



***advanced FLOW engineering***

**Instruction Manual P/N: 46-20588-B**

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**BladeRunner – Hot Side Charge Pipe Kit**

Make: **Ford**

Model: **Bronco**

Year: **2021-2024**

Engine: **V6 – 2.7L(tt)**



- 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.

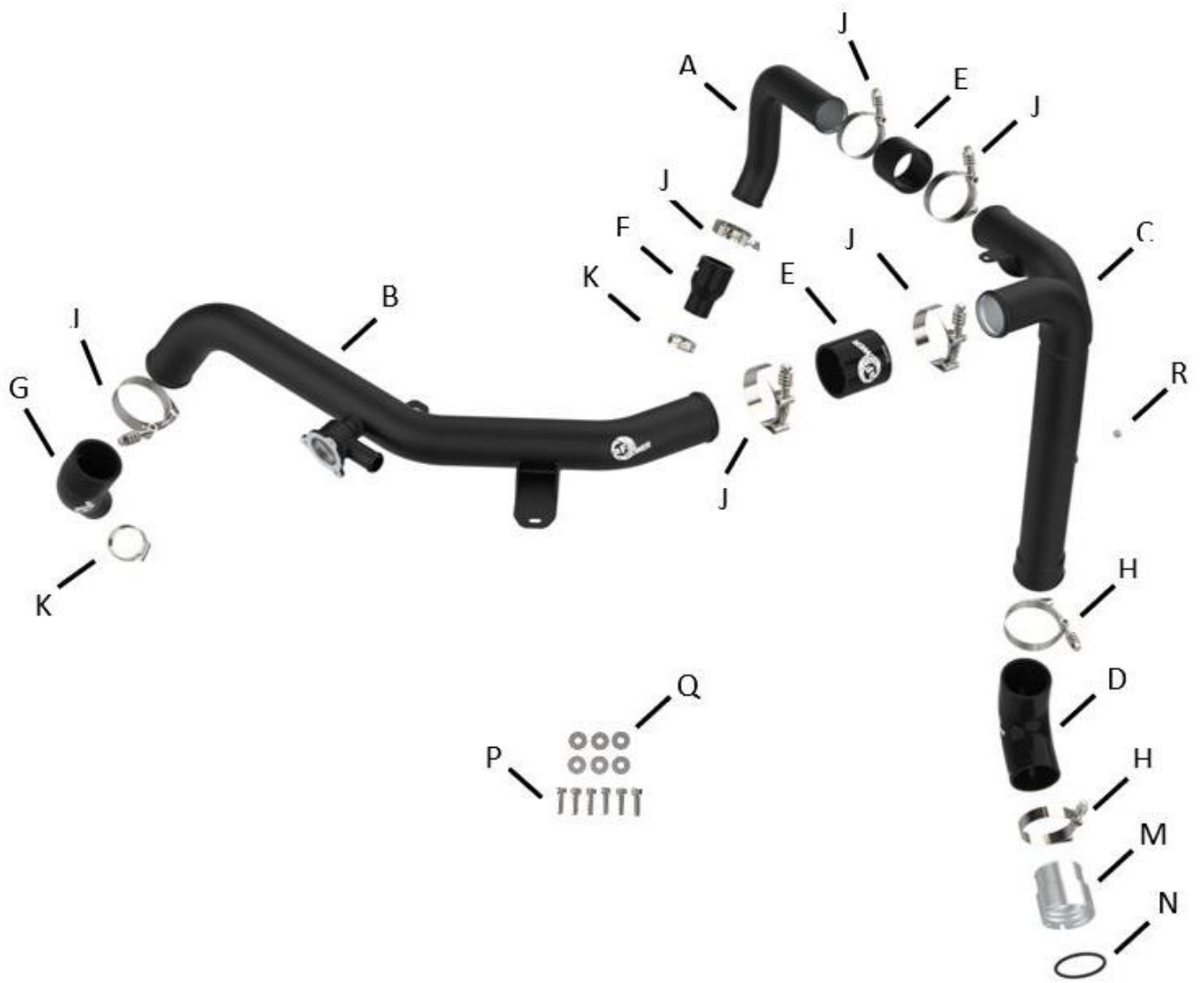
Label	Qty.	Description	Part Number
A	1	Tube, DS Hot Side: 46-2058X	05-61255B
B	1	Tube, PS Hot Side: 46-2058X	05-61256B
C	1	Tube, Hot Side Lower: 46-2058X	05-61257B
D	1	Coupling, Silicone Elbow: 2.75" x 6"L 90Deg	05-61273
E	2	Coupling, Silicone Straight: 2.25"ID x 3"L	05-01242
F	1	Coupling, Silicone Reducer: (2.25" x 1.5")ID x 4"L	05-61274
G	1	Coupling, Silicone Rdr Elbow 2.25" x 1.5" 45Deg	05-61275
H	2	Clamp, Spring Loaded T-Bolt: (3" - 3.25") (ss)	05-60435
J	6	Clamp, Spring Loaded T-Bolt: (2.5" - 2.75") (ss)	03-50560
K	2	Clamp, SmartSeal, 032 (1.94" – 2.31")	03-50655
M	1	Adaptor, I/C: 46-2057X	05-61271
N	1	O-Ring, 66mm ID x 5mm W	05-61025
P	6	Screw, Socket Head Cap: M6x1.0x20, (ss)	03-50241
Q	6	Washer, M6 (12mm OD x 6.4mm ID)	03-50177
R	1	Plug, Hex Hd Socket: 1/8" NPT (Zn Plt)	03-50029

