



advanced FLOW engineering

Instruction Manual P/N: 46-20584-B

BladeRunner – Charge Pipe Combo Kit

Make: **Ford**

Model: **Bronco**

Year: **2021+**

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.

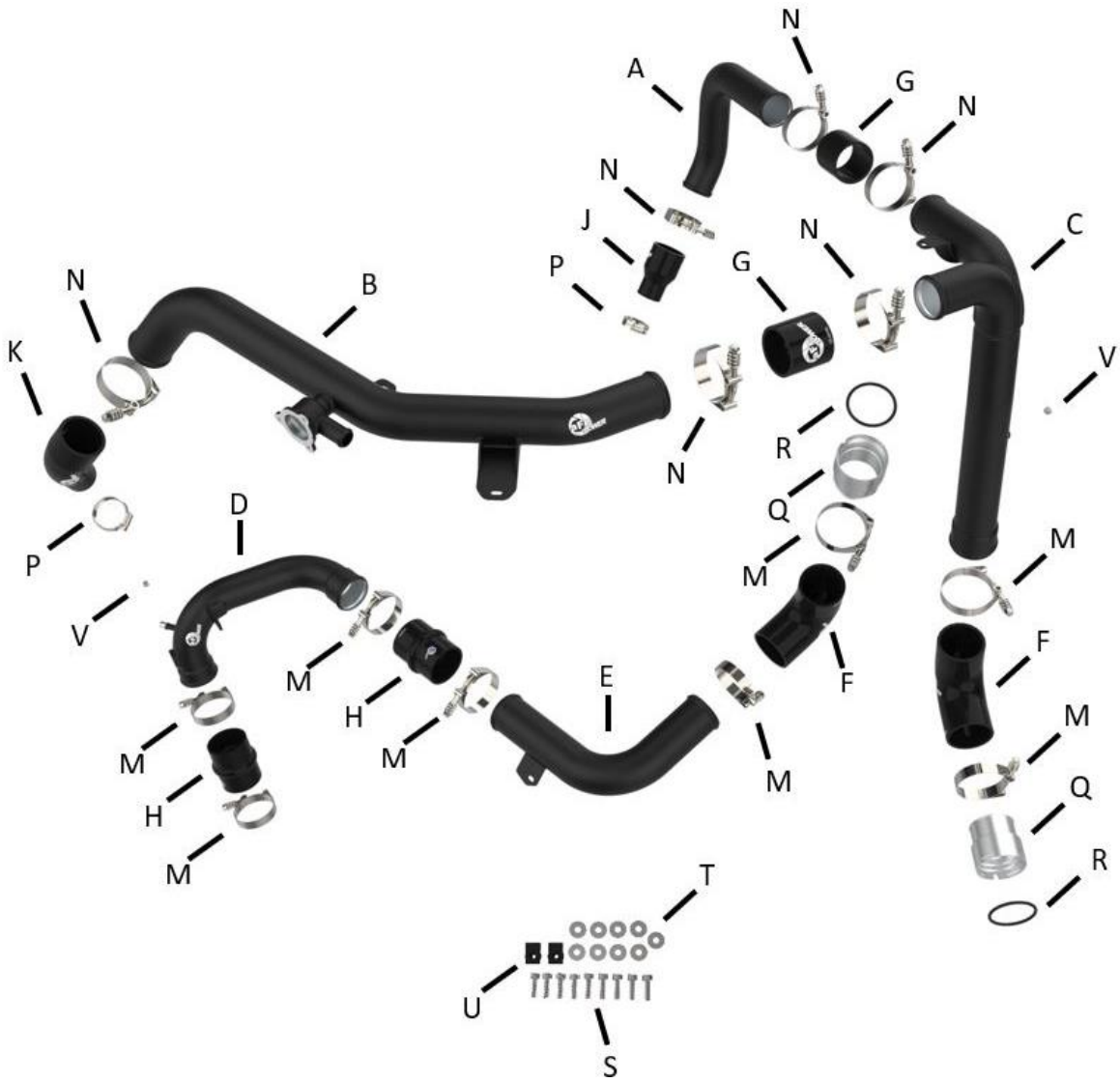
Label	Qty.	Description	Part Number
A	1	Tube, DS Hot Side: 46-2058X	05-61255B
B	1	Tube, PS Hot Side: 46-2058X	05-61256B
C	1	Tube, Hot Side Lower: 46-2058X	05-61257B
D	1	Tube, Cold Side Upper: 46-2058X	05-61258B
E	1	Tube, Cold Side Lower: 46-2058X	05-61259B
F	2	Coupling, Silicone Elbow: 2.75" x 6"L 90Deg	05-61273
G	2	Coupling, Silicone Straight: 2.25"ID x 3"L	05-01242
H	2	Coupling, Silicone Hump: 2.75"ID x 4"L	05-60216
J	1	Coupling, Silicone Reducer: (2.25" x 1.5")ID x 4"L	05-61274
K	1	Coupling, Silicone Rdr Elbow 2.25" x 1.5" 45Deg	05-61275
M	8	Clamp, Spring Loaded T-Bolt: (3" - 3.25") (ss)	05-60435
N	6	Clamp, Spring Loaded T-Bolt: (2.5" - 2.75") (ss)	03-50560
P	2	Clamp, SmartSeal, 032 (1.94" – 2.31")	03-50655
Q	2	Adaptor, I/C: 46-2057X	05-61271
R	2	O-Ring, 66mm ID x 5mm W	05-61025
S	9	Screw, Socket Head Cap: M6x1.0x20, (ss)	03-50241
T	9	Washer, M6 (12mm OD x 6.4mm ID)	03-50177
U	2	Clip Nut, M6	03-50414
V	2	Plug, Hex Hd Socket: 1/8" NPT (Zn Plt)	03-50029

