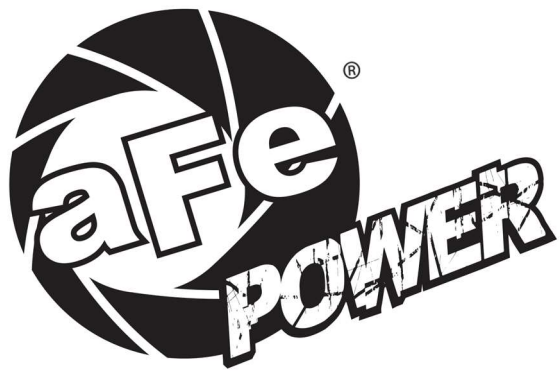




advanced FLOW engineering BladeRunner – Charge Pipe Hot Side Kit
Instruction Manual P/N: 46-20788-B

Make: Ford

Model: F-150

Year: 2024–2026

Engine: V6-2.7L (tt)



- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- For technical support please call 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.	UoM	Description	Part Number
A	1	Ea.	Tube, Hot Side Upper DS: 46-20788	05-61596B
B	1	Ea.	Tube, Hot Side PS: 46-20788	05-61597B
C	1	Ea.	Tube, Hot Side Lower DS: 46-20784	05-61763B
D	1	Ea.	Coupler, Silicone Elbow Rdr: 2"ID x 1.75"ID 54Deg	05-61591
E	1	Ea.	Coupling, Silicone ELB RDR: (2.00" x 1.75") 90 Deg	05-61737
F	1	Ea.	Coupling, Silicone Hump: 2-1/2"ID x 4"L	05-60439
G	2	Ea.	Coupling, Silicone Hump: 2.5"ID x 5.5"L	05-60610
H	2	Ea.	Clamp, SmartSeal, 032 (1-15/16" - 2-5/16")	03-50655
J	2	Ea.	Clamp, SmartSeal, 036 (2-1/4" - 2-9/16")	03-50789
K	6	Ea.	Clamp, SmartSeal, 044 (2-1/2" - 3-1/16")	03-50656
M	2	Ea.	Plug, Hex Hd Socket: 1/8" NPT (Zn Plt)	03-50029

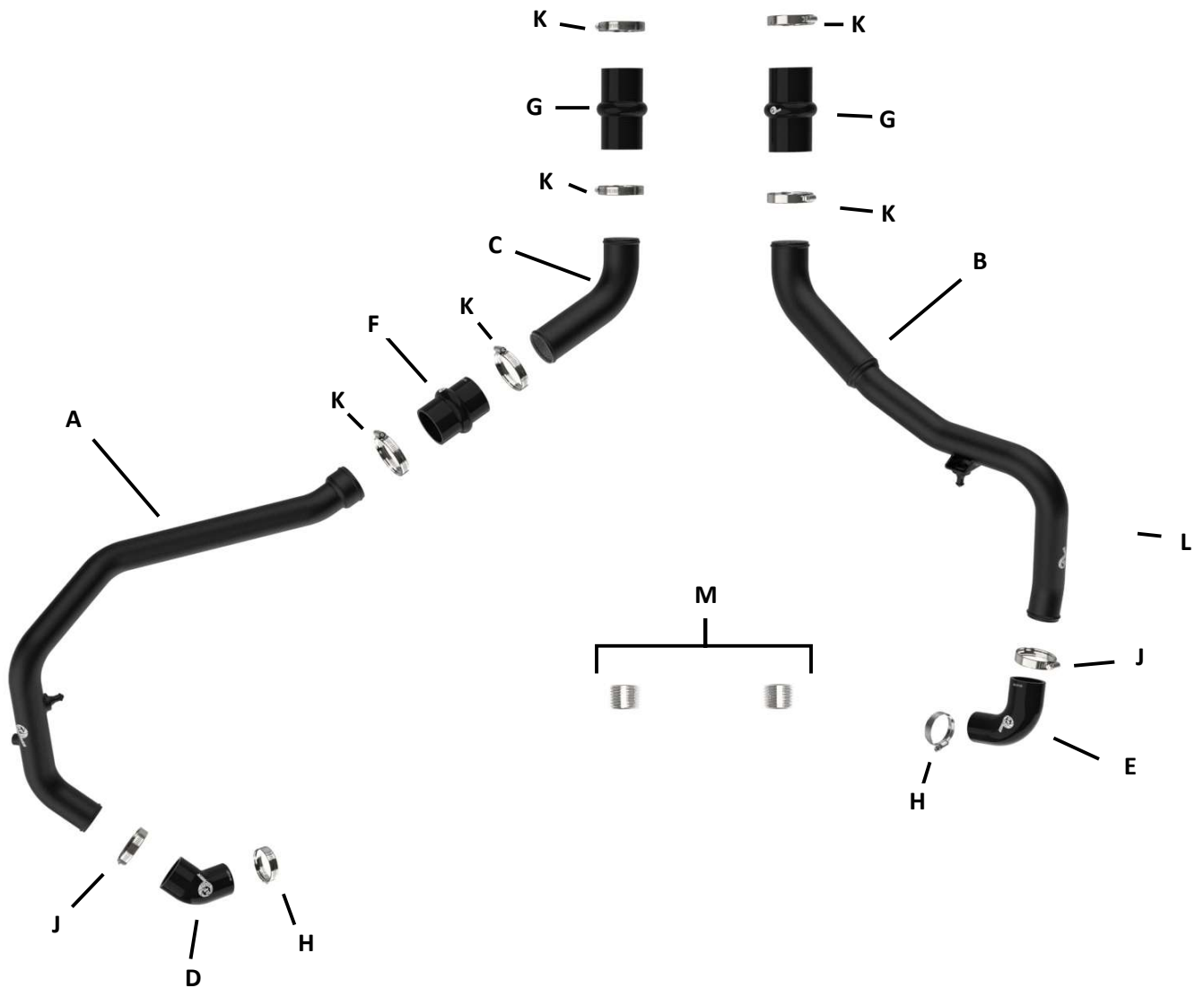
Installation will require the following tools:

