



advanced FLOW engineering BladeRunner – Intercooler with Tubes

Instruction Manual P/N: 46-20492-B

Make: RAM

Model: 1500

Year: 2016-2019

Engine: V6-3.0L (td)



- 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.	S/A I/C: 46-20172	A5-60454
B	1	Ea.	Tube, Hot Side Lower: 46-20498	05-61441B
C	1	Ea.	Tube, Cold Uppe: 46-20179-B	05-60430B
D	1	Ea.	Tube, Cold Lower: 46-20179-B	05-60431B
E	1	Ea.	Coupling, Silicone Reducer: (2.5" x 2.13")ID x 3"L	05-61442
F	1	Ea.	Coupling, Silicone Elbow: 3"ID x 45 Deg	05-60433
G	1	Ea.	Coupling, Silicone Elbow: 3"ID x 45 Deg	05-60448
H	1	Ea.	Coupling, Silicone Hump: 3"ID x 4"L	05-60012
J	6	Ea.	Clamp, Spring Loaded T-Bolt: (3.25" - 3.5") (ss)	03-50530
K	1	Ea.	Clamp, Spring Loaded T-Bolt: (2.75" - 3") (ss)	05-60039
M	1	Ea.	Clamp, Spring Loaded T-Bolt: (2.375"-2.625") (ss)	03-50570
N	1	Ea.	O-Ring, 60mm ID x 4mm W	05-60615
P	3	Ea.	Plug, Hex Hd Socket: 1/8" NPT (Zn Plt)	03-50029
Q	1	Ea.	Vent, Breather 1/8" NPT	03-50393

Installation will require the following tools:

7mm, 10mm, 7/16 sockets, 3/16" allen, extensions, ratchet, flat screwdriver, pannel popper, pick, teflon tape, grease.

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.





Figure A

Refer to Figure A for Steps 1-2

Step 1: Disconnect the negative battery cable.

Step 2: Remove the engine cover from the vehicle (1). Do this by lifting the front up then sliding it forward out of the rear mounts.



Refer to Figure B for Steps 3-4

Step 3: Loosen the clamp securing the hot side charge pipe onto the intercooler inlet (2).

Step 4: Loosen the clamp securing the hot side charge pipe onto the upper hot side charge pipe, then remove the factory hot side charge pipe from the vehicle (3).