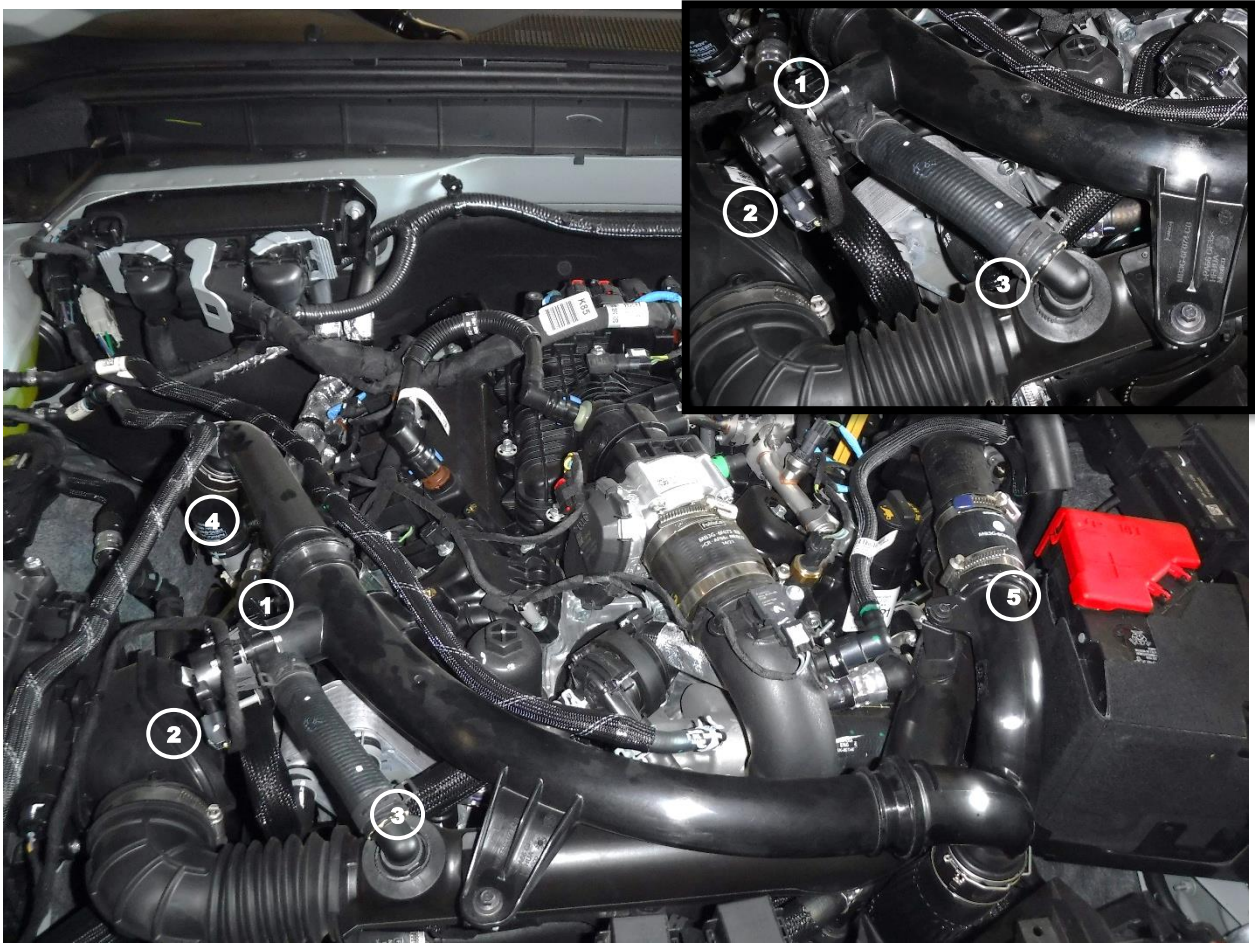
Installation will require the following tools:

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

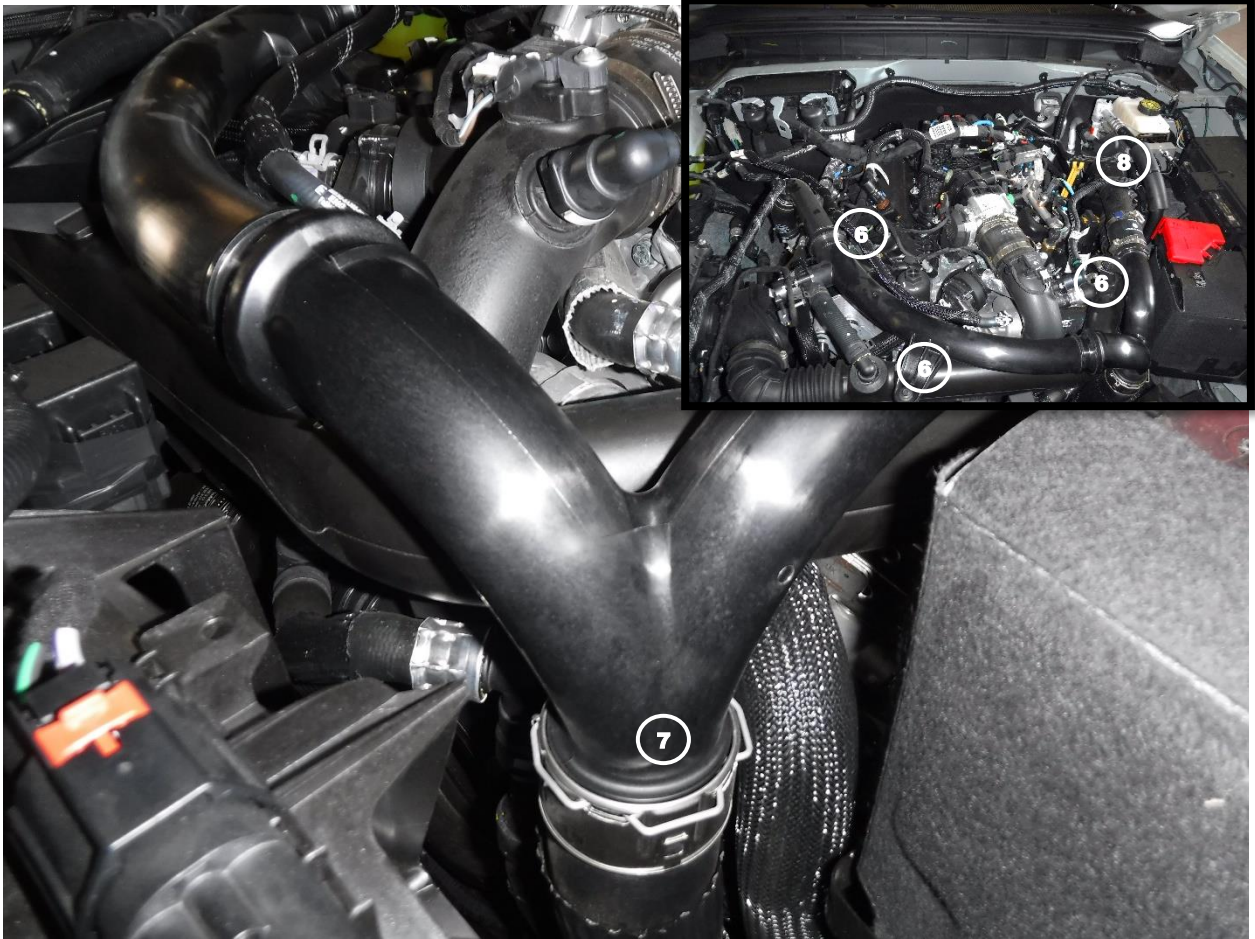
Warranty Information available at <https://afepower.com/contact#warranty>