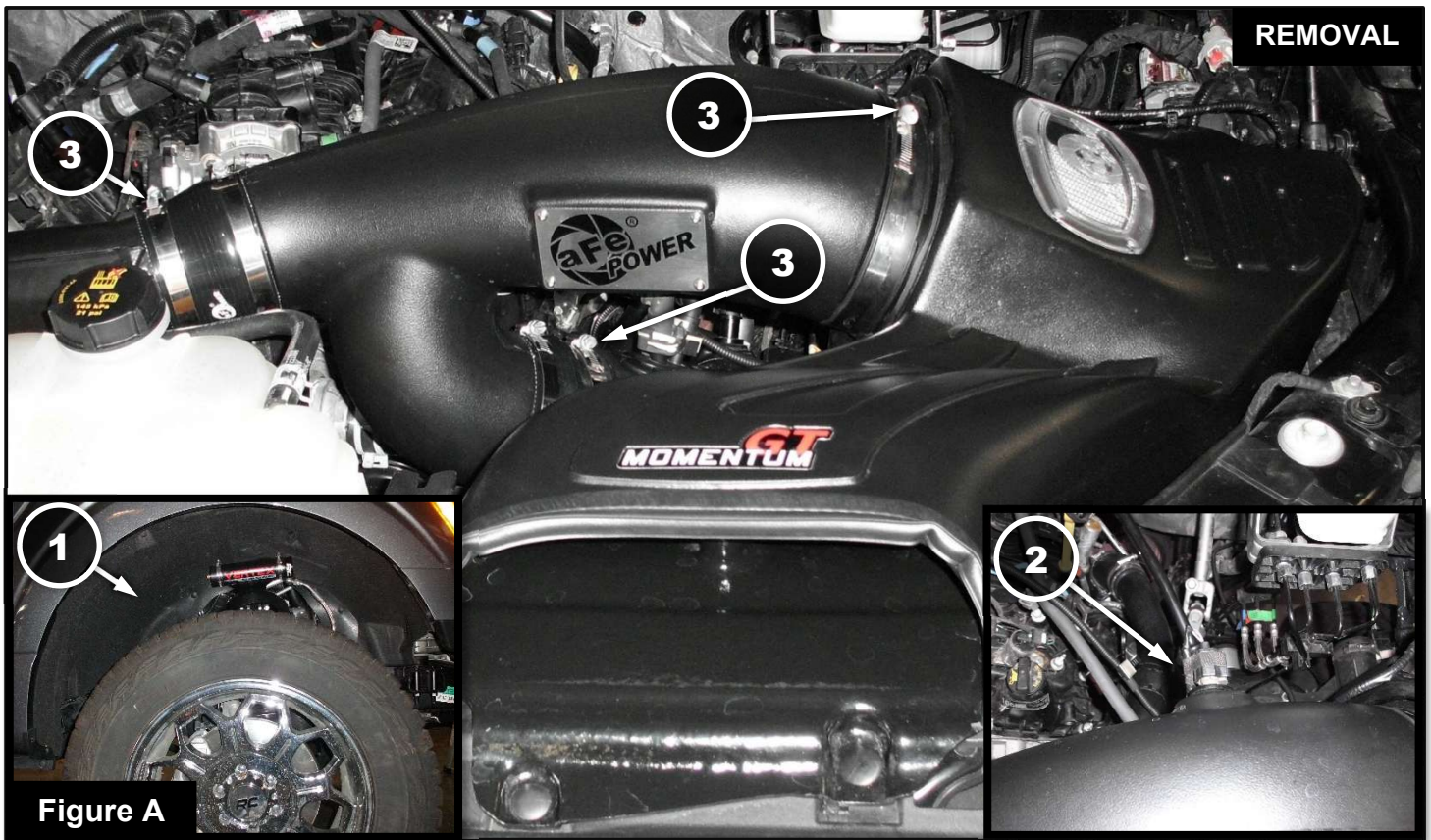
- Torque Wrench
- 1/4" Socket Wrench
- 6"-12" Extensions
- 8mm Deep Socket
- 5/16" Deep Socket
- 3/16in Hex Driver
- Flat Head Screwdriver
- Trim Removal Tool Set
- Pick Set
- Thread Sealant

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.