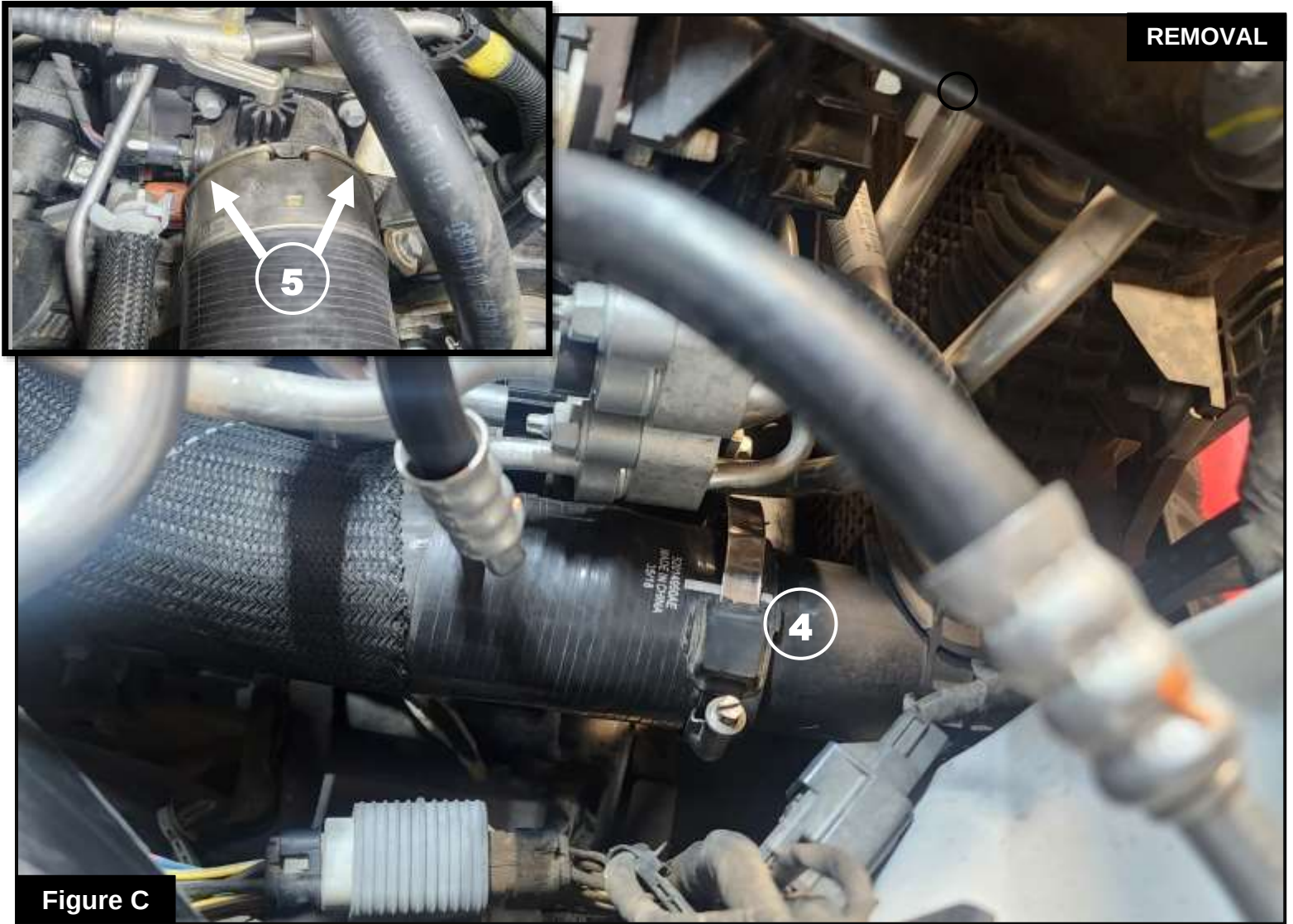


Figure C

Refer to Figure C for Steps 5-6

Step 5: Loosen the clamp securing the cold side charge pipe onto the intercooler outlet (4).

Step 6: Expand the retaining clip securing the cold side charge pipe onto the engine inlet, then remove the factory cold side charge pipe from the vehicle (5).



Refer to Figure D for Steps 7-10

Step 7: Remove the plastic radiator cover from the vehicle (6)

Step 8: Remove the screws securing the grille (7) then remove it from the vehicle.

Step 9: Remove the screws securing the active shutters to the vehicle, then disconnect the electrical connector and remove it from the vehicle.

Step 10: Remove the screws securing the intercooler (8) then remove it from the vehicle.



Figure E

Refer to Figure E for Steps 11-15

Step 11: Remove the metal insert from the upper mounting grommets, then transfer the upper mounting grommets from the factory intercooler onto the aFe POWER intercooler along with the metal inserts (9).

Note: Be sure to use thread sealant on the plug or sensor to prevent any leaking

Step 12: Install either the vent breather fitting for oil drainage or the 1/8" NPT plugs into the bottom ports on the aFe POWER intercooler pegs (10)

Step 13: Transfer the bottom mounting grommets from the factory intercooler onto the aFe POWER intercooler (11)

Step 14: Install the aFe POWER intercooler into the vehicle (12) then secure it with the factory mounting screws.

Step 15: Reinstall active shutters, grille, and radiator cover. Be sure to connect the electrical connector.



Refer to Figure F for Steps 16-18

Step 16: The plastic retainer will need to be removed from the charge pipe by standing it up on the end with the metal adaptor and tapping it down on either side of the plastic retainer (13)

Step 17: Remove the metal retaining clip from the factory cold side charge pipe, then install it onto the aFe POWER upper cold side charge pipe (14)

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

Step 18: Install the 60mm ID x 4mm W O-ring into the groove on the inside of the supplied aFe POWER upper cold side charge pipe (15)

