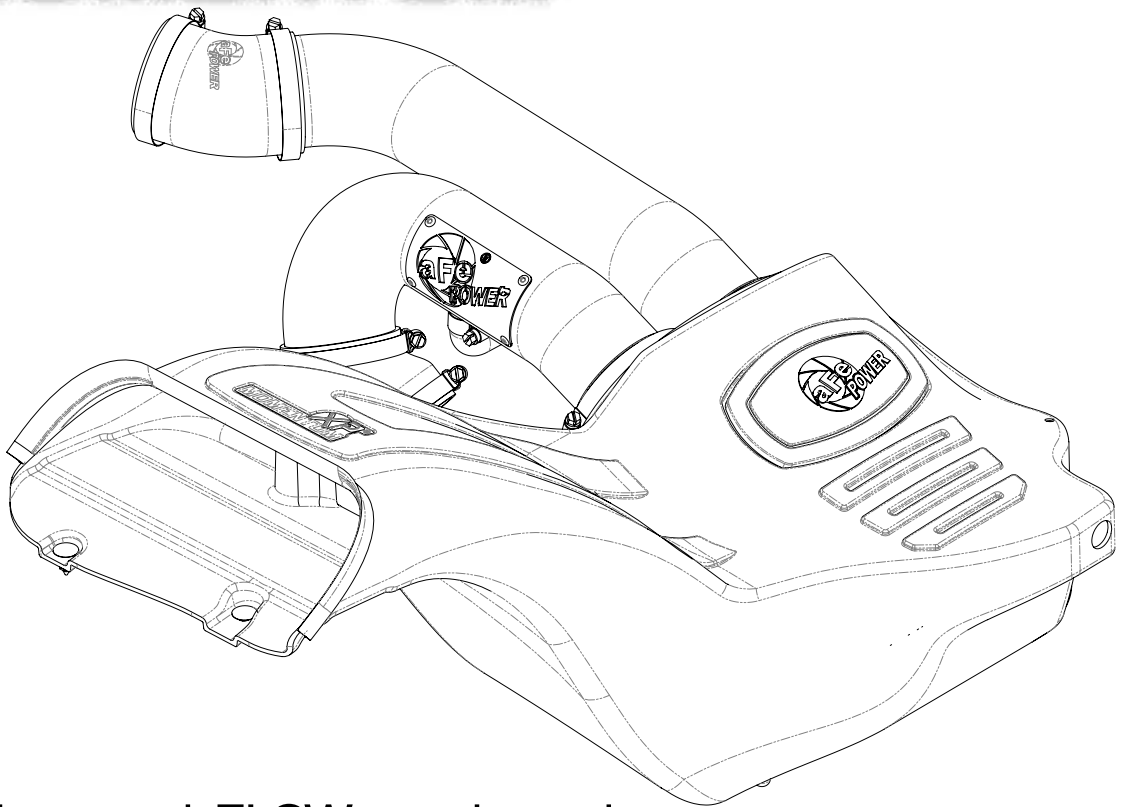




The logo features the 'aFe' brand name in a stylized font inside a circular emblem, with 'POWER' written in a bold, italicized font below it. Further down, 'XP' is written in a large, metallic, 3D-style font, and 'MOMENTUM' is written in a similar metallic, italicized font at the bottom.



advanced FLOW engineering

Cold Air Intake System

**Instruction Manual** P/N: 51-73120-B/H/L / 54-73120-B/H/L / 75-73120-B/H/L

Make: **Ford** Model: **F-150 Raptor** Year: **2017-2020** Engine: **V6-3.5L (tt) EcoBoost**

Make: **Ford** Model: **F-150**

Year: **2017-2020** Engine: **V6-3.5L (tt) EcoBoost**



- 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.
- Retain factory parts for future use.