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





Refer to Figure A for Steps 1-6

Step 1: Park vehicle on level ground and engage the parking brake.

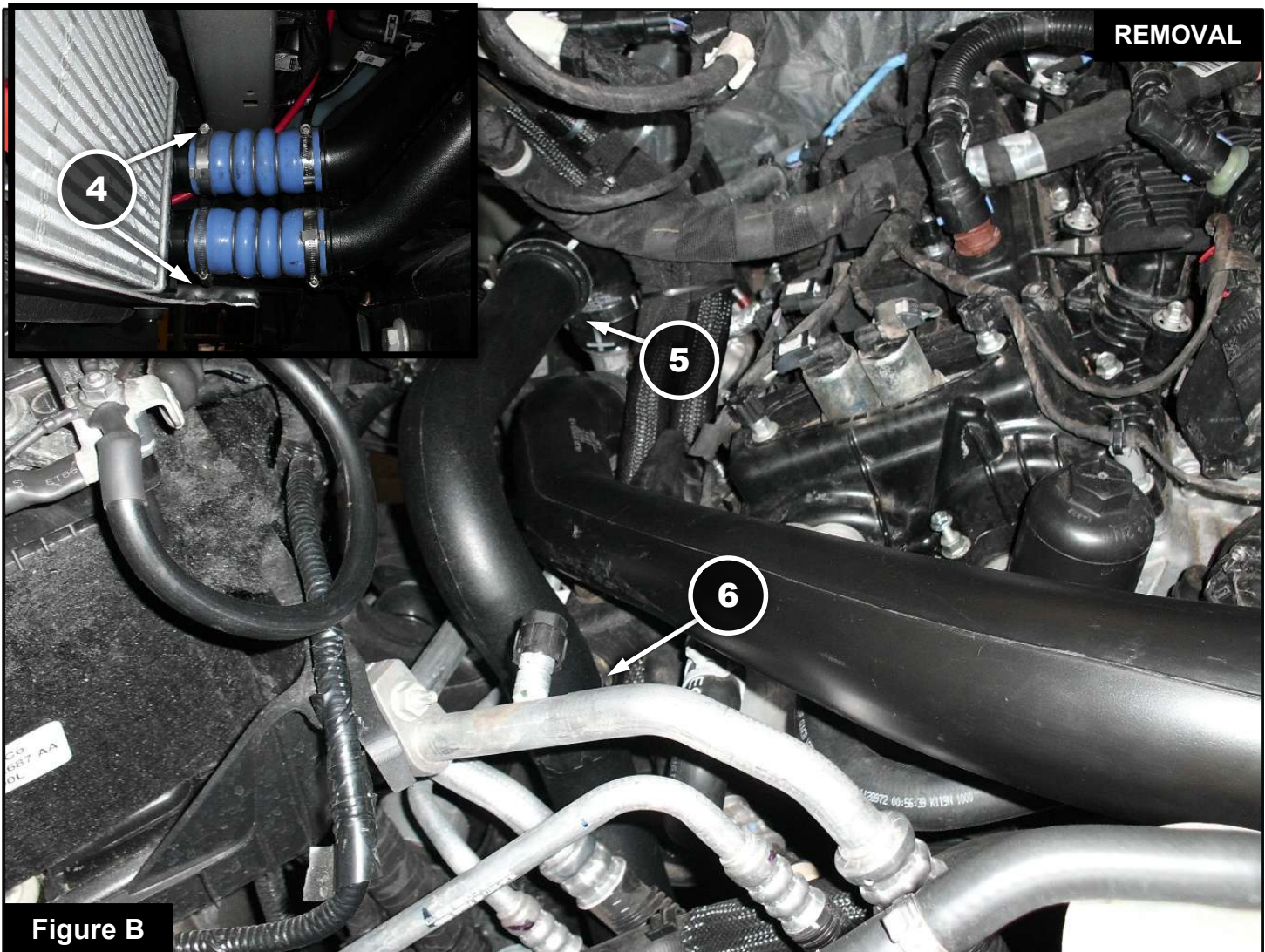
Step 2: Disconnect the negative battery cable.