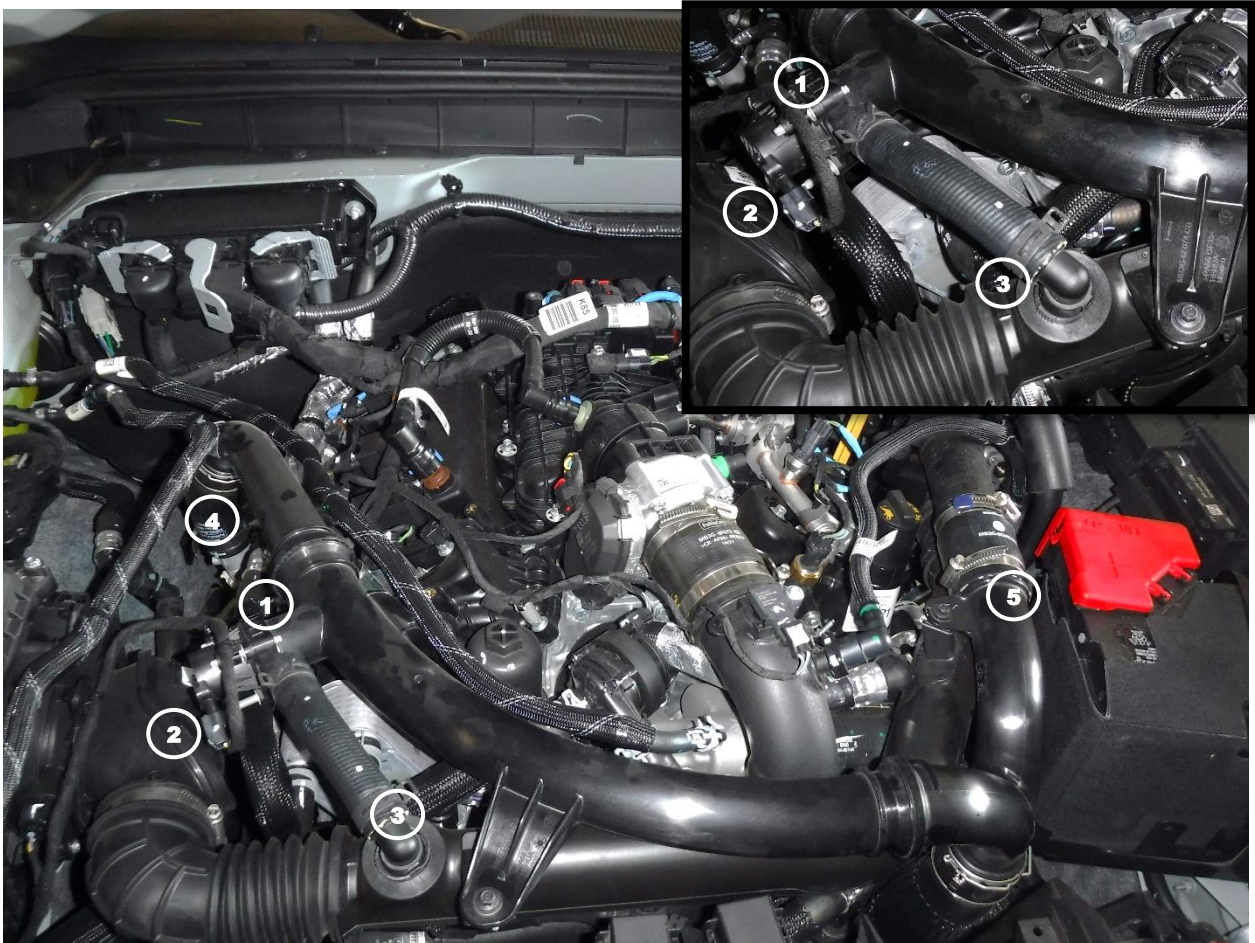
### Installation will require the following tools:

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

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

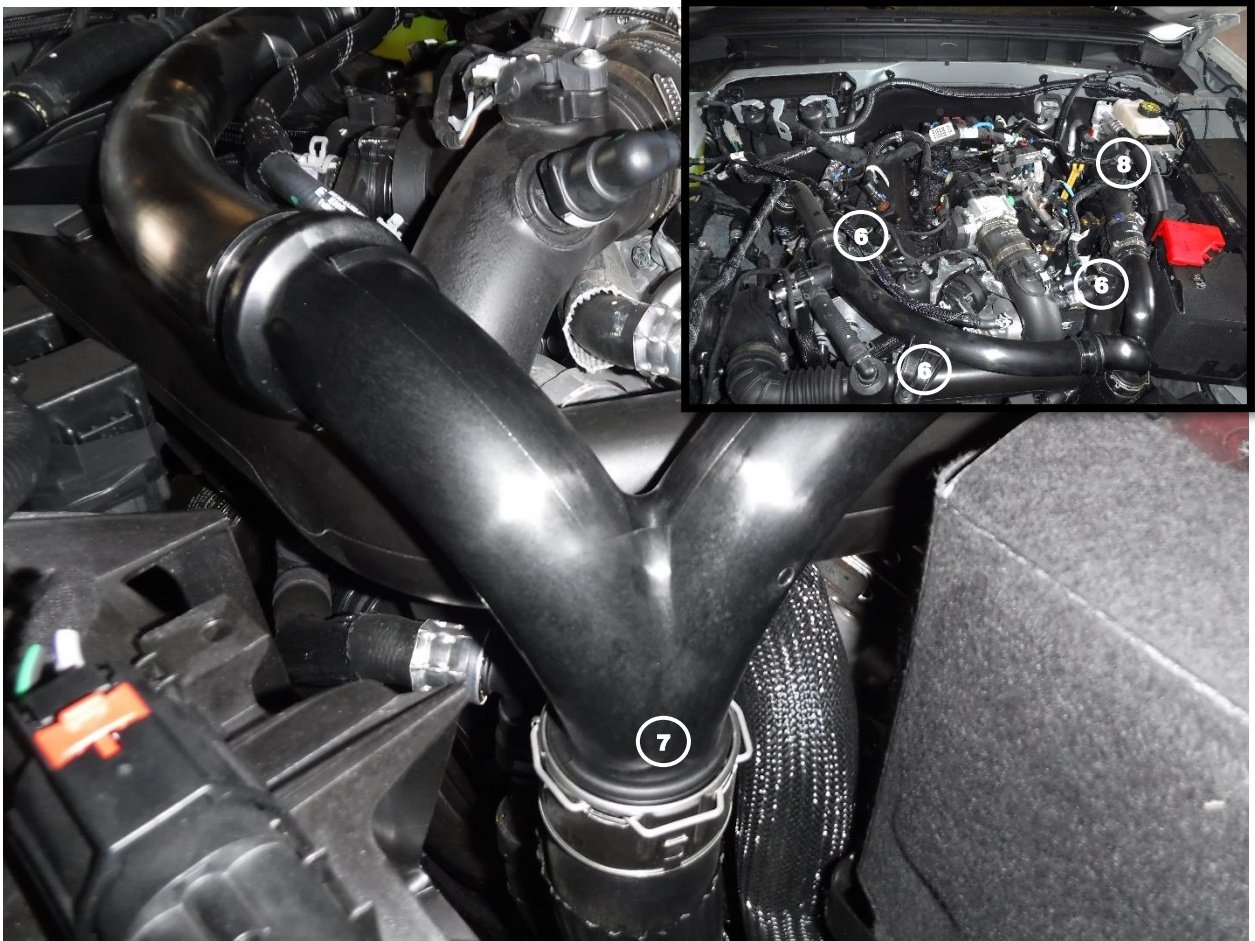
**Note: Legal in California for use on race vehicles only. The use of this device on vehicles used on public streets or highways is strictly prohibited in California and others states that have adopted California emission regulations.**