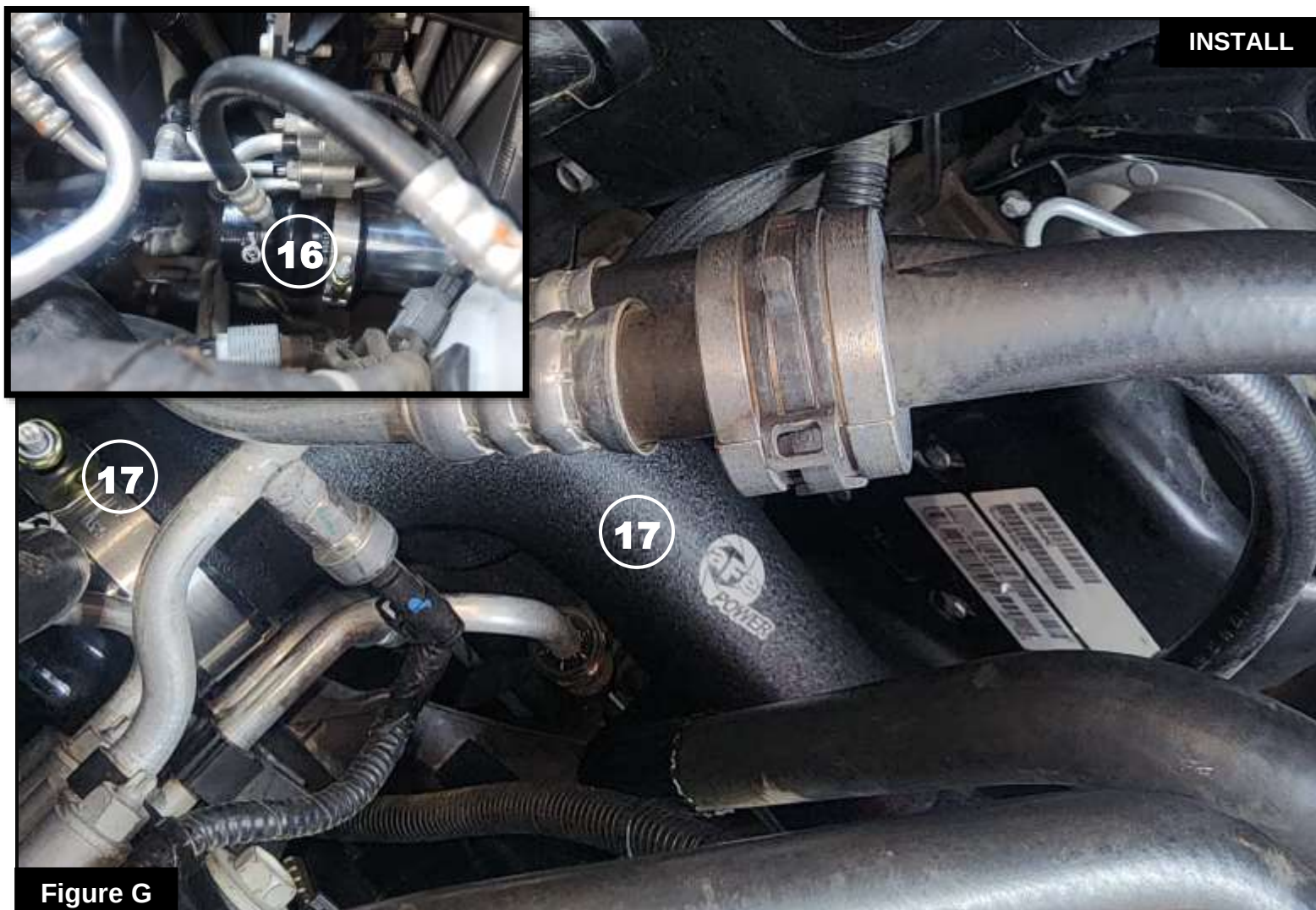


Figure G

Refer to Figure G for Steps 19-20

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

Step 19: Install the supplied aFe POWER silicone hump coupling, 3"ID x 4"L, with one supplied 3.25" spring loaded spring loaded T-Bolt clamp onto the intercooler outlet (16) do not tighten the clamp yet.

Step 20: Install the short end of the aFe POWER lower cold side charge pipe into the coupling from the previous step along with one 3.25" spring loaded spring loaded T-Bolt clamp (17) do not tighten the clamp yet.