Step 3: Remove the front fender liner on both sides of the truck for easier access to both turbo outlet couplers. (1)

Step 4: In the engine bay, disconnect the air intake temperature sensor from the air intake tube. (2)

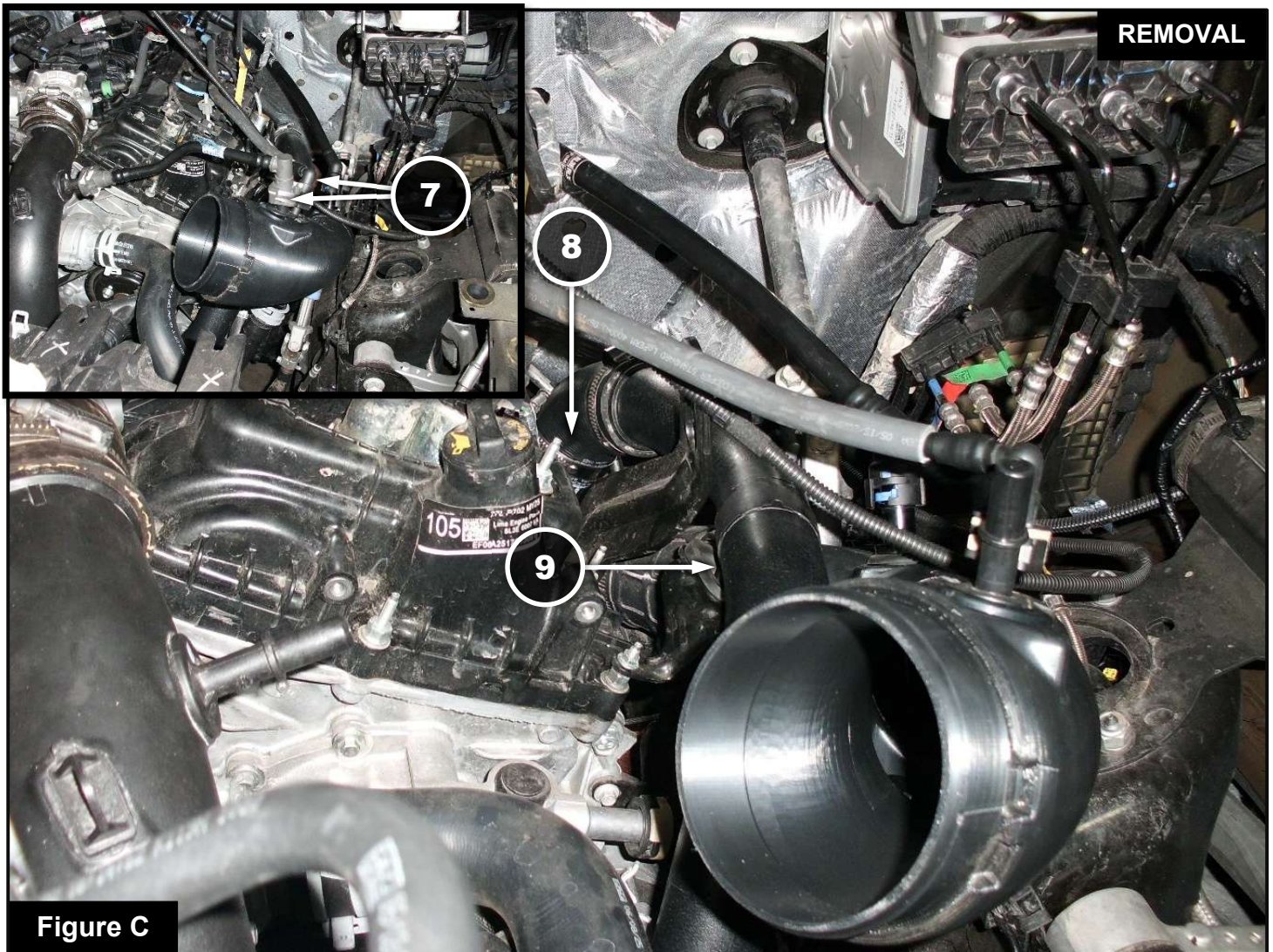
Step 5: Loosen the worm clamps on the intake tube connecting the turbo inlet tubes and the intake housing. (3)

Step 6: Remove the air intake tube.



Refer to Figure B for Steps 7-9

- Step 7: Loosen both clamps securing both hot side charge pipes to the intercooler from underneath and remove the couplers from the intercooler inlets. (4)
- Step 8: Loosen the clamp securing the hot side charge pipe coupler to the turbo outlet on the passenger side. (5)
- Step 9: Lubricate the mounting grommet to disconnect the charge pipe from its mount and the turbocharger outlet, then remove the charge pipe from the vehicle. (6)



Refer to Figure C for Steps 10-12

- Step 10: Disconnect the PCV and Recirculation hose from the driver side turbo inlet tube. ⑦
- Step 11: Loosen the clamp securing the hot side charge pipe coupler to the turbo outlet on the driver side. ⑧
- Step 12: Lubricate the mounting grommet to disconnect the charge pipe from its mount and the turbo coupling, then remove the charge pipe from the vehicle from the vehicle. ⑨



Refer to Figure D for Step 13

NOTE: Be sure to use thread sealant on the plug or sensor to prevent any leaks.