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.

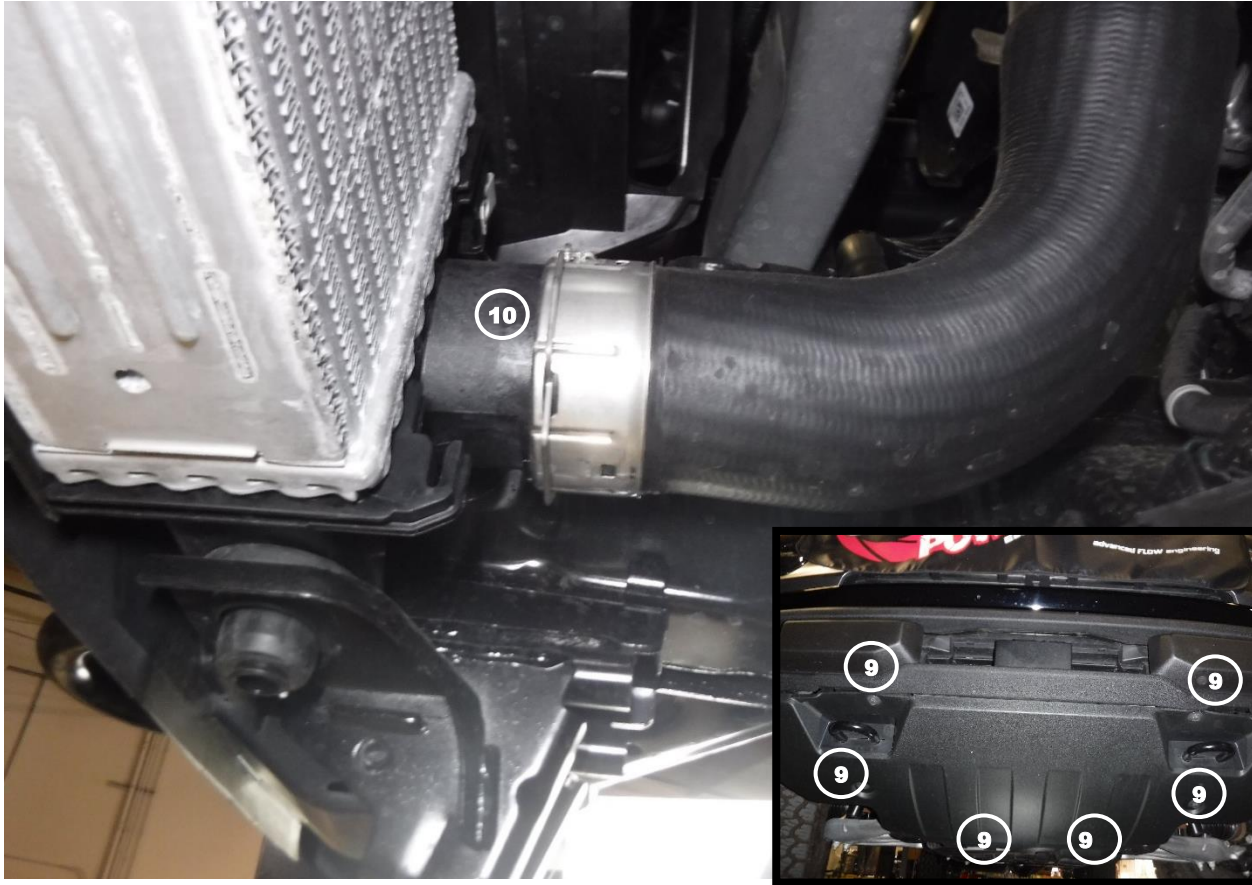




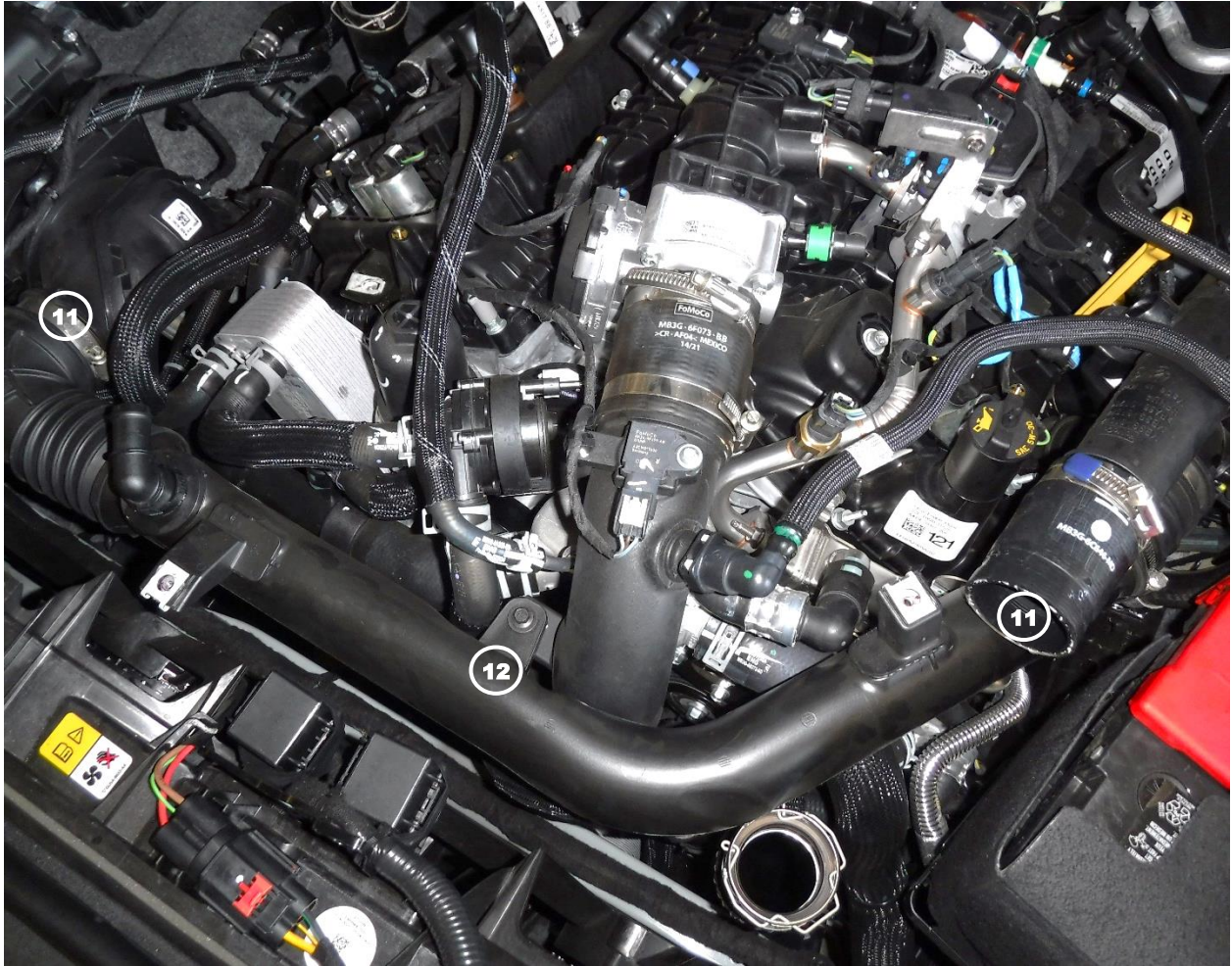
1. Park the vehicle on level ground and engage the parking brake.
2. Disconnect the negative battery cable.
3. Unclip the wire harness from the factory hot side charge pipe on the passenger side of the vehicle in two places (1)
4. Disconnect the bypass valve actuator connector on the hot side charge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



