



advanced FLOW engineering

Instruction Manual P/N: 46-20574-B

BladeRunner – Charge Pipe Combo Kit

Make: **Ford**

Model: **Bronco**

Year: **2021+**

Engine: **L4 – 2.3L(t)**



- 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.
- Disconnect the negative battery terminal before proceeding.
- Retain factory parts for future use.

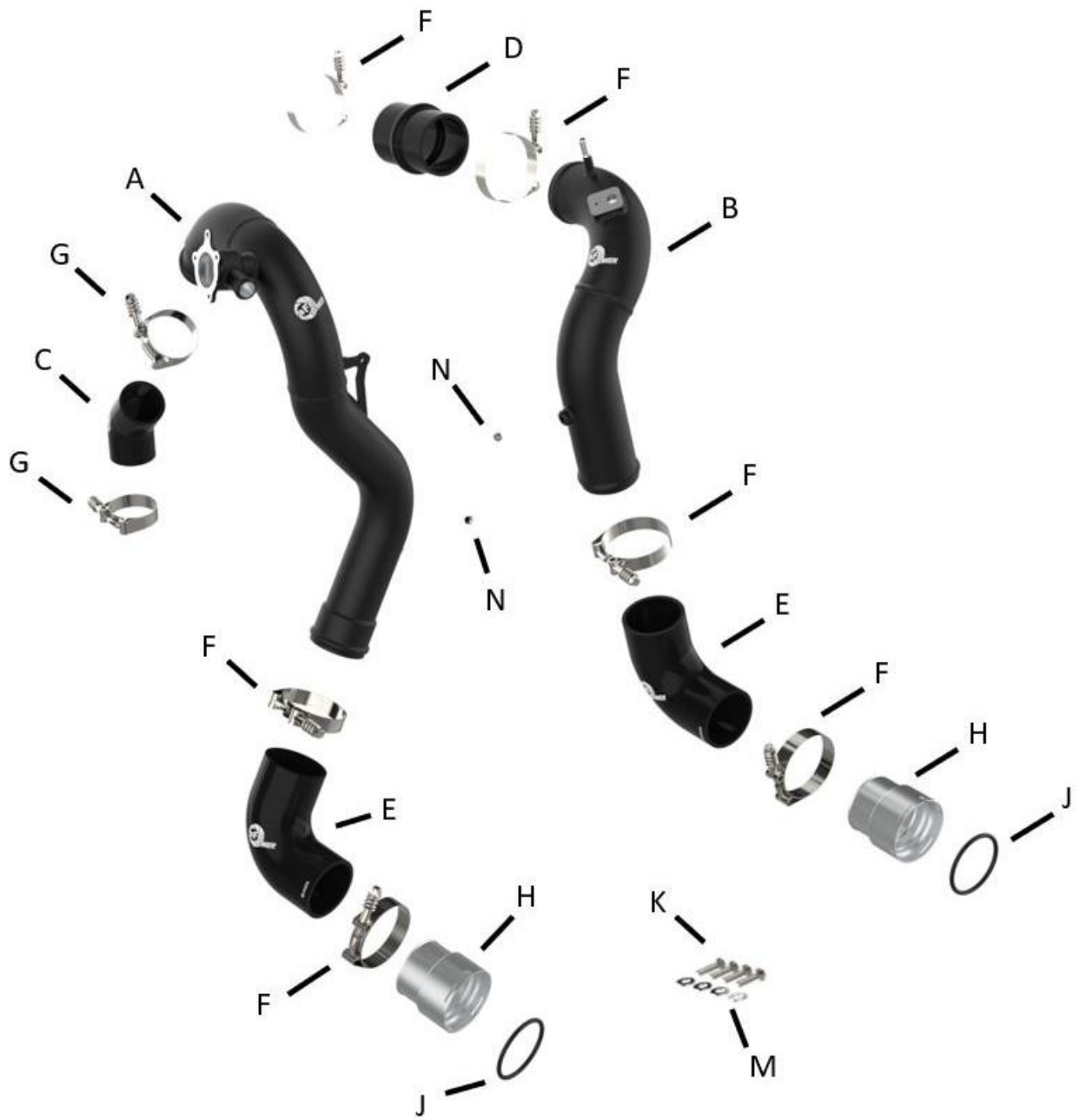
Label	Qty.	Description	Part Number
A	1	Tube, Hot Side: 46-2057X	05-61250B
B	1	Tube, Cold Side: 46-2057X	05-61251B
C	1	Coupling, Silicone Elbow: 2"ID x 45 Deg	05-60398
D	1	Coupling, Silicone Hump: 2-3/4"ID x 3"L	05-01220
E	2	Coupling, Silicone Elbow: 2.75" x 6"L 90Deg	05-61273
F	6	Clamp, Spring Loaded T-Bolt: (3" - 3.25") (ss)	05-60435
G	2	Clamp, Spring Loaded T-Bolt: (2.25" - 2.5") (ss)	03-50280
H	2	Adaptor, I/C: 46-2057X	05-61271
J	2	O-Ring, 66mm ID x 5mm W	05-61025
K	4	Screw, Socket Head Cap: M6x1.0x20, S/S	03-50241
M	4	Washer, M6 (12mm OD x 6.4mm ID)	03-50177
N	2	Plug, Hex Hd Socket: 1/8" NPT (Zn Plt)	03-50029