Step 13: If you are not using any aftermarket sensors, install the supplied 1/8" NPT plugs into the threaded fittings on both the aFe POWER hot side and cold side charge pipes. (13)

Note: Be sure to lubricate the O-ring with grease to prevent it from tearing during installation.

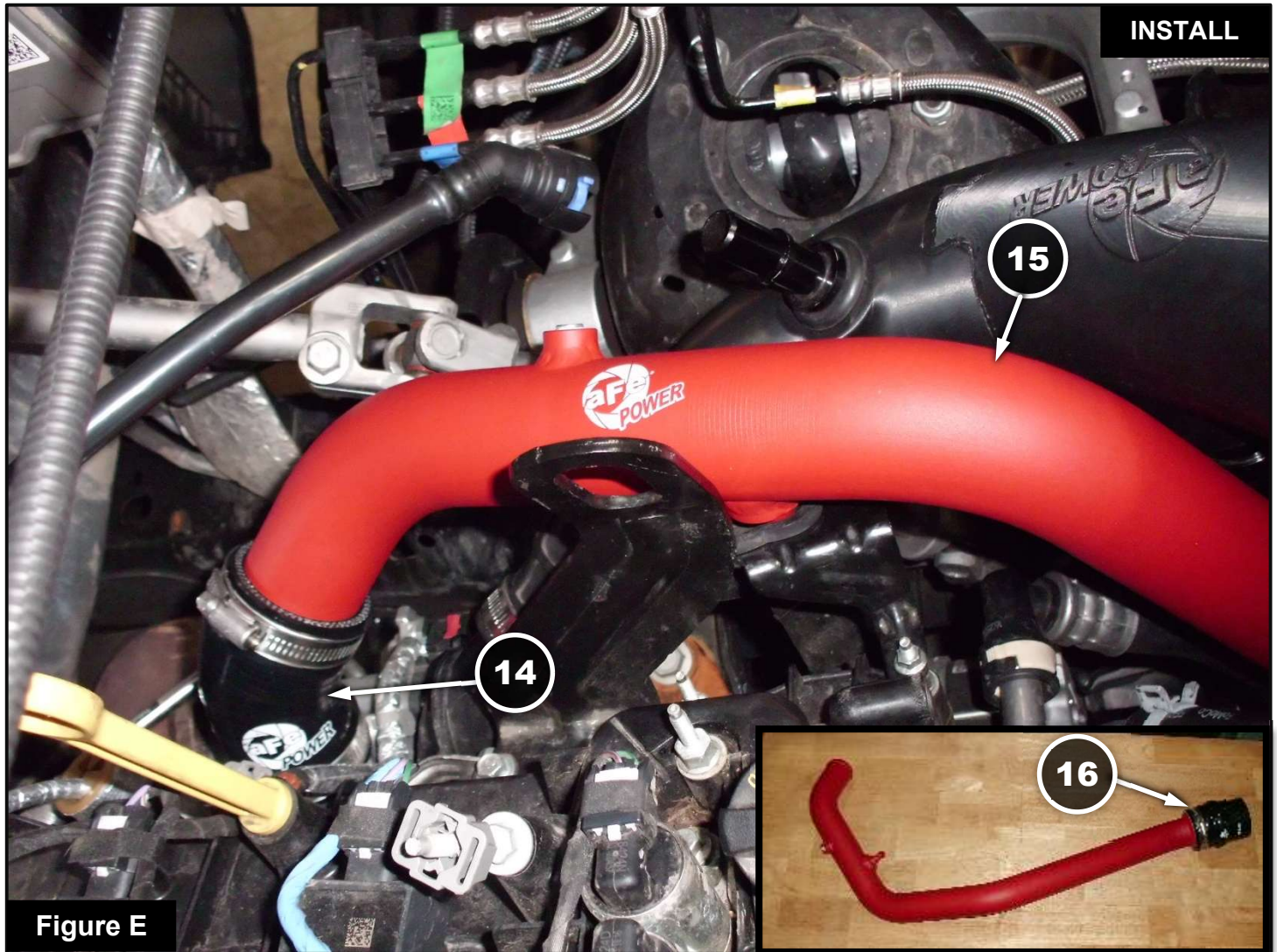


Figure E

Refer to Figure E for Steps 14-16

- Step 14: Install the supplied aFe POWER silicone elbow coupling (2"x1.75" ID, 54 DEG) onto the aFe POWER DS upper hot side charge pipe with one 032 SmartSeal Clamp onto the turbo side and one 036 SmartSeal Clamp onto the tube side; leave the clamps loose. (14)
- Step 15: Install the supplied aFe POWER silicone straight coupling (2.00"ID x 3.00"L) onto the expanded portion of the charge pipe with one 044 SmartSeal Clamp; leave the clamp loose. (15)
- Step 16: Install the partially assembled aFe POWER DS upper hot side charge pipe onto the vehicle, ensuring the mounting pin goes into the factory grommet; leave the clamps loose. (16)