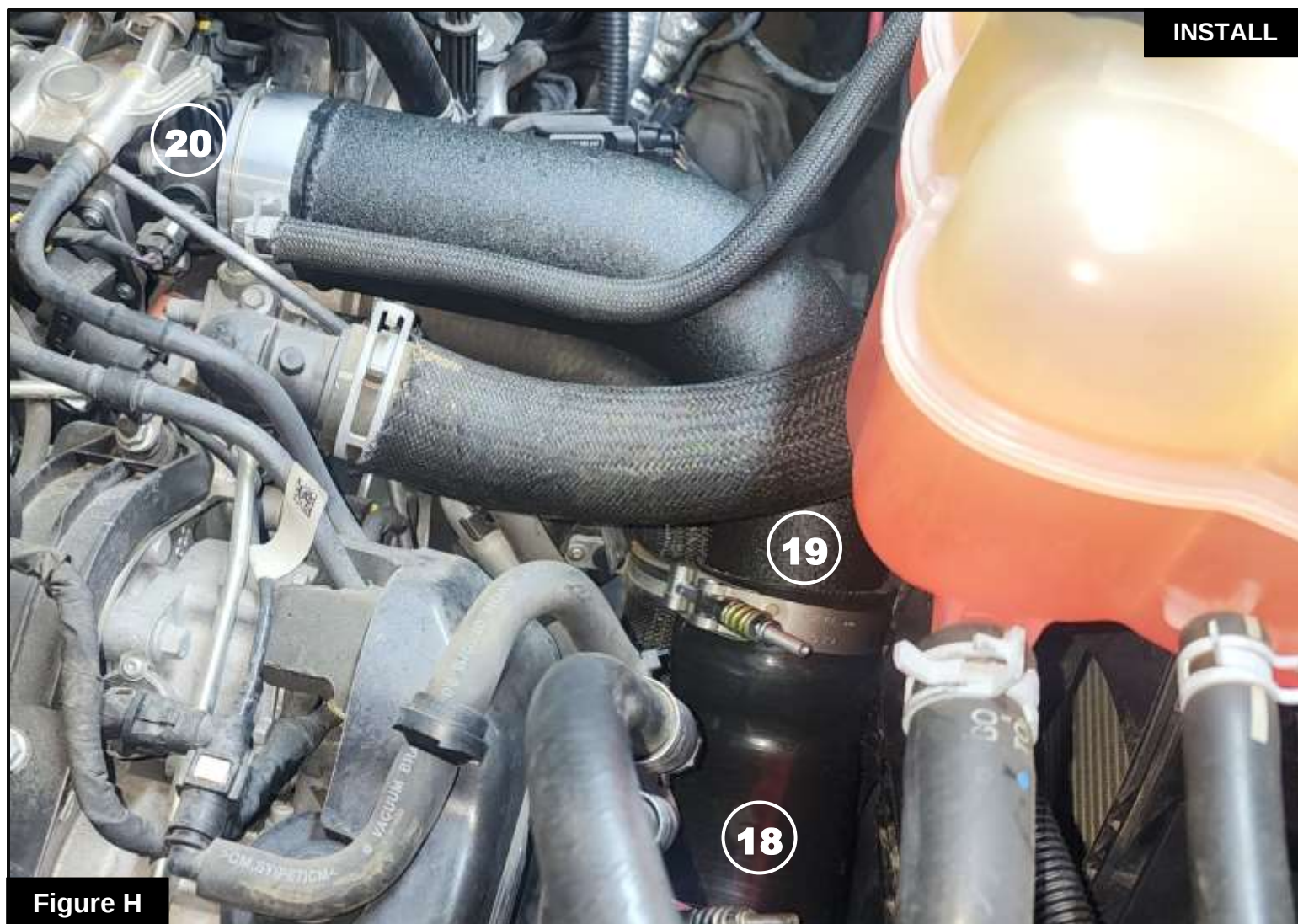


Figure H

Refer to Figure H for Steps 21-23

Step 21: Install the smaller supplied aFe POWER silicone elbow coupling, 3"ID x 45 Deg, with one supplied 3.25" spring loaded spring loaded T-Bolt clamp onto the aFe POWER lower cold side charge pipe (18) do not tighten the clamp yet.

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

Step 22: Install the short end of the aFe POWER upper cold side charge pipe into the coupling from the previous step along with one 3.25" spring loaded spring loaded T-Bolt clamp (19) do not tighten the clamp yet.

Step 23: Slide the aFe POWER upper cold side charge pipe onto the engine inlet (20) and ensure the retaining clip snaps into place all the way around, do not tighten the clamps yet.


Figure I

Refer to Figure I for Steps 24-26

Note: Be sure to use thread sealant on the plug or sensor to prevent any leaking

Step 24: If you are not using any aftermarket sensors, install the supplied 1/8" NPT plug into the threaded fitting on the aFe POWER lower hot side charge pipe (21).

Step 25: Install the supplied aFe POWER silicone reducer coupling, 2.50" x 2.13" x 3"L and the 3" spring loaded T-Bolt clamp onto the hot side charge pipe (22), do not tighten the clamp yet.

Step 26: Place the supplied 2.625" spring loaded T-Bolt clamp onto the end of the coupling from the previous step (23), do not tighten the clamp yet.



Figure J

Refer to Figure J for Steps 27-28

Step 27: Install the larger supplied aFe POWER silicone elbow coupling, 3"ID x 45 Deg, with one supplied 3.25" spring loaded spring loaded T-Bolt clamp onto the intercooler inlet (24) do not tighten the clamp yet.

Step 28: Install the aFe POWER lower hot side charge pipe into the vehicle by first connecting to the coupling from the previous step and then to the upper hot side charge pipe (25) do not tighten the clamps yet.



INSTALL

Figure K

Refer to Figure K for Steps 29-32

Step 29: Ensure all of the aFe POWER charge pipes are not touching anything, then tighten all of the clamps.

Step 30: Reinstall the engine cover onto the vehicle ②⑥

Step 31: Reconnect the negative battery cable.

Step 32: Install is now complete.

NOTE: Check all clamps, and connectors are secure after 100-200 miles



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