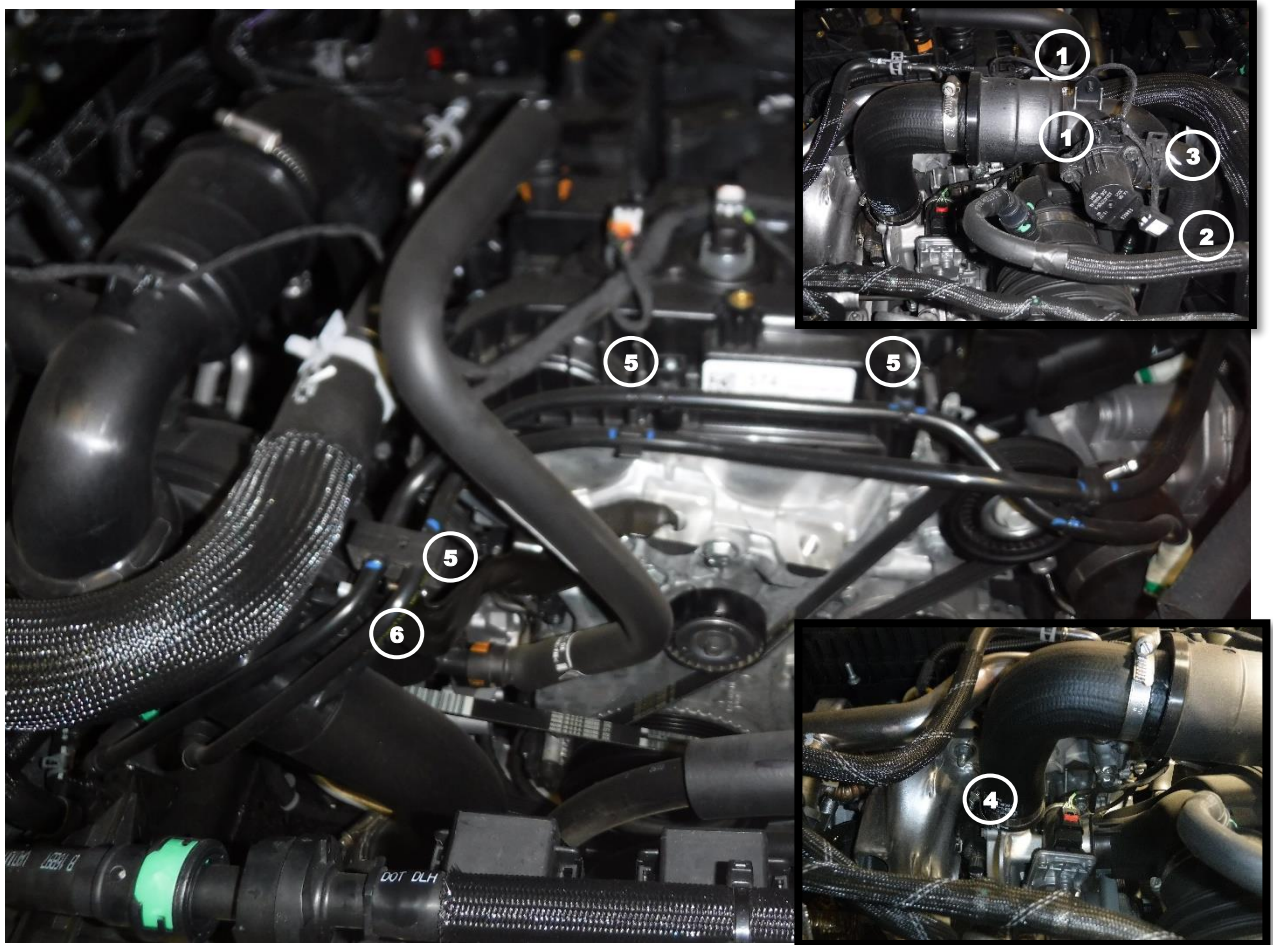
Installation will require the following tools:

8mm socket, 10mm socket, 15mm socket, 5mm allen wrench, 3/16" allen wrench, T30 Torx socket, 6" extension, ratchet, pick, flat head screwdriver, & thread sealant

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

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.

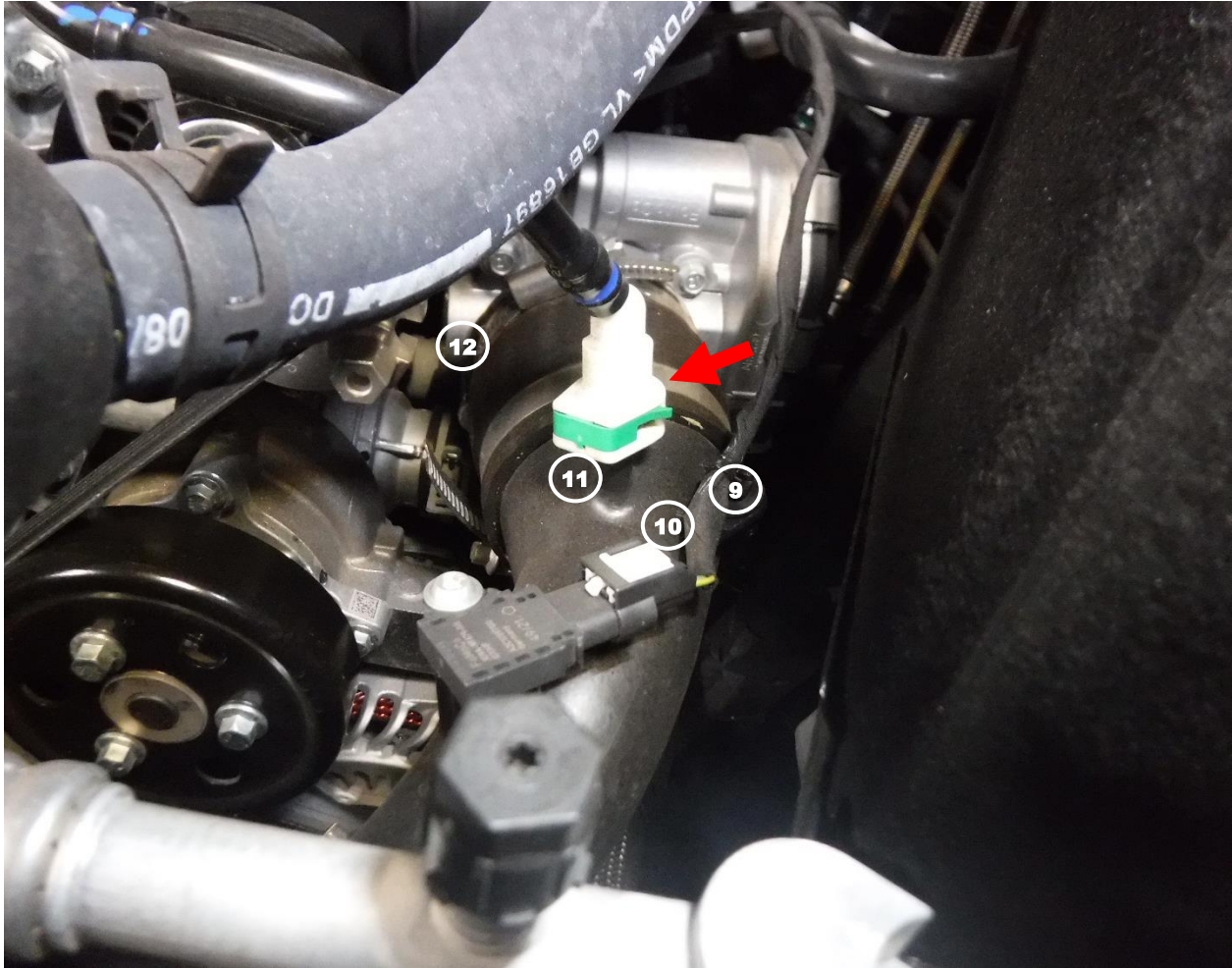




1. Park the vehicle on level ground and engage the parking brake.
2. Disconnect the negative battery cable.
3. Unclip the wire harness from the factory hot side charge pipe on the passenger side of the vehicle in two places (1).
4. Disconnect the bypass valve actuator connector on the hot side charge pipe (2) by sliding the security tab back then pressing the tab down and pulling it off the sensor.
5. Disconnect the bypass valve hose on the factory hot side charge pipe (3).
6. Loosen the clamp securing the hot side charge pipe coupling to the turbo (4).
7. Unclip the plastic crankcase breather tube from across the front of the valve cover and unclip it from the mounting bracket (5) by gently pulling them straight upwards.
8. Remove the screw securing the hot side charge pipe to the engine (6).



9. Underneath the vehicle loosen the two rearward screws securing the skid plate then remove the four remaining screws from the skid plate and remove it from the vehicle (7)
10. Release the factory retaining clip from the intercooler connection, for both hot and cold charge pipes, by pressing down on the clip to lock it in the open position on both sides (8)
11. Remove hot side charge pipe from the vehicle from the top.



12. Unclip the wire harness from the factory cold side charge pipe on the driver's side of the vehicle (9)
