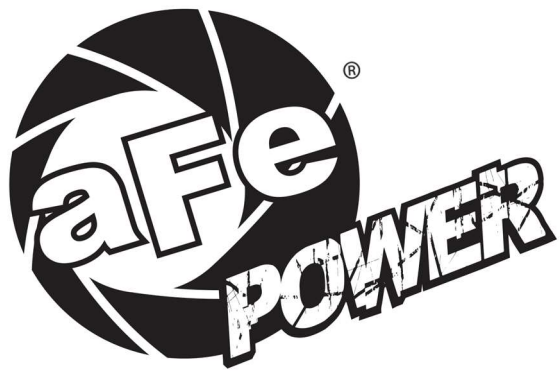




advanced FLOW engineering BladeRunner – Charge Pipe Combo Kit
Instruction Manual P/N: 46-20784-R

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	05-61596R
B	1	Ea.	Tube, Hot Side PS: 46-20788	05-61597R
C	1	Ea.	Tube, Hot Side Lower DS: 46-20784	05-61763R
D	1	Ea.	Tube, Cold Side: 46-20474-R	05-61215R
E	1	Ea.	Coupler, Silicone Elbow Rdr: 2"ID x 1.75"ID 54Deg	05-61591
F	1	Ea.	Coupling, Silicone ELB RDR: (2.00" x 1.75") 90 Deg	05-61737
G	1	Ea.	Coupling, Silicone Hump: 2-1/2"ID x 4"L	05-60439
H	2	Ea.	Coupling, Silicone Hump: 2.5"ID x 5.5"L	05-60610
J	1	Ea.	Coupling, Silicone Hump: 2-3/4"ID x 4"L	05-60216
K	1	Ea.	Coupling, Silicone Elbow: 3-1/2"ID x 45 Deg	05-60556
M	2	Ea.	Clamp, SmartSeal, 032 (1-15/16" - 2-5/16")	03-50655
N	2	Ea.	Clamp, SmartSeal, 036 (2-1/4" - 2-9/16")	03-50789
P	6	Ea.	Clamp, SmartSeal, 044 (2-1/2" - 3-1/16")	03-50656
Q	2	Ea.	Clamp, SmartSeal, 052 (2-7/8" - 3-9/16")	03-50786
R	2	Ea.	Clamp, SmartSeal, 060 (3-1/4" - 4-1/16")	03-50790
S	1	Ea.	Adaptor, Ford I/C: 46-20219	05-60373
T	1	Ea.	O-Ring, #339: 46-20209/19	05-60626
U	1	Ea.	Screw, BHCS, S/S: M6x1x16	03-50782
V	3	Ea.	Plug, Hex Hd Socket: 1/8" NPT (Zn Plt)	03-50029

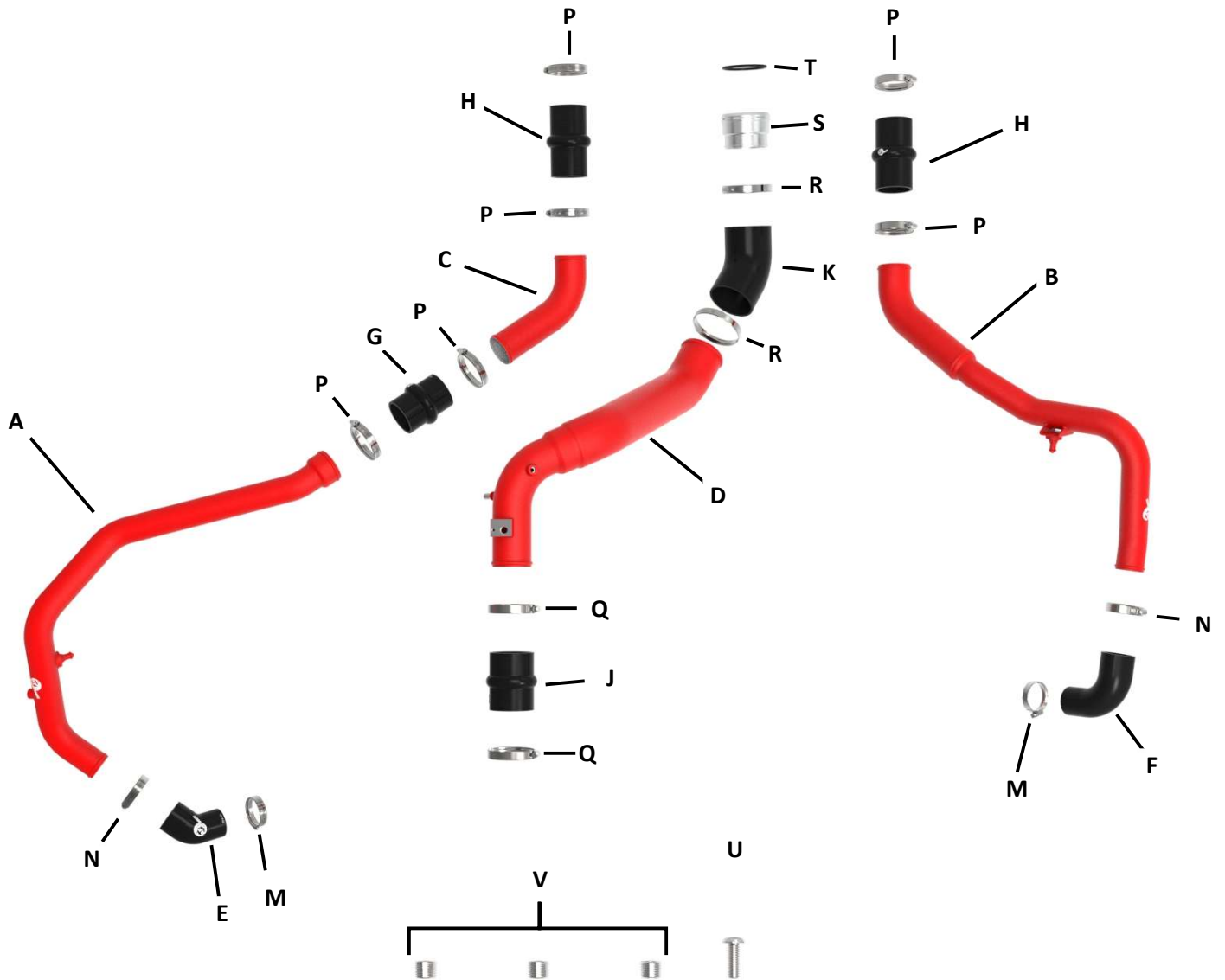
Installation will require the following tools:

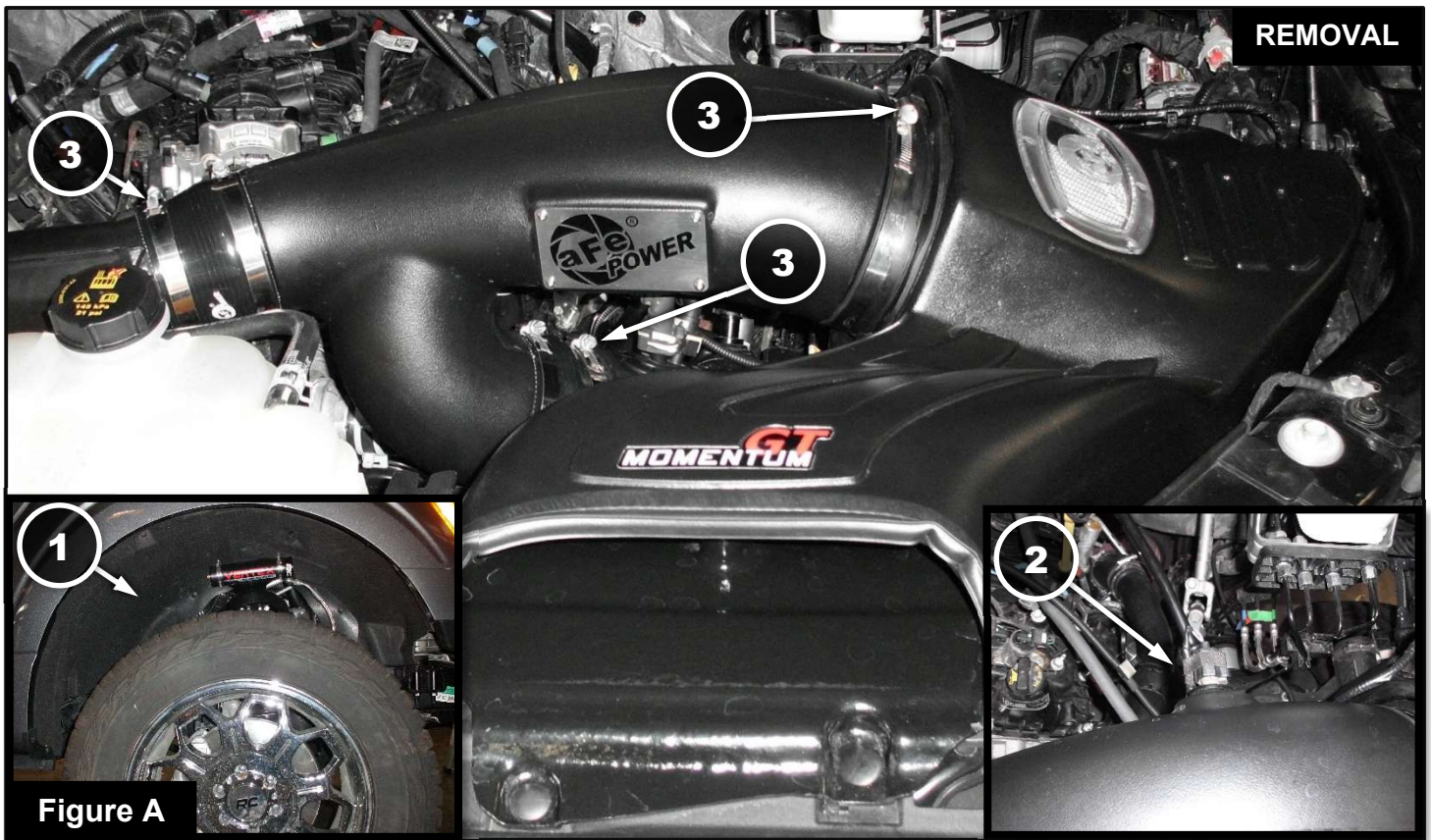
- Torque Wrench
- 1/4" Socket Wrench
- 6"-12" Extensions
- 8mm Deep Socket
- 5/16" Deep Socket
- 3/16in Hex Driver
- Flat Head Screwdriver
- Trim Removal Tool Set
- Pick Set
- Thread Sealant

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.