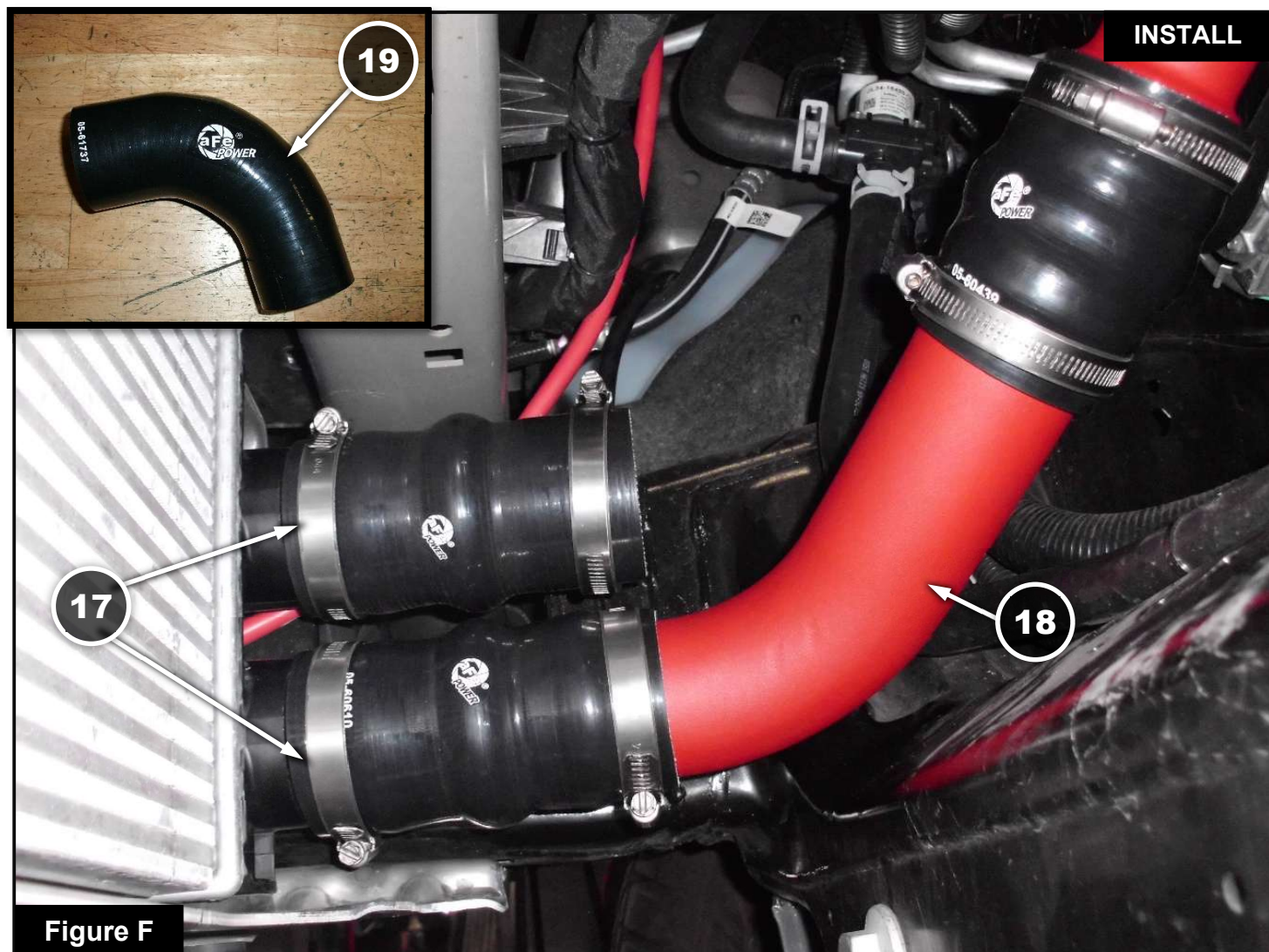


Figure F

Refer to Figure F for Steps 17-19

Note: Be sure to thoroughly clean all oil residue from the connections before installing any of the aFe couplings onto the vehicle.