13. Disconnect the manifold pressure sensor connector by sliding the security tab back then pressing the tab down and pulling off of the sensor (10).
14. Disconnect the crankcase breather tube from the factory cold side charge pipe by removing the green retaining clip then depressing the release button on the opposing side then pulling upwards (11).
15. Loosen the clamp securing the cold side charge pipe coupling to the throttle body (12) then disconnect it from the throttle body.
16. Remove cold side charge pipe from the vehicle from the top.



Note: The retaining clips will need to be removed from both factory charge pipes for reuse with the aFe charge pipes.

17. Lift the two metal retainers up enough to slide the retaining clips out of the factory charge pipes and remove the clips (13)
18. Install the factory retaining clips onto the supplied aFe intercooler adaptors with the opening of the clips at the notch in the adaptors (14)

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

19. Install the supplied 66mm inner diameter x 5mm width O-rings into the groove on the inside of the aFe intercooler adaptors (15)



20. Remove the bypass valve actuator from the factory hot side charge pipe (16)
21. Install the factory bypass valve actuator onto the supplied aFe hot side charge pipe using the supplied M6x1.0x20mm screws and M6 washers (17)

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

22. If you are not using any aftermarket sensors, install the supplied 1/8" NPT plug (18) into the threaded fitting on the aFe hot side charge pipe.
23. Install the supplied 2"x 45Deg coupling along with one 2.25" - 2.5" spring loaded T-Bolt clamp onto the smaller end of the aFe hot side charge pipe (19) do not tighten the clamp yet.