| Label | Qty. | Description                         | Part Number  |
|-------|------|-------------------------------------|--------------|
| A1    | 1    | Air Filter (Pro DRY S)              | 21-91115     |
| A2    | 1    | Air Filter (Pro 5R)                 | 24-91115     |
| A3    | 1    | Air Filter (Pro-GUARD 7)            | 72-91115     |
| B     | 1    | Housing                             | 05-5030024B3 |
| C1    | 1    | Tube 1 of 2: Black                  | 05-73120B1   |
| C2    | 1    | Tube 1 of 2: Brushed                | 05-73120H1   |
| C3    | 1    | Tube 1 of 2: Blue                   | 05-73120L1   |
| D1    | 1    | Tube 2 of 2: Black                  | 05-73120B2   |
| D2    | 1    | Tube 2 of 2: Brushed                | 05-73120H2   |
| D3    | 1    | Tube 2 of 2: Blue                   | 05-73120L2   |
| E     | 1    | Hose, Silicone Breather: 5/8" ID    | 05-01444     |
| F     | 1    | Coupling, Silicone Elbow: (4" x 3") | 05-01445     |
| G     | 1    | Coupling, Silicone Elbow: (3" x 3") | 05-01446     |
| H     | 1    | Clamp, #064                         | 03-50006     |
| I     | 3    | Clamp, #044                         | 03-50019     |
| J     | 2    | Clamp, Mini #008                    | 03-50077     |
| K     | 2    | Retainer Clip                       | 03-50616     |
| L     | 1    | Seal, Trim: 7/16" (15-1/2" in.)     | 05-00072     |
| M     | 1    | Insert, Vent                        | 05-01405     |

Installation will require the following tools:

7mm/8mm/nut driver or deep sockets, flat head screw driver, 13mm socket and driver, panel popper tool.

**Product covered by one or more of the following patents:** 11125150, 11603792, 10648404, 9440175, 10252202, 10532304, 11219850, 11331607, 11376536, 11135538, 11745129

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.