Step 17: Install both silicone straight 2.5"ID x 5.5"L couplers onto the intercooler inlets with two 044 SmartSeal Clamps onto each coupler; leave the clamps loose. (17)

Step 18: Install the aFe POWER DS lower hot side charge pipe into the vehicle along with one 044 SmartSeal Clamp; leave the clamps loose. (18)

Step 19: Install the aFe POWER silicone elbow coupler (2" x 1.75"ID, 90 DEG) onto the passenger side turbo with one 032 SmartSeal Clamp on the turbo side of the coupler and one 036 SmartSeal Clamp on the tube side of the coupler; leave the clamps loose. (19)

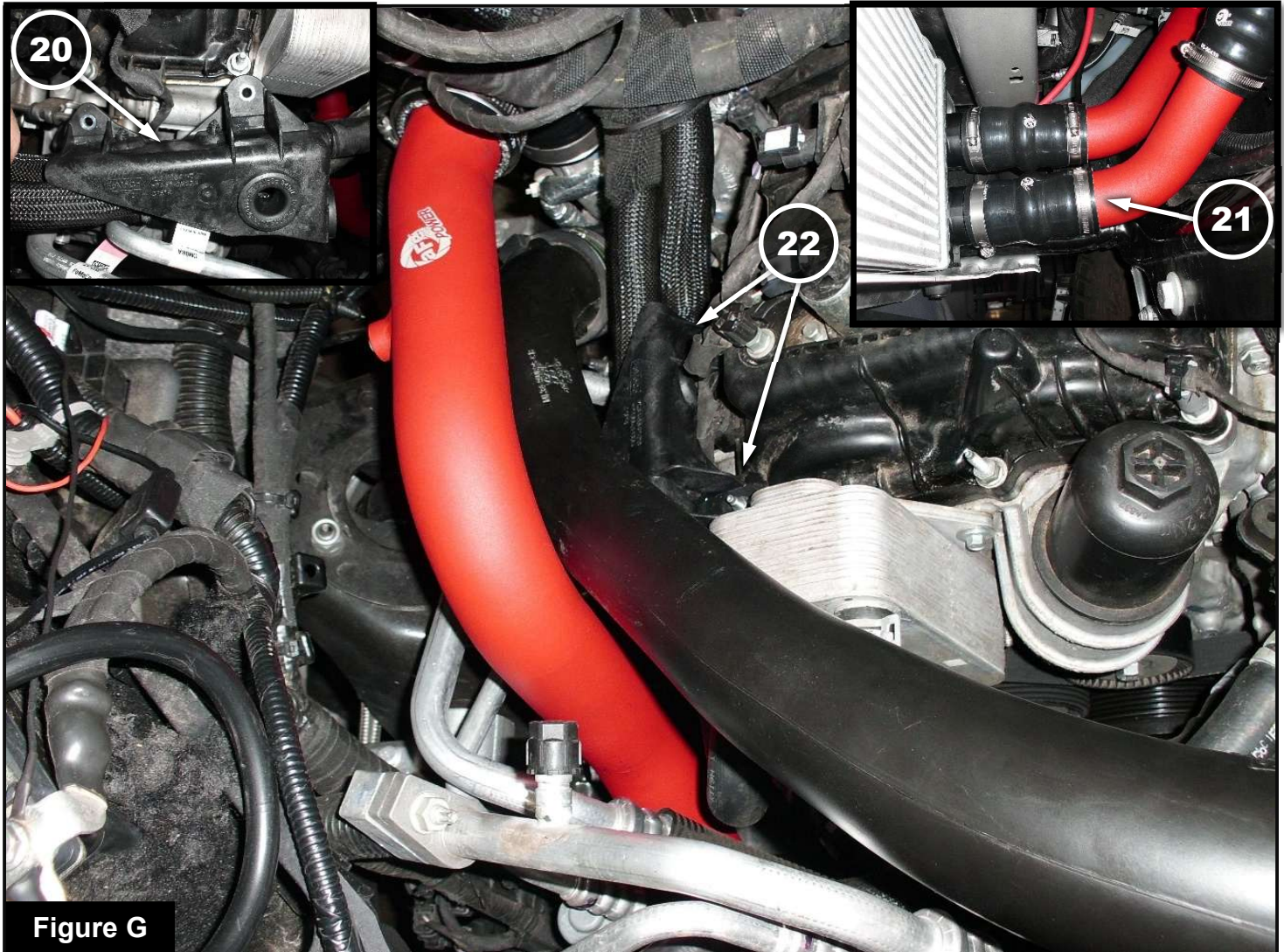


Figure G

Refer to Figure G for Steps 20-23

- Step 20: Remove the two nuts securing the mount for the charge pipe and turbo inlet tube and lift the mount free from the studs as shown; keep the wiring harness attached to the bottom. (20)
- Step 21: Install the aFe POWER PS hot side charge pipe from the top of the vehicle, sliding the mounting pin into the grommet of the loose mount and fitting it into the bottom intercooler coupler. (21)
- Step 22: With the charge pipe installed in the mount, reinstall the mount back on the studs and adjust the turbo coupler to fit the charge pipe on the turbocharger outlet; torque the two nuts for the mount to manufacturer specifications. (22)
- Step 23: Ensure the aFe POWER hot side charge pipes are not touching anything and tighten all the clamps on all charge pipes; torque to 6 Ft-lbs. (72in-lbs).