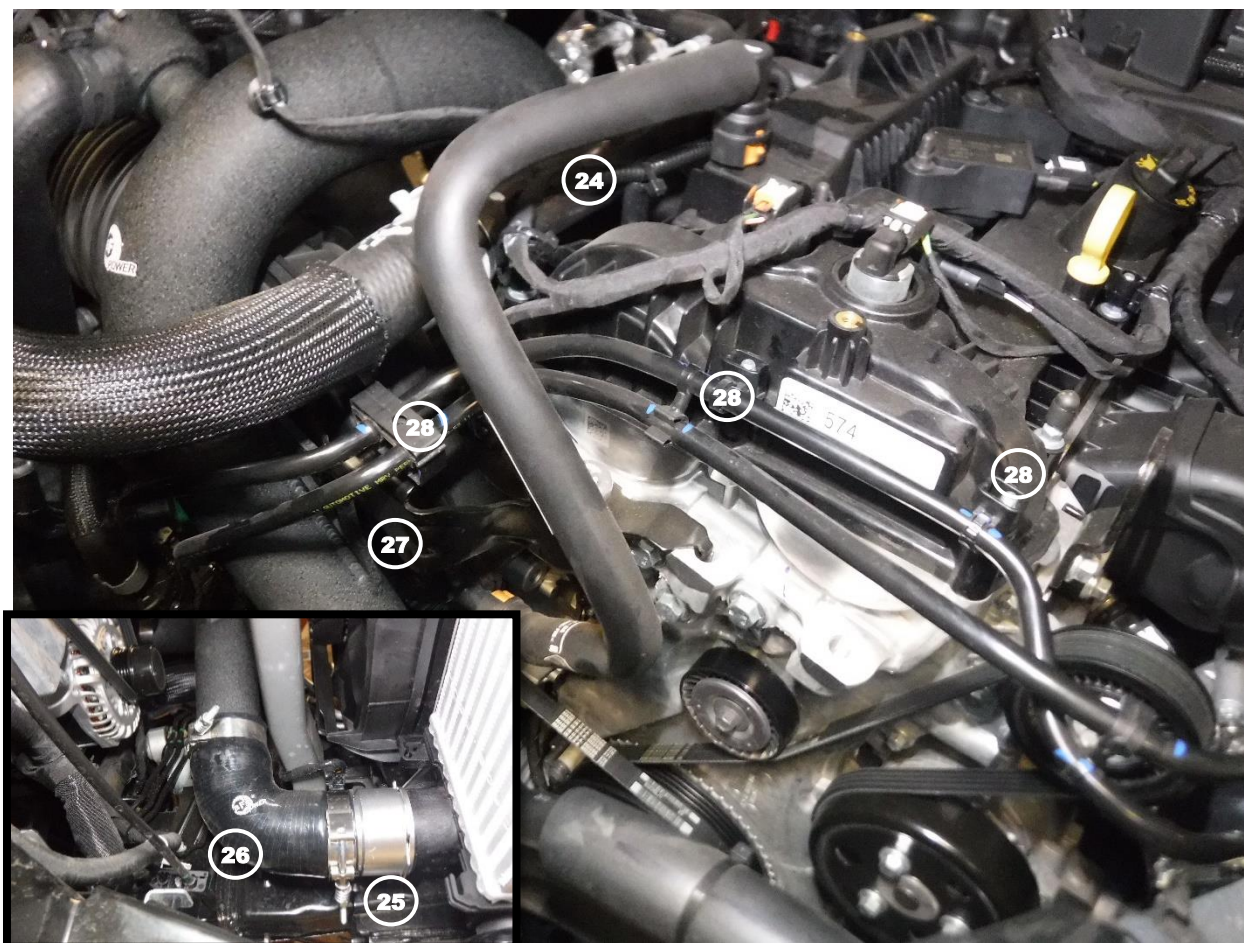
24. Remove the manifold pressure sensor from the factory cold side charge pipe (20)

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

25. Install the factory manifold pressure sensor onto the supplied aFe cold side charge pipe using the supplied M6x1.0x20mm screw and M6 washer (21)

Note: Be sure to use thread sealant on the plugs or sensors to prevent any leaking.

26. If you are not using any aftermarket sensors, install the 1/8" NPT plug (22) into the threaded fitting on the cold side aFe charge pipe.
27. Install the supplied 2-3/4" ID x 3" L silicone hump coupling along with one 3" – 3.25" spring loaded T-Bolt clamp onto the short end of the aFe cold side charge pipe (23) do not tighten the clamp yet.