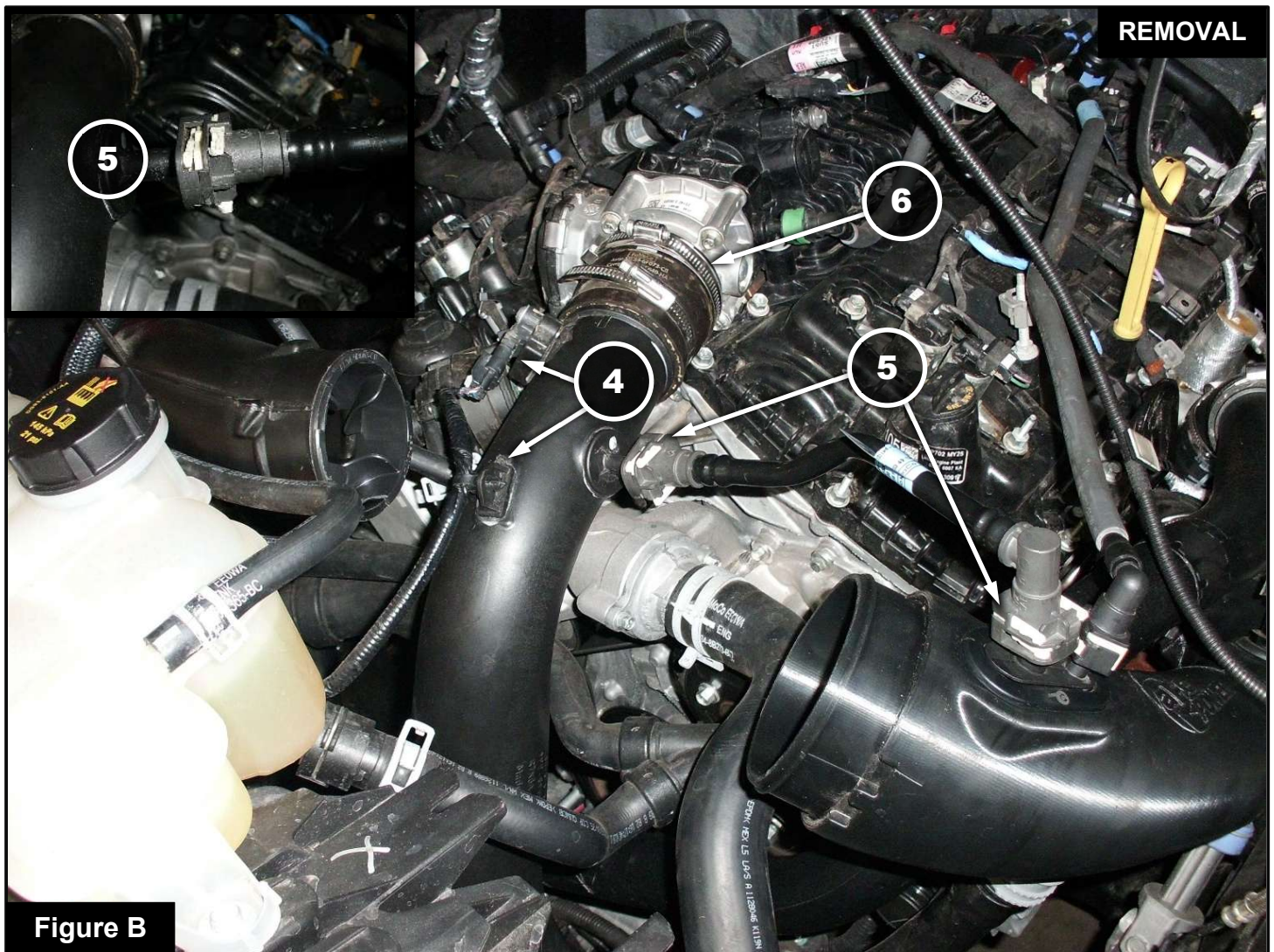


Figure B

Refer to Figure B for Steps 7-9

- Step 7: Disconnect the MAP sensor connector and unclip the harness from the cold side charge pipe. (4)
- Step 8: Disconnect the vent hose from the turbo inlet tube and the cold side charge pipe and remove it from the vehicle. (5)
- Step 9: Loosen the clamp securing the throttle body to the cold side charge pipe coupler and disconnect the charge pipe from the throttle body. (6)

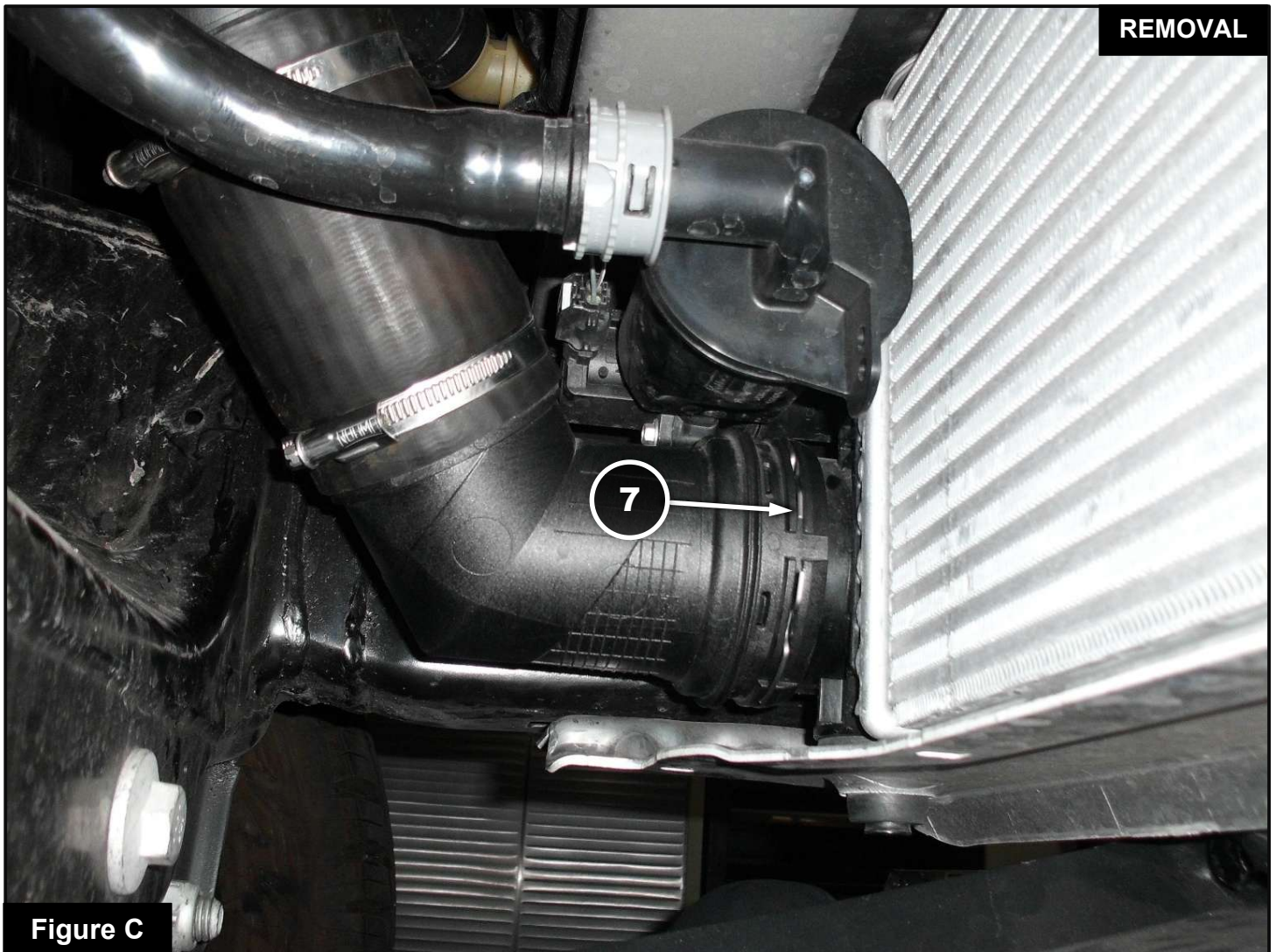


Figure C

Refer to Figure C for Steps 10-11

Step 10: Underneath the vehicle, remove the retaining clip from the cold side charge pipe quick connector and firmly pull the connector off the intercooler. (7)

Step 11: Remove the cold side charge pipe from the vehicle from the top of the vehicle.