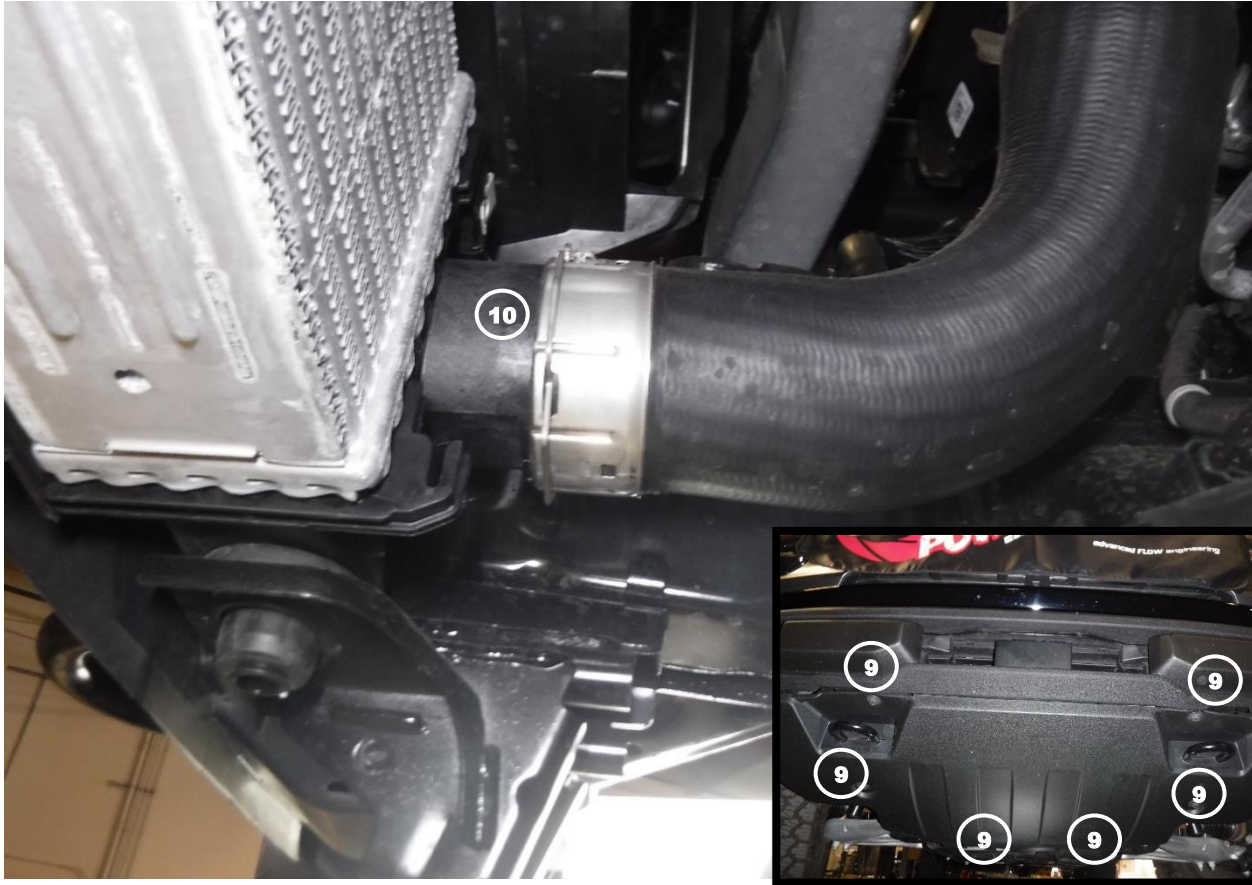


1. Park the vehicle on level ground and engage the parking brake.
2. Disconnect the negative battery cable.
3. Unclip the wire harness from the factory hot side charge pipe on the passenger side of the vehicle (1).
4. Disconnect the bypass valve actuator connector on the hot side charge pipe (2) by sliding the security tab back then pressing the tab down and pulling it off the sensor.
5. Disconnect the bypass valve hose on the factory air intake tube (3) by squeezing the ribbed features and pulling upwards on it.
6. Loosen the clamp securing the passenger hot side charge pipe coupling to the turbo (4).
7. Loosen the clamp securing the passenger hot side charge pipe coupling to the driver side hot charge pipe (5).





8. Remove the three screws securing the hot side charge pipe to the vehicle⑥
9. Release the factory retaining clip securing the hot side charge pipe connection together by sliding the clip back to lock it in the open position⑦.
10. Remove the passenger side and y-merge portion of the hot side charge pipe from the vehicle.
11. Loosen the clamp securing the driver's side hot charge pipe coupling to the turbo⑧
12. Remove the driver's side hot charge pipe from the vehicle.



13. 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 (9)
14. Release the factory retaining clip from the intercooler connection on the driver's side of the vehicle for the hot side charge pipe (10) and disconnect it from the intercooler.
15. Remove the lower half of the hot side charge pipe from the vehicle from the bottom.



**Note: The retaining clip at the intercooler side of the charge pipe will need to be removed for reuse with the aFe charge pipe.**

16. Lift the two metal retainers up enough to slide the retaining clip out of the factory charge pipe and remove the clip (11)
17. Install the factory retaining clip onto the supplied aFe intercooler adaptor with the opening of the clip at the notch in the adaptor (12)

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

18. Install the supplied 66mm inner diameter x 5mm width O-ring into the groove on the inside of the aFe intercooler adaptor (13)