8. Remove the three screws securing the hot side charge pipe to the engine (6).
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 position (7).
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 turbo (8).
12. Remove the driver's side hot charge pipe from the vehicle.



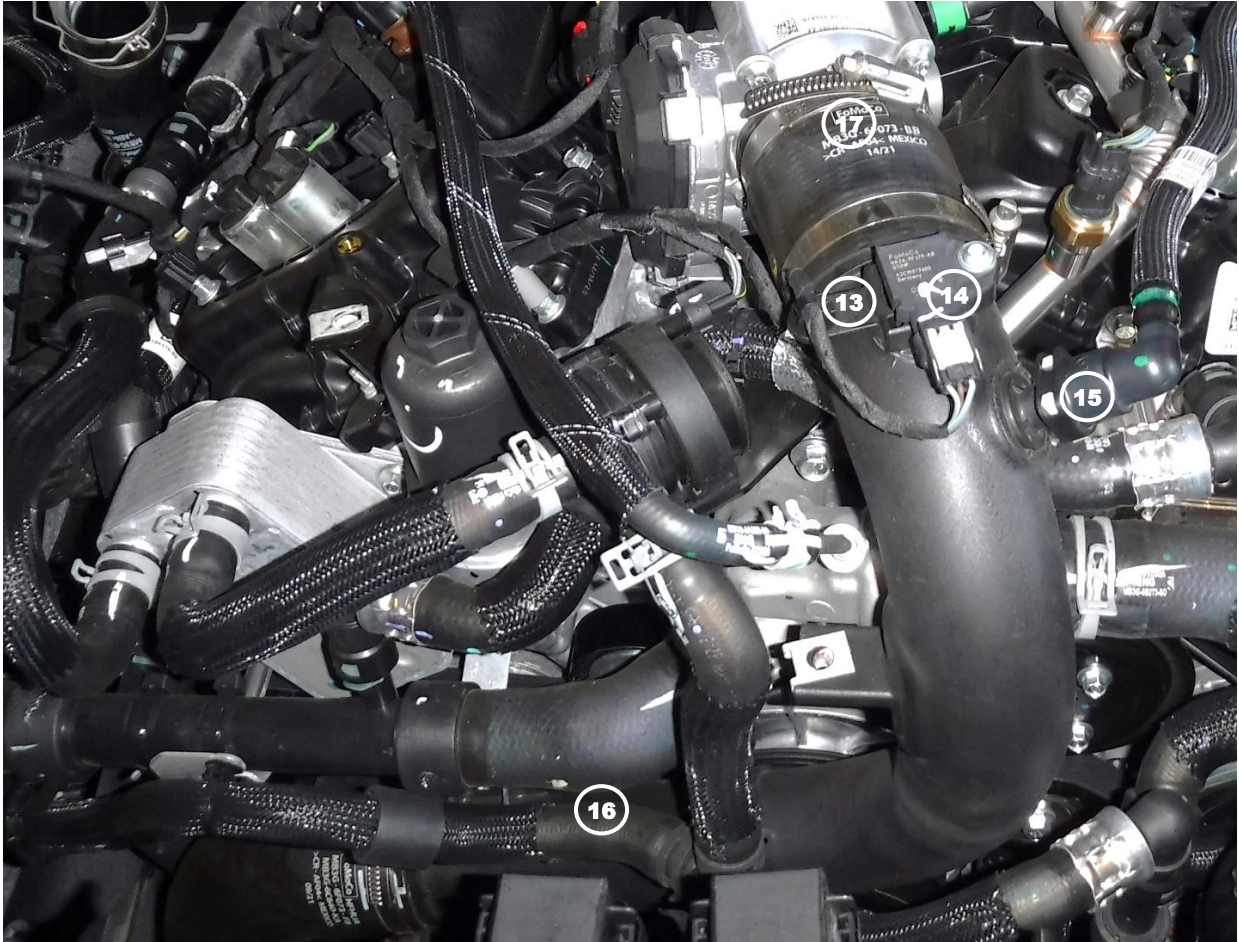
13. Underneath the vehicle loosen the two rearward screws securing the skid plate then remove the four remaining screws from the skid plate and remove it from the vehicle (9)
14. Release the factory retaining clips from the intercooler connection for both hot and cold charge pipes (10) and disconnect them from the intercooler.
15. Remove the lower half of the hot side charge pipe from the vehicle from the bottom.