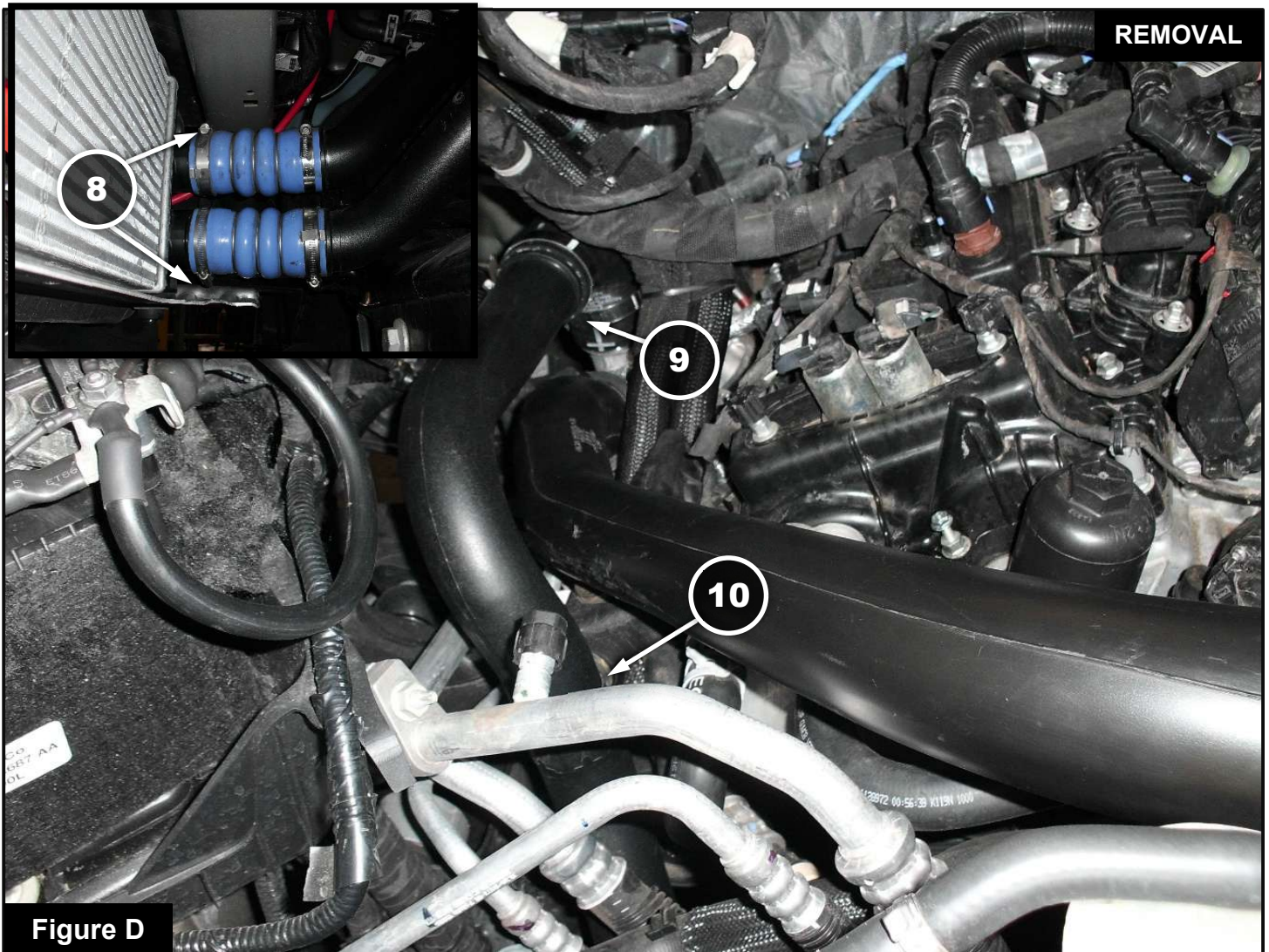


Figure D
Refer to Figure D for Steps 12-14

- Step 12: Loosen both clamps securing both hot side charge pipes to the intercooler from underneath and remove the couplers from the intercooler inlets. (8)
- Step 13: Loosen the clamp securing the hot side charge pipe coupler to the turbo outlet on the passenger side. (9)
- Step 14: Lubricate the mounting grommet to disconnect the charge pipe from its mount and the turbocharger outlet, then remove the charge pipe from the vehicle. (10)

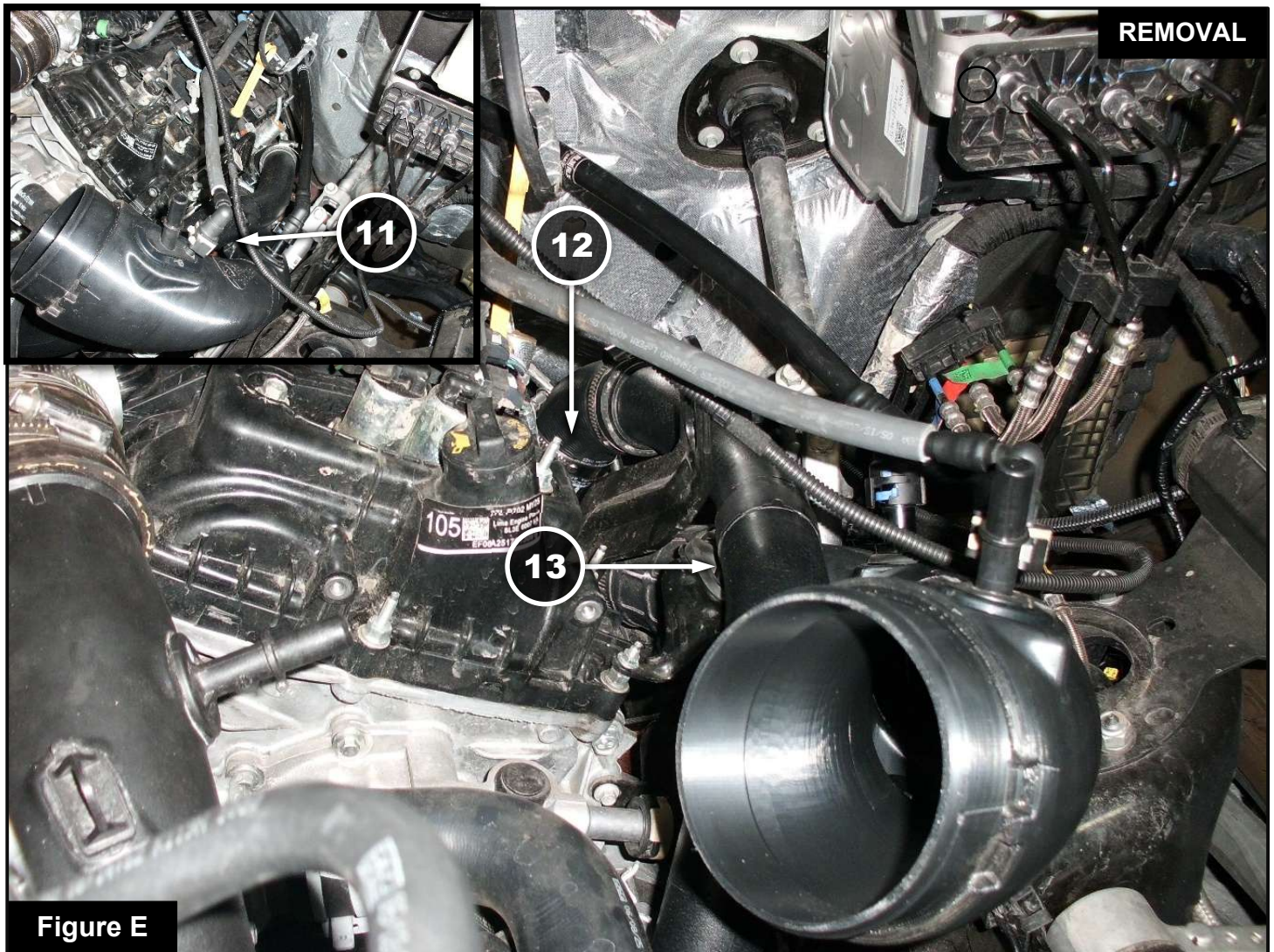


Figure E

Refer to Figure E for Steps 15-17

- Step 15: Disconnect the PCV hose from the driver side turbo inlet tube. (11)
- Step 16: Loosen the clamp securing the hot side charge pipe coupler to the turbo outlet on the driver side. (12)
- Step 17: 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. (13)