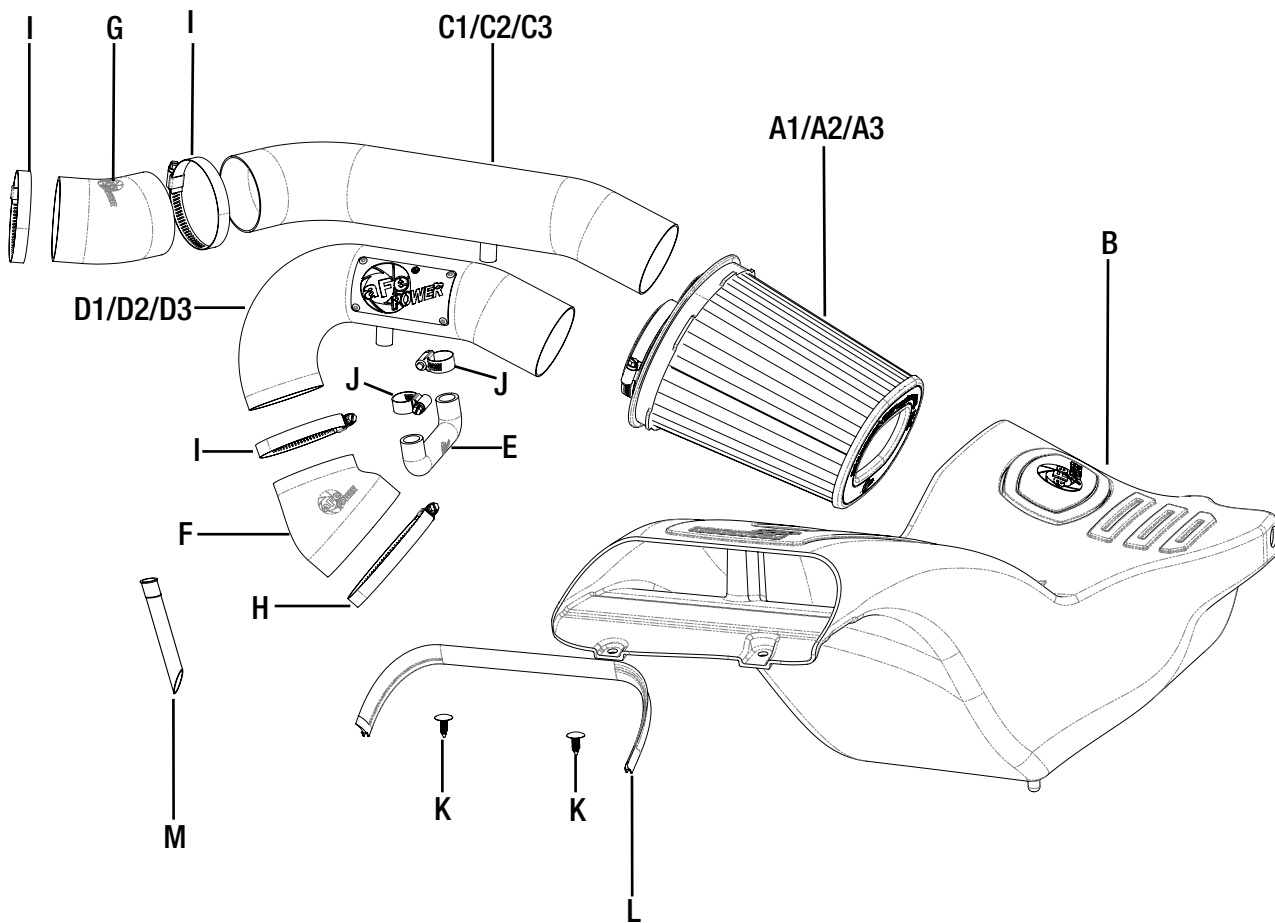




Figure A

### **Refer to Figure A for Steps 1-2**

Step 1: Unplug temp sensor harness (1) from the back side of the intake tube. Unclip the coolant line from the intake tube.

Step 2: Loosen the clamps (2) on the intake tubes. Unclip the top of the air box (3) and remove the tube, air filter and top of the air box from the vehicle.



REMOVAL

**Refer to Figure B for Steps 3-5**

Step 3: Unclip the wire from the back of the air box.

Step 4: Remove the wastegate accuator from the housing.

Step 5: Remove the screw (4) and the two plastic rivets (5) securing the housing, then pull the factory air box out of the truck.

## Vent insert installation:

REMOVAL



Figure C

### Refer to Figure C for Step 6

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

Step 6: Locate the o.e. plastic tube feeding the driver's side turbo inlet.



**Figure D****Refer to Figure I for Step 7**

Step 7: Locate the valve cover vent tube that feeds into driver's side turbo inlet. It is not necessary to remove the engine cover.


**Figure E**

### **Refer to Figure E for Step 8**

Step 8: 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 F

### **Refer to Figure F for Step 9**

Step 9: 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 G for Steps 10-11**

Step 10: Reconnect the vent fitting. It will snap over without having to release the plastic clip. Pull up slightly to confirm installation.

Step 11: 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.

**Figure H****Refer to Figure H for Steps 12-13**

Step 12: Transfer the grommet (6) from the factory air box to the aFe air box.

Step 13: Install the furnished seal trim (7) on the top edge of the aFe housing.

Optional: Drill two small holes in the top of the housing for the wastegate accutator wire harness to clip into. There are two drill points marking these locations and the hole size is 1/4". (8) This will allow you to mount the wastegate actuator wire to the air box, however, it will require you to relocate the push clips on the factory wire.



Figure I

### **Refer to Figure I for Steps 14-17**

Step 14: Install the aFe housing into the truck by pushing it into the factory mounting grommets.

Step 15: Re-install the factory screw (9) removed in Step 5, inside the aFe housing.

Step 16: Secure the housing with the two furnished plastic rivets (10).

Step 17: Reconnect the wastegate accutator to the bracket on the back side of the housing. (11)





Figure J

**Refer to Figure J for Step 18**

Step 18: Slide aFe filter inside the housing and push it in until it locks.