16. Loosen the two clamps securing the air intake tube from the air box to the driver's side turbo (11).

17. Remove the screw securing the driver's side air intake tube to the cold side charge pipe (12)

18. Remove the driver's side air intake tube from the vehicle.



19. Unclip the wire harness from the factory cold side charge pipe (13)
20. Disconnect the MAP sensor from the cold side charge pipe (14)
21. Disconnect the crankcase breather tube from the cold side charge pipe by pressing the white button in and pulling it off (15)
22. Remove the bolt and nut securing the cold side charge pipe to the bracket on the engine (16)
23. Loosen the clamp securing the cold side charge pipe to the throttle body (17)
24. Remove the cold side charge pipe from the vehicle.



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

25. Lift the two metal retainers up enough to slide the retaining clips out of the factory charge pipes and remove the clips (18).
26. Install the factory retaining clips onto the supplied aFe intercooler adaptors with the opening of the clips at the notch in the adaptors (19)

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

27. Install the supplied 66mm inner diameter x 5mm width O-rings into the groove on the inside of the aFe intercooler adaptors (20)



28. Remove the bypass valve actuator from the factory hot side charge pipe (21)
29. Install the factory bypass valve actuator onto the supplied aFe passenger hot side charge pipe using the supplied M6x1.0x20mm screws and M6 washers (22)
30. 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 (23) do not tighten the clamp yet.
31. 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 (24) do not tighten the clamp yet.

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

32. If you are not using any aftermarket sensors, install the supplied 1/8" NPT plug (25) into the threaded fitting on the aFe lower hot side charge pipe.



33. Remove the MAP sensor from the factory cold side charge pipe (26)

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

34. Install the factory MAP sensor onto the supplied aFe upper cold side charge pipe using the supplied M6x1.0x20mm screw and M6 washer (27)

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

35. If you are not using any aftermarket sensors, install the 1/8" NPT plug (28) into the threaded fitting on the cold side aFe charge pipe.