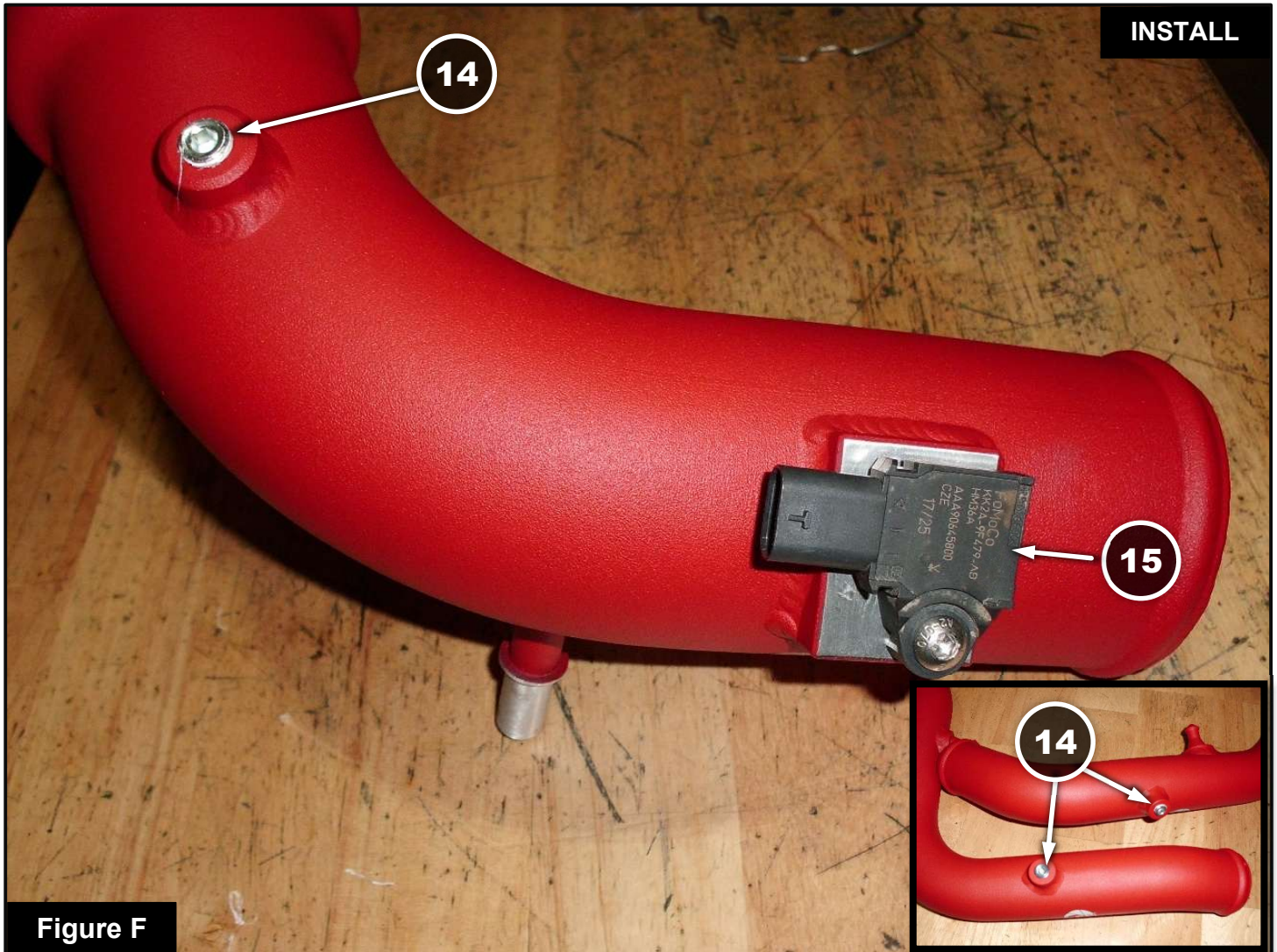


Figure F

Refer to Figure F for Steps 18-20

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

Step 18: 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. (14)

Step 19: Remove the MAP sensor from the factory pipe.

Step 20: Install the MAP sensor into the port on the aFe POWER cold side charge pipe and secure it using the supplied M6x1x12mm screw. (15)