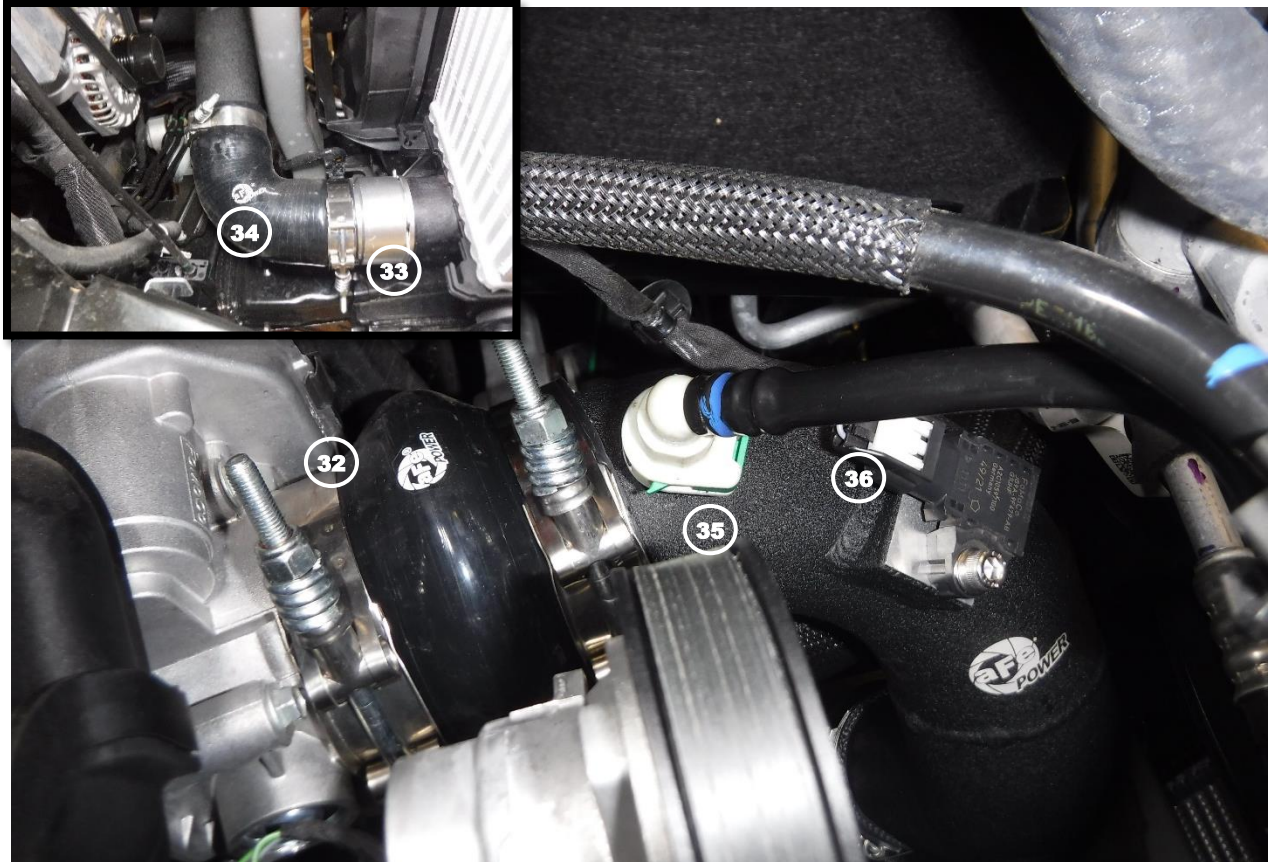


Note: Be sure to thoroughly clean all oil residue off of the connections before installing any of the aFe couplings onto the vehicle.

28. Install the aFe hot side charge pipe assembly into the vehicle along with one 2.25" - 2.5" spring loaded T-Bolt clamp on the turbo side (24) do not tighten the clamps yet.
29. Install one of the aFe intercooler adaptors onto the intercooler on the passenger side. Line up the notch on the adaptor with the notch on the intercooler, and ensure the retaining clip snaps into the intercooler all of the way around (25).
30. Install one of the supplied aFe silicone elbow couplings 2.75"x 90Deg and two of the supplied 3" – 3.25" spring loaded T-Bolt clamps between the aFe hot side charge pipe and the intercooler adaptor (26) do not tighten the clamps yet.
31. Install the factory mounting screw securing the aFe hot side charge pipe to the engine (27)
32. Reconnect the crank case breather tube to the valve cover and its mounting bracket (28)