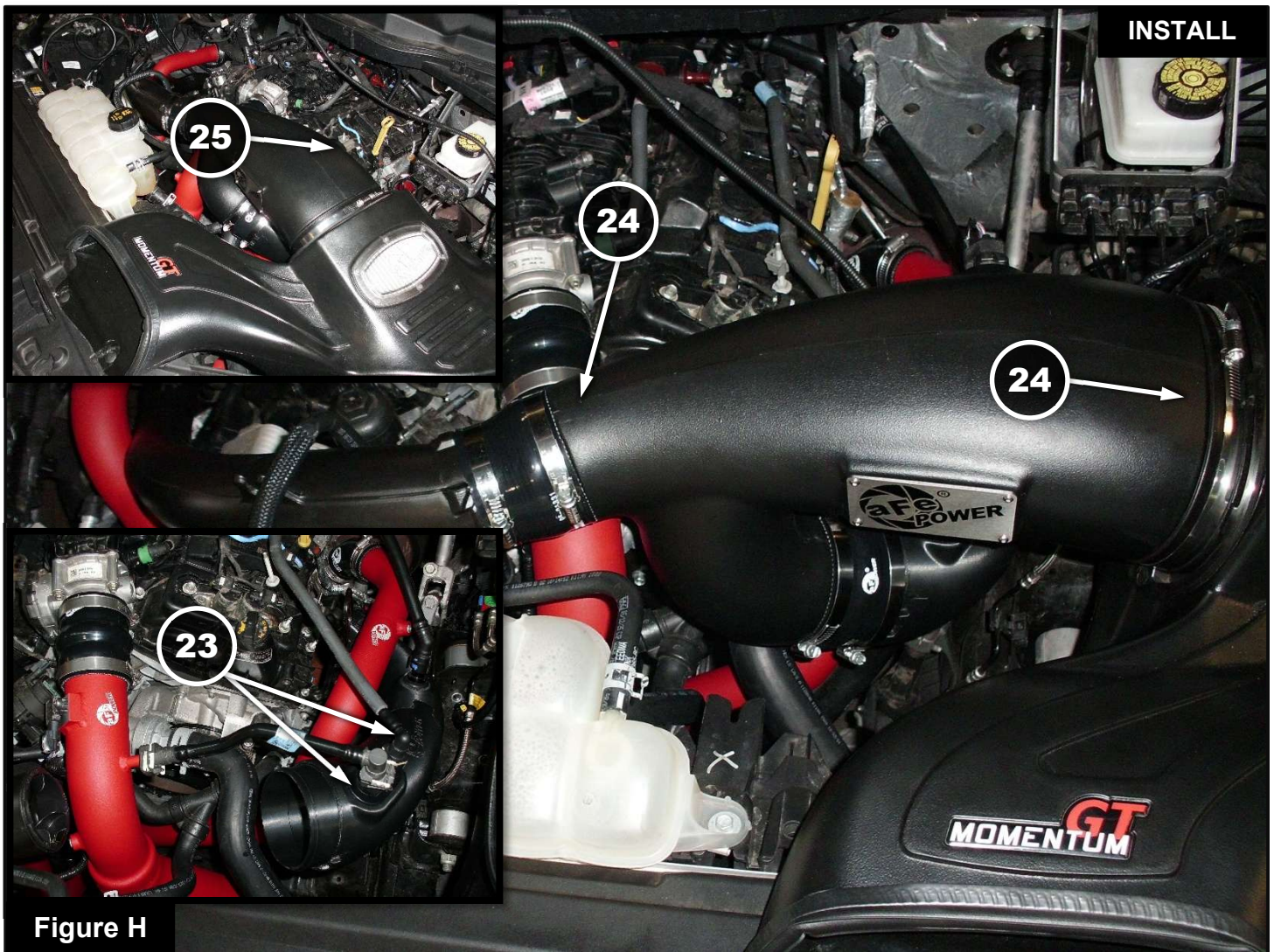


Figure H

Refer to Figure H for Steps 24-28

- Step 24: Reinstall the PCV and Recirculation hose from the driver side turbo inlet tube. (23)
- Step 25: Reinstall the air intake tube(s) and top of the air box into the vehicle; tighten the clamps to manufacturers' specification. (24)
- Step 26: Reconnect the air intake temperature sensor to the air intake tube. (25)
- Step 27: Reconnect the negative battery cable.
- Step 28: Installation is now complete.

NOTE: Check that all clamps and connectors are secure after 100–200 miles.



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