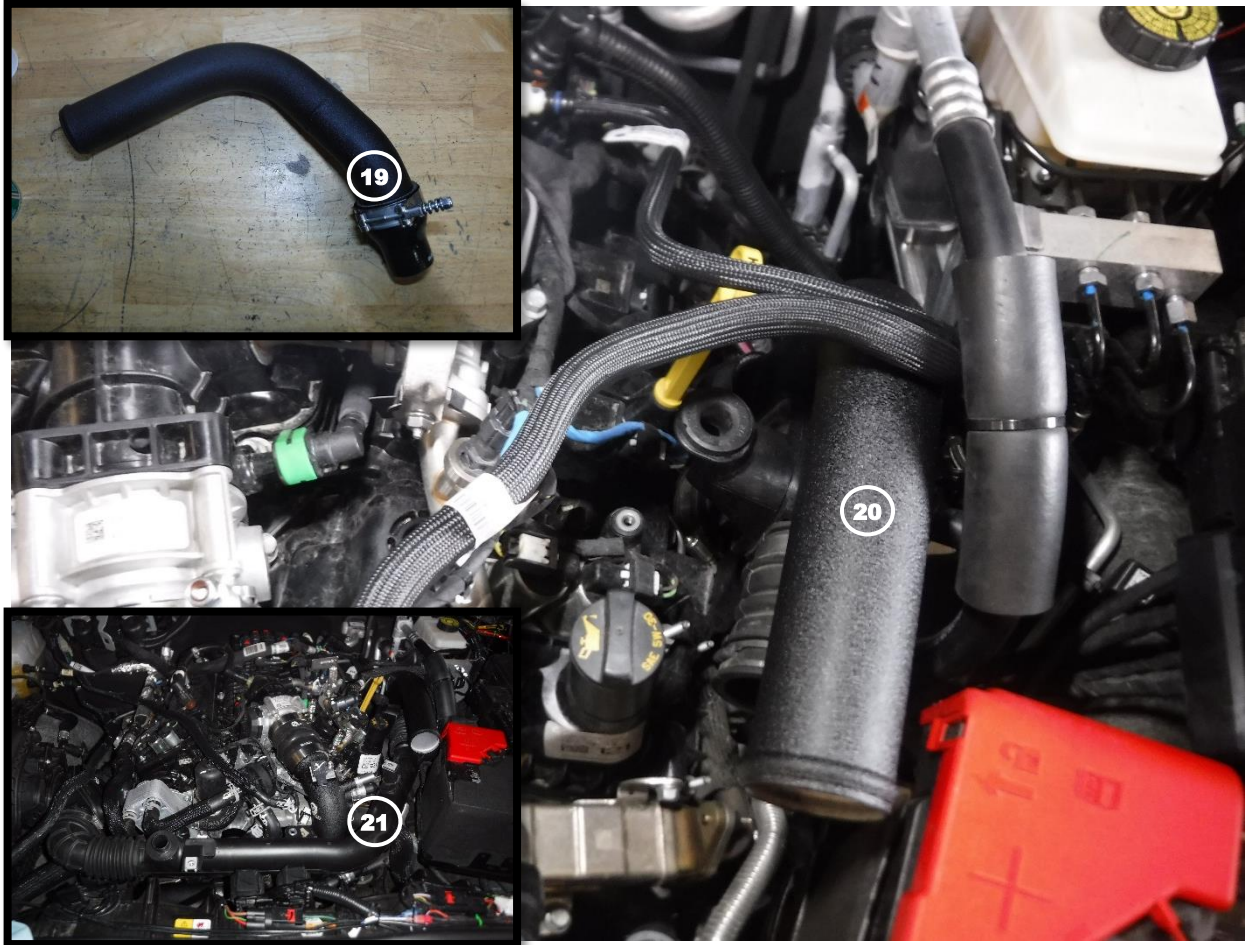


19. Remove the bypass valve actuator and hose from the factory hot side charge pipe 14
20. Install the factory bypass valve actuator and hose onto the supplied aFe passenger hot side charge pipe using the supplied M6x1.0x20mm screws, M6 washers, and factory clamp 15
21. Install the supplied 2.25"x1.50"x 45Deg reducer coupling along with one 2.25" - 2.5" spring loaded T-Bolt clamp onto the longer end of the aFe passenger hot side charge pipe 16 do not tighten the clamp yet.
22. Install the supplied 2.25"x3"L straight coupling along with one 2.25" - 2.5" spring loaded T-Bolt clamp onto the shorter end of the aFe passenger hot side charge pipe 17 do not tighten the clamp yet.

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

23. If you are not using any aftermarket sensors, install the supplied 1/8" NPT plug 18 into the threaded fitting on the aFe lower 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.**

24. Install the supplied aFe silicone reducer coupling 2.25"x1.50"x 4"L and one supplied 2.50" – 2.75" spring loaded T-Bolt clamp onto the shorter end of the supplied aFe driver's hot side charge pipe (19) do not tighten the clamps yet.
25. Install the aFe driver's hot side charge pipe into the vehicle (20) along with one supplied SmartSeal 032 (1.94" – 2.31" ) clamp, do not tighten the clamp yet.
26. Install the factory driver's side air intake tube back into the vehicle (21) do not tighten the clamps yet.