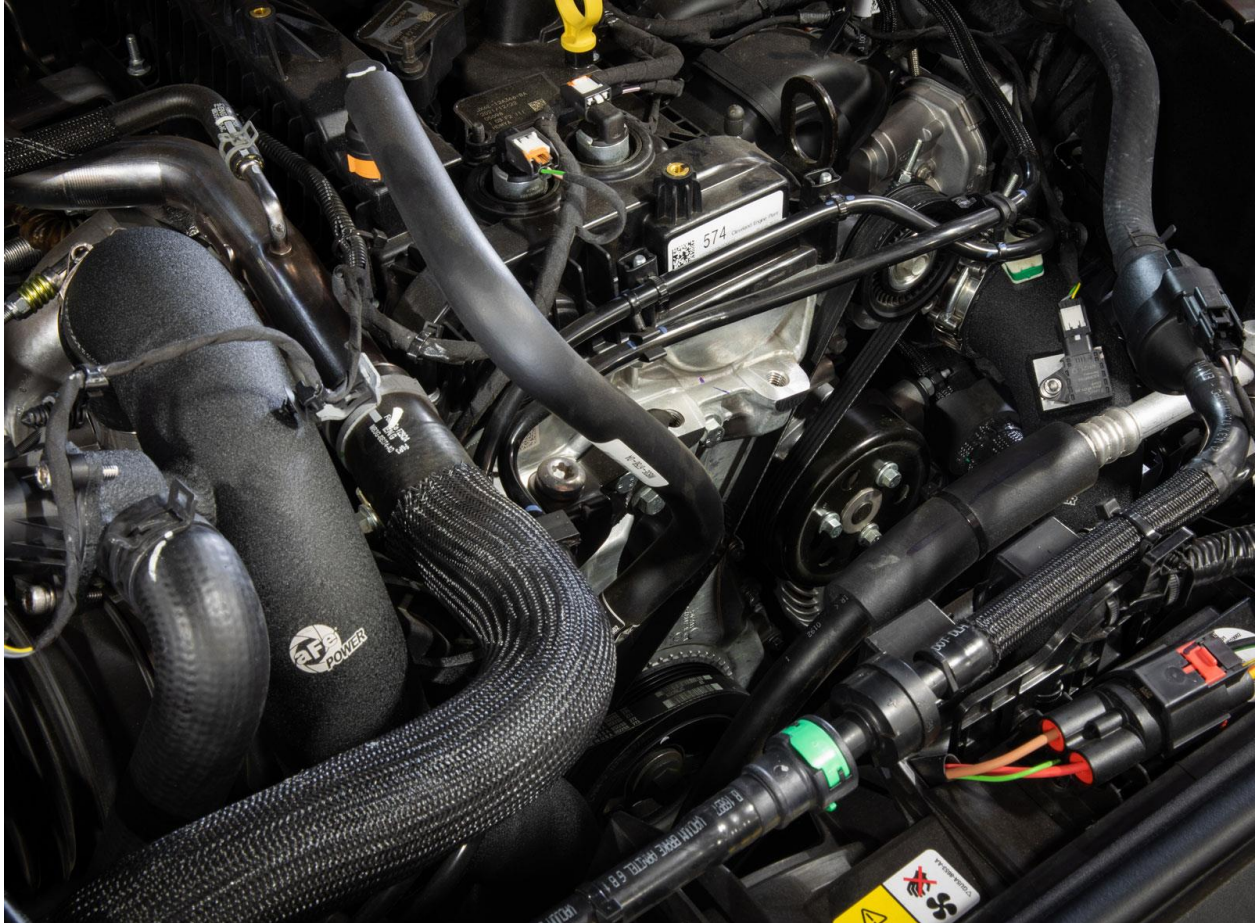


33. Reconnect the bypass valve actuator connector on the aFe hot side charge pipe (29).
34. Reclip the wire harness onto the aFe hot side charge pipe (30).
35. Install the factory bypass valve hose onto the aFe hot side charge pipe (31).
36. Ensure the aFe hot side charge pipe is not touching anything.
37. Tighten all clamps for the aFe hot side charge pipe.



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

38. Install the aFe cold side charge pipe assembly into the vehicle along with one 3" – 3.25" spring loaded T-Bolt clamp on the throttle body (32) do not tighten the clamps yet.
39. Install the aFe intercooler adaptor onto the intercooler. Line up the notch on the adaptor with the notch on the intercooler, and ensure the retaining clip snaps into the intercooler all of the way around (33)
40. Install the aFe silicone elbow coupling 2.75"x 90Deg and two of the 3" – 3.25" spring loaded T-Bolt clamps between the aFe cold side charge pipe and the intercooler adaptor (34) do not tighten the clamps yet.
41. Connect crankcase breather tube to the aFe cold side charge pipe and install the green retaining clip (35)
42. Reconnect the MAP sensor connector and lock the security tab (36)



43. Ensure the aFe cold side charge pipe is not touching anything.
44. Tighten all clamps for the aFe cold side charge pipe.
45. Reconnect the negative battery cable.
46. Install is now complete.

Note: Be sure to check all connections after 50-100 miles.

This Page Was Left Intentionally Blank

This Page Was Left Intentionally Blank



advanced FLOW engineering, inc.

252 Granite Street Corona, CA 92879

TEL: 951.493.7100 • TECH: 951.493.7100 x23

E-Mail: Tech@aFepower.com