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

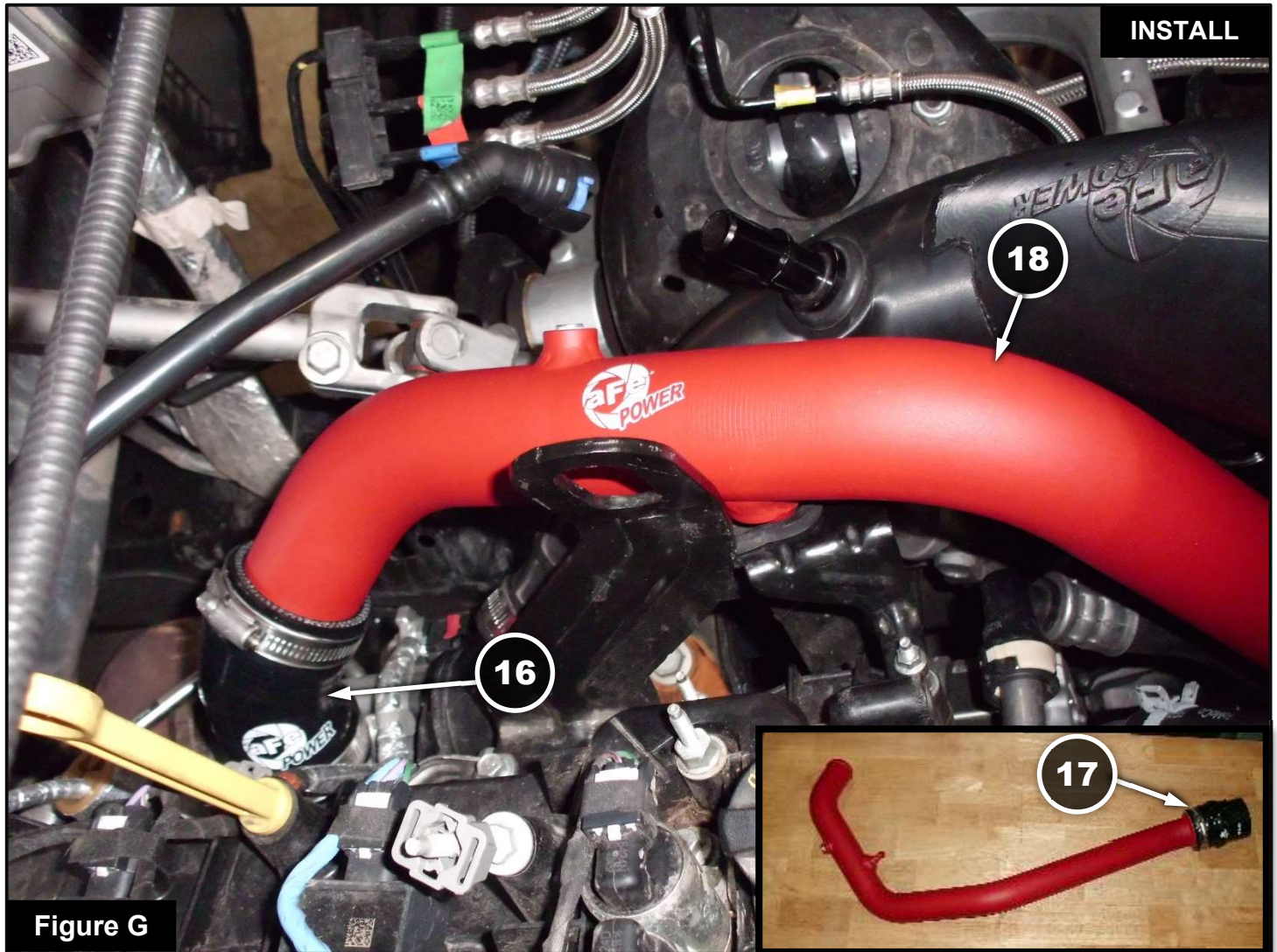


Figure G

Refer to Figure G for Steps 21-23

- Step 21: 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. (16)