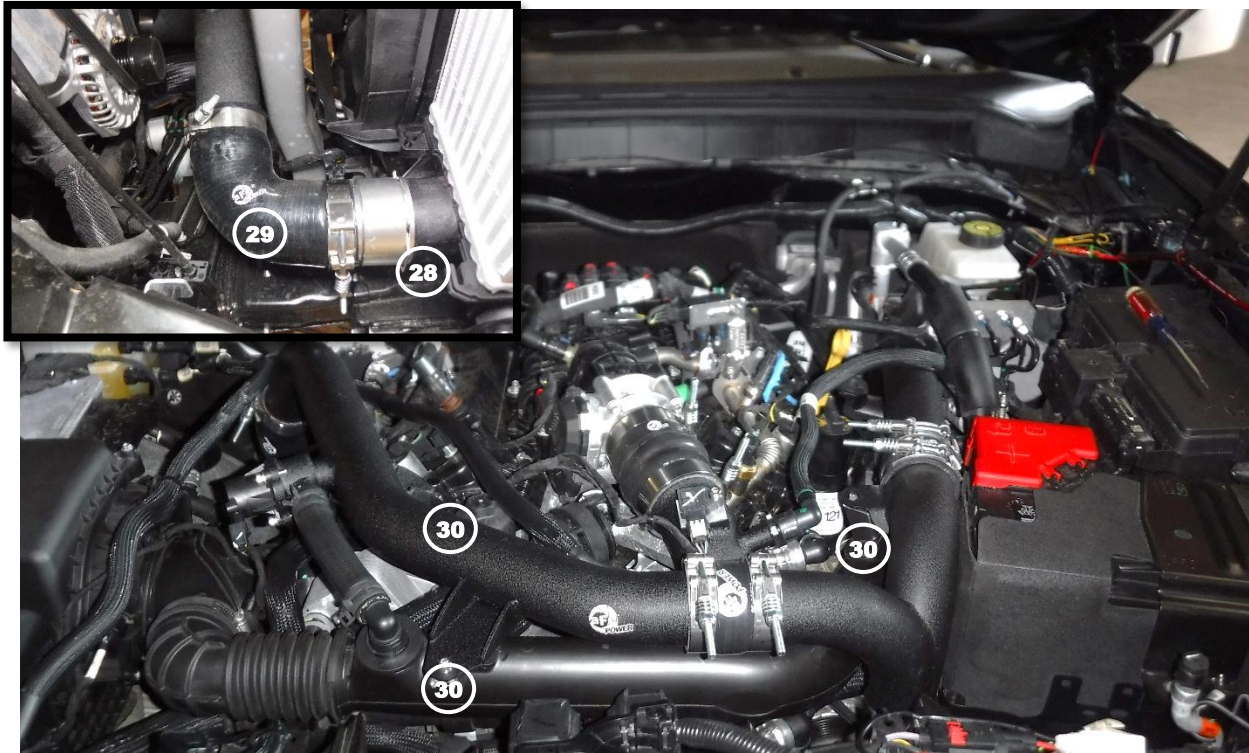


27. Install one aFe silicone straight coupling 2.25"x 3"L and one 2.50" – 2.75" spring loaded T-Bolt clamp onto the side of the aFe lower hot side charge pipe with the mounting bracket (22) do not tighten the clamps yet.
28. Install the aFe lower hot side charge pipe into the vehicle (23) connecting the coupling from the previous step to the aFe driver's hot side charge pipe along with one 2.50" – 2.75" spring loaded T-Bolt clamp, do not tighten the clamp yet.
29. Install the aFe passenger hot side charge pipe into the vehicle (24) connecting the straight coupling to the aFe lower hot side charge pipe, along with one 2.50" – 2.75" spring loaded T-Bolt clamp, do not tighten the clamp yet.
30. Connect the opposite end of the aFe passenger hot side charge pipe to the turbo outlet (25) along with one SmartSeal 032 (1.94" – 2.31" ) clamp, do not tighten the clamp yet.
31. Reconnect the bypass valve actuator connector on the aFe hot side charge pipe (26) be sure to lock the security tab.





32. Reconnect the bypass valve recirculation hose to the air intake tube 27, ensure it snaps into place.



33. Install the aFe intercooler adaptor onto the intercooler on the driver's side of the vehicle. 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 (28).
34. Install the aFe silicone elbow coupling 2.75"x 90Deg and two 3" – 3.25" spring loaded T-Bolt clamps into the vehicle connecting the adaptor from the previous step and aFe lower hot side charge pipe (29) do not tighten the clamp yet.
35. Adjust all of the aFe charge pipes so they are not touching anything and lined up with the mounting holes on the vehicle.
36. Secure the aFe hot side charge pipes to the vehicle using three of the M6 x 1 x 20mm and M6 washers (30).
37. Tighten all of the clamps on the aFe charge pipes and the air intake tube.
38. Reinstall the skid plate onto the vehicle.
39. Reconnect the negative battery cable.
40. Install is now complete.

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



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