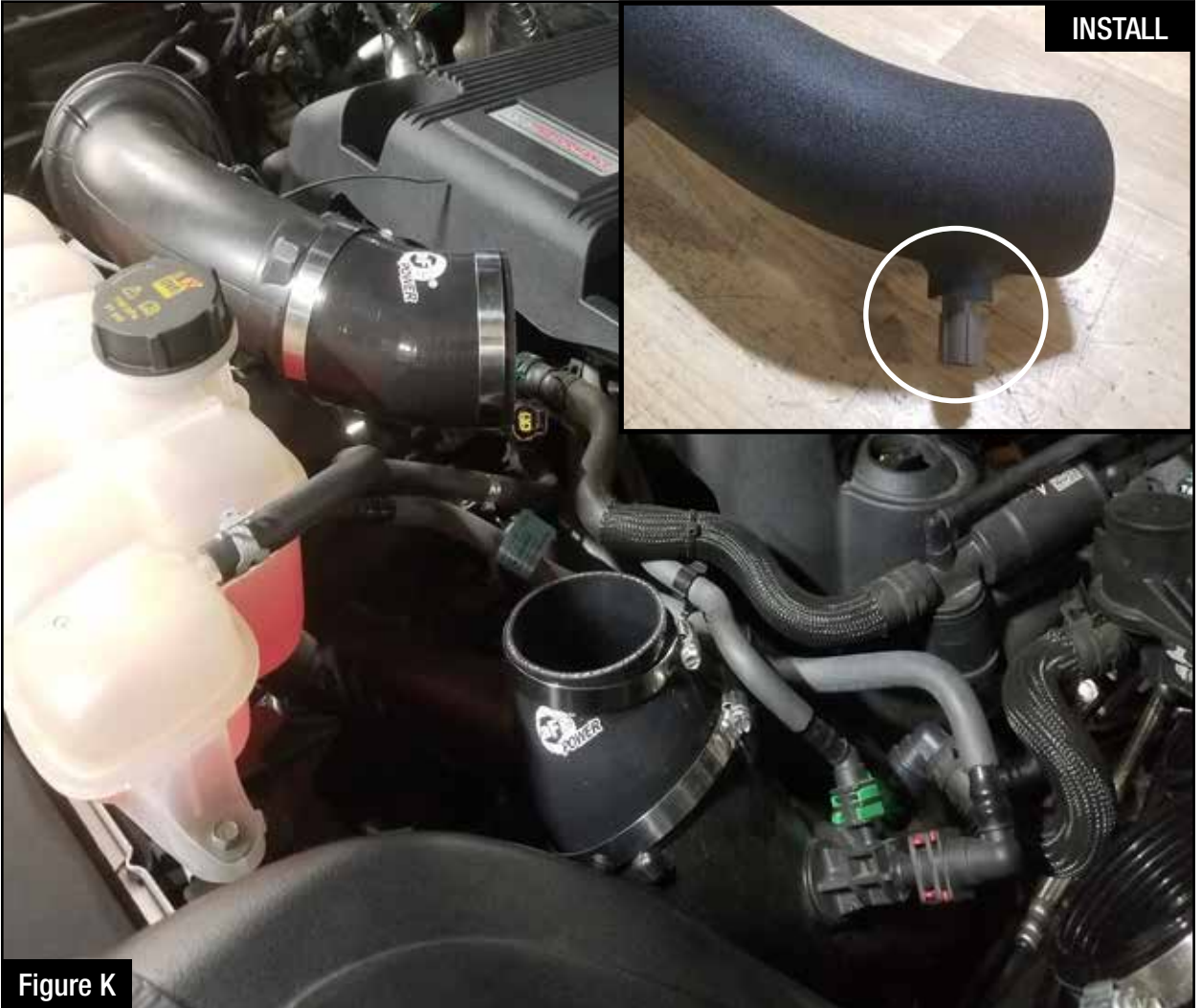


Figure K

### **Refer to Figure K for Steps 19-20**

Step 19: Install the couplers and their respective clamps onto the two intake tubes as shown in Figure K. Do not tighten clamps yet.

Step 20: Transfer the temperature sensor from the factory intake tube to the new aFe intake tube.





Figure L

**Refer to Figure L for Steps 21-24**

- Step 21: Install the tube 05-73120B2/H2/L2 into the air filter and then line it up with its coupler. Do not tighten the clamps at this time.
- Step 22: Install the small clamps onto the supplied silicone breather hose and then install the hose on the bottom of the intake tube 05-73120B2/H2/L2 as shown in Figure L.
- Step 23: Position the two small clamps so that they will be accessible after both intake tubes are installed.
- Step 24: Reconnect the temp sensor harness.



Figure M

**Refer to Figure M for Steps 25-28**

Step 25: Install tube 05-73120B1/H1/L1 into the filter flange.

Step 26: Position the other end of the tube on top of the coupler and rotate the coupler so that it is parallel to the intake tube.

Step 27: Tighten the lower clamp that is around the factory intake tube and then install the 05-73120B1/H1/L1 into the coupler.

Step 28: Slip the breather hose over the fitting on the front intake tube.



### **Refer to Figure N for Step 29**

Step 26: Locate the two plastic push clips for the wastegate actuator harness. Cut the tape securing these to the wire. Place the push clip in the drilled holes on the housing. Hold the wire in place along side these push clips and retape the push clips in the appropriate locations on the wire (12).





Figure 0

### **Refer to Figure 0 for Step 30**

Step 30: Make sure all clamps and screws are tight. Remove plastic film from aFe window. Your installation is now complete.

**NOTE:** Check all bolts, clamps, and connectors after 200 miles.

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