- Step 22: 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. (17)
- Step 23: 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. (18)

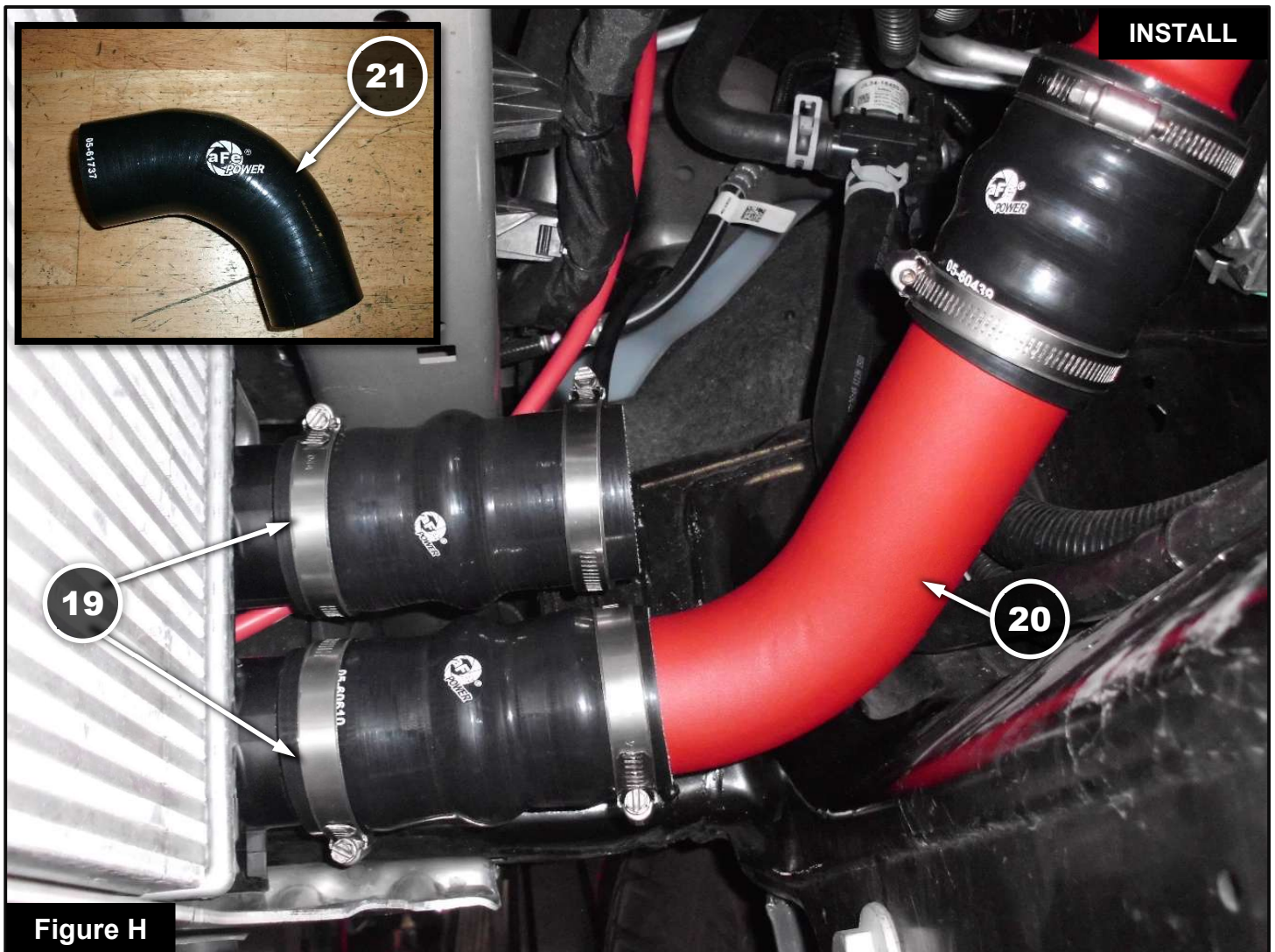
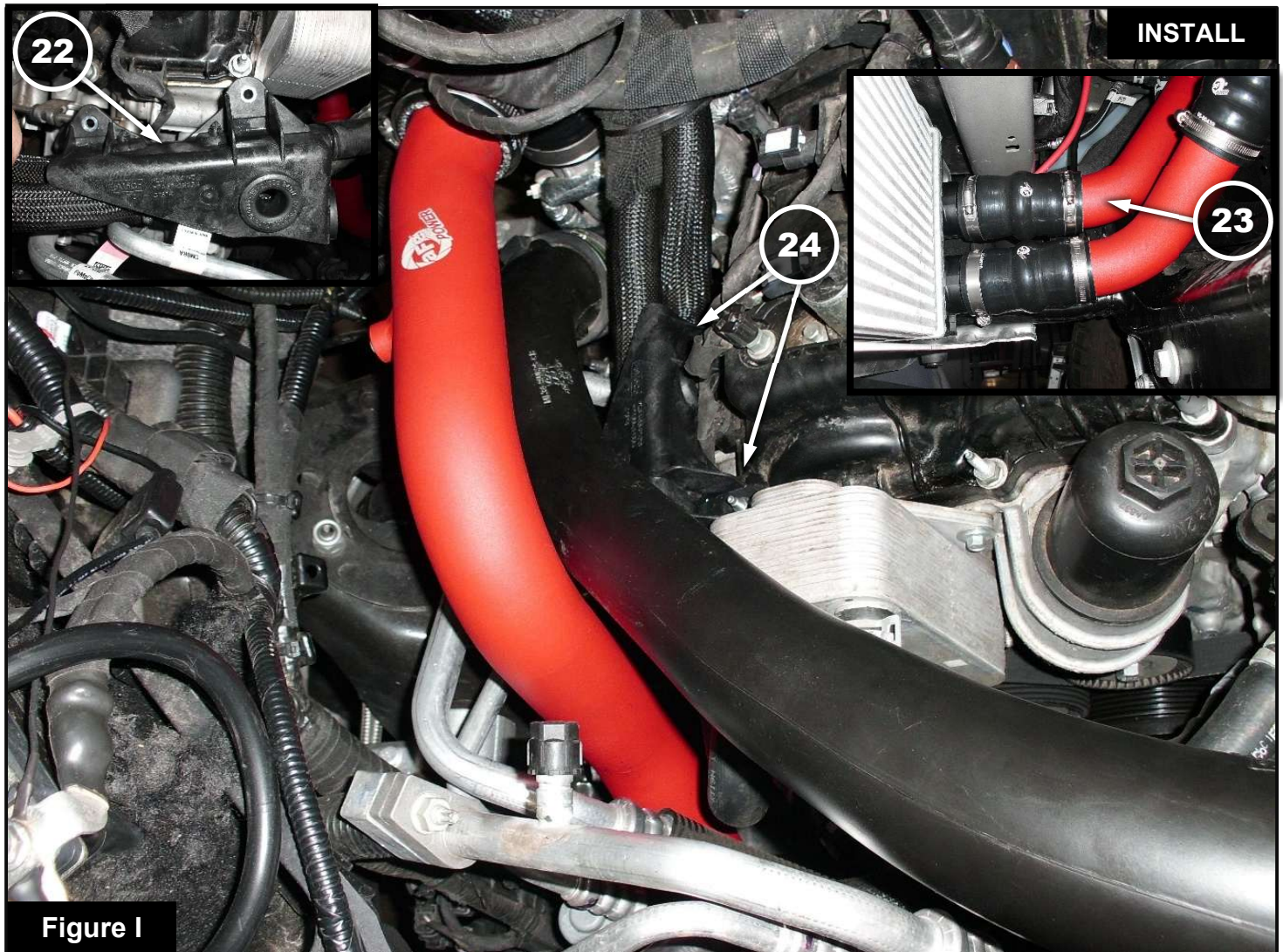


Figure H

Refer to Figure H for Steps 24-26

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

- Step 24: 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. (19)
- Step 25: Install the aFe POWER DS lower hot side charge pipe into the vehicle along with one 044 SmartSeal Clamp; leave the clamps loose. (20)
- Step 26: 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. (21)



Refer to Figure I for Steps 27-30

- Step 27: 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. (22)
- Step 28: 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. (23)
- Step 29: 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. (24)
- Step 30: Ensure the aFe POWER hot side charge pipes are not touching anything and tighten all the clamps on the hot side charge pipes; torque to 6 Ft-lbs. (72in-lbs).


Figure J

Refer to Figure J for Steps 31-34

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

Step 31: Install the supplied -339 O-ring into the groove on the inside of the supplied aFe intercooler adaptor. (25)

Step 32: Install the factory retaining clip onto the aFe intercooler adaptor as shown. (26)

Step 33: Install the supplied aFe POWER silicone elbow coupling (3.5"ID x 45Deg) and two 060 SmartSeal Clamp onto the aFe POWER intercooler adaptor, leave the clamps loose. (27)

Step 34: Install the adaptor onto the intercooler ensure the retaining clip snaps and is seated into the groove on the intercooler.

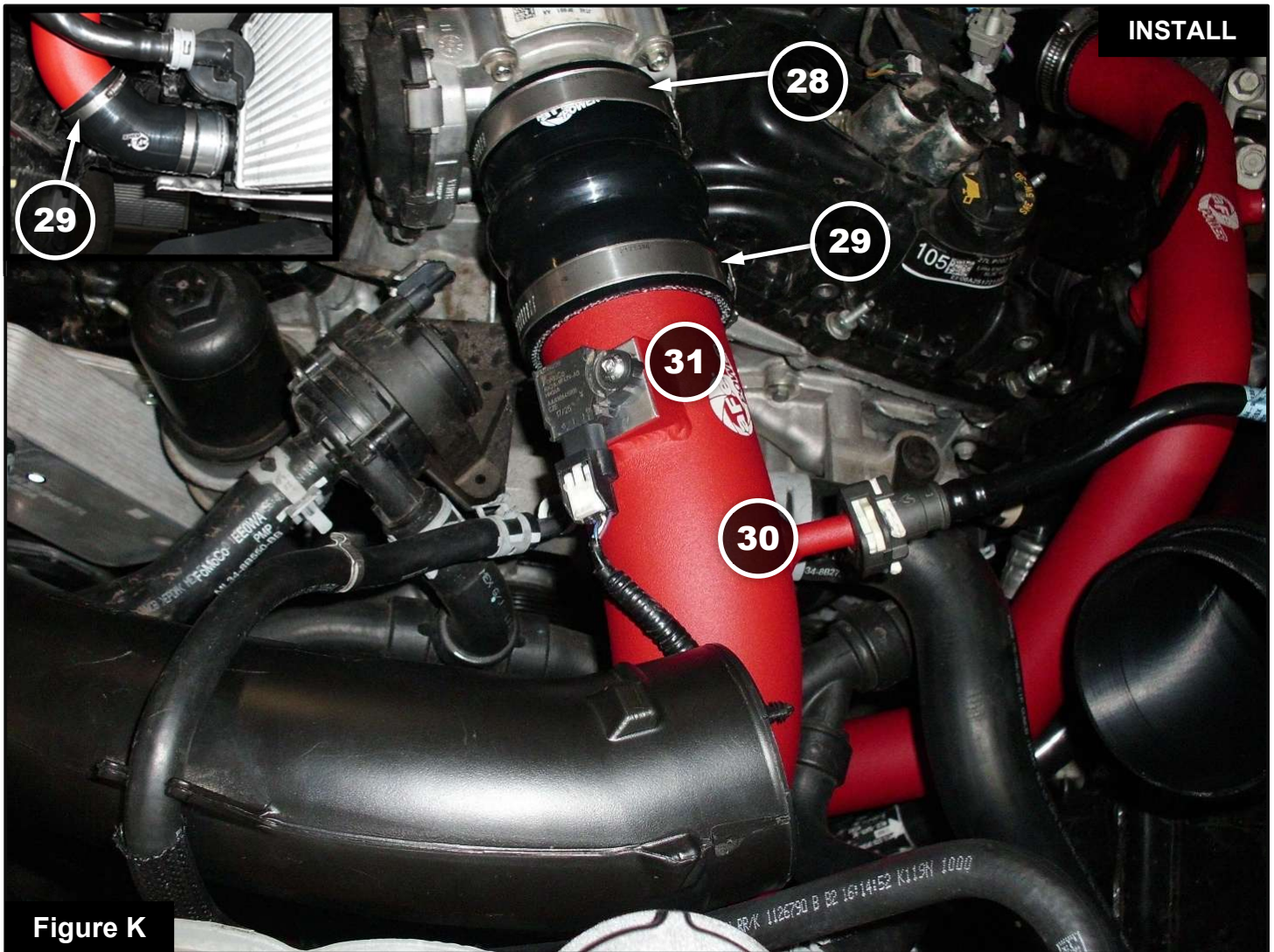


Figure K

Refer to Figure K for Steps 35-39

Step 35: Install the supplied aFe POWER silicone hump coupling (2.75"ID x 4"L) and one 052 SmartSeal Clamp onto the throttle body; leave the clamp loose. (28)

Step 36: Install the aFe POWER cold side charge pipe into the vehicle, connecting it to the lower coupling at the intercooler and to the upper coupling using one 052 SmartSeal Clamp; leave the clamps loose. (29)

Step 37: Reconnect the vent hose to the aFe charge pipe and the turbo inlet tube, ensuring the retaining clips lock into place. (30)

Step 38: Reconnect the MAP sensor to the aFe charge pipe using the supplied M6x1x16 button head cap screw. (31)

Step 39: Ensure the aFe cold side charge pipe is not touching anything and tighten the clamps on the cold side charge pipes; torque to 6 Ft-lbs. (72in-lbs).

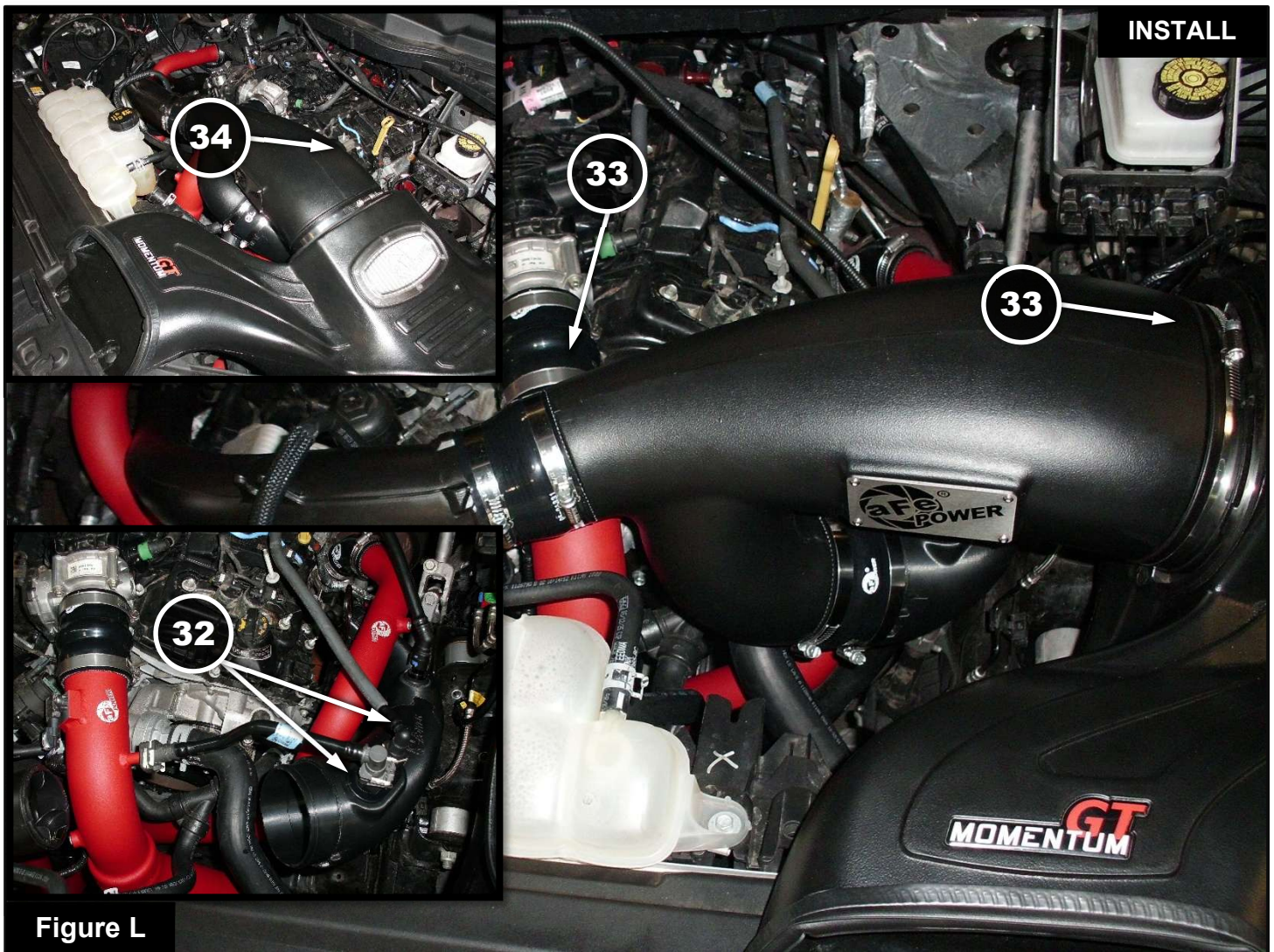


Figure L

Refer to Figure L for Steps 40-43

- Step 40: Reconnect the bypass valve tube to the bypass valve. (32)
- Step 41: Reinstall the air intake tube(s) and top of the air box into the vehicle; tighten the clamps to manufacturers' specification. (33)
- Step 42: Reconnect the air intake temperature sensor to the air intake tube. (34)
- Step 43: Reconnect the negative battery cable.
- Step 44: Installation is now complete.

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



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