36. Install the supplied M6x1 clip nut onto the mounting bracket on the aFe upper cold side charge pipe (29)

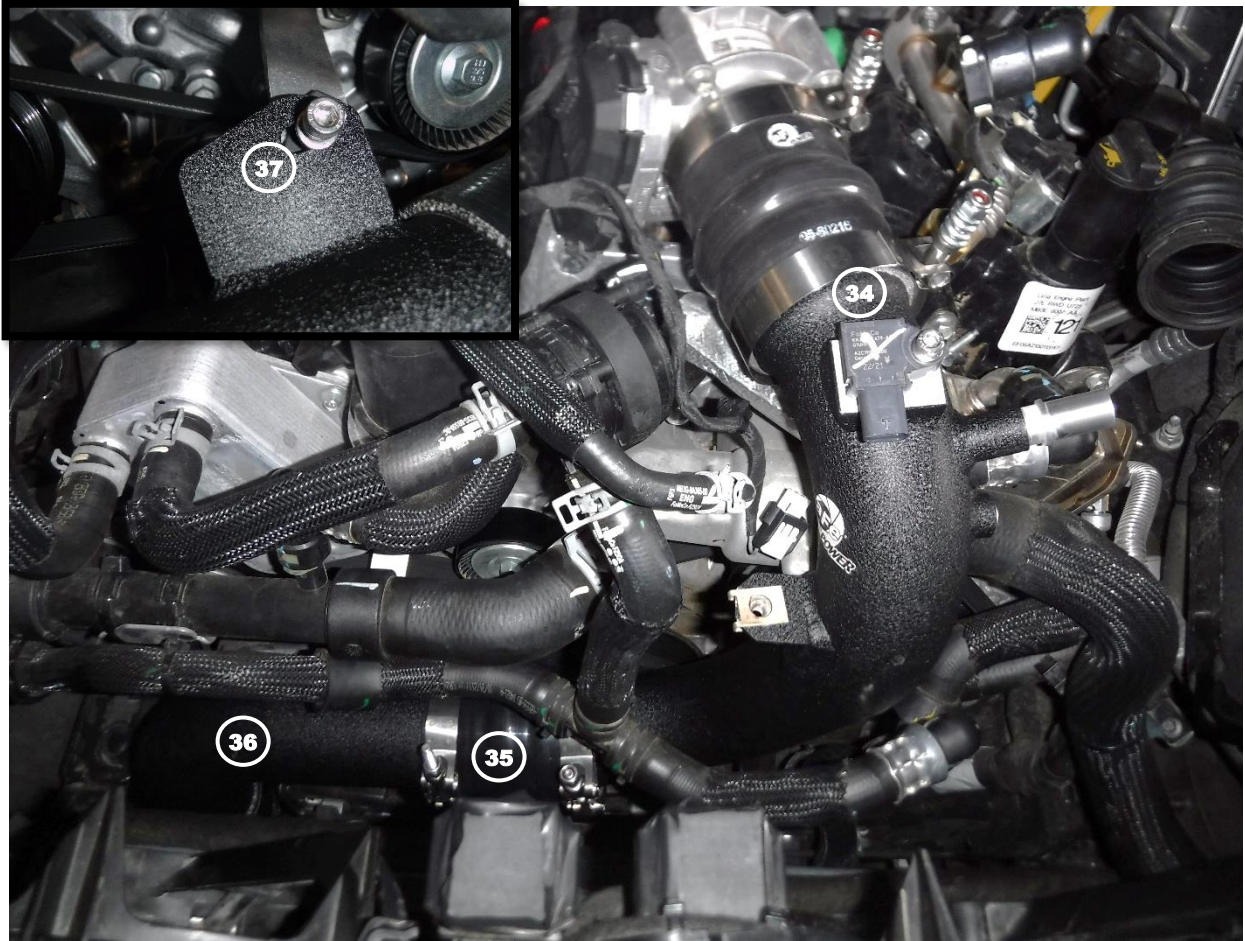


Note: Be sure to thoroughly clean all oil residue off of the connections before installing any of the aFe couplings onto the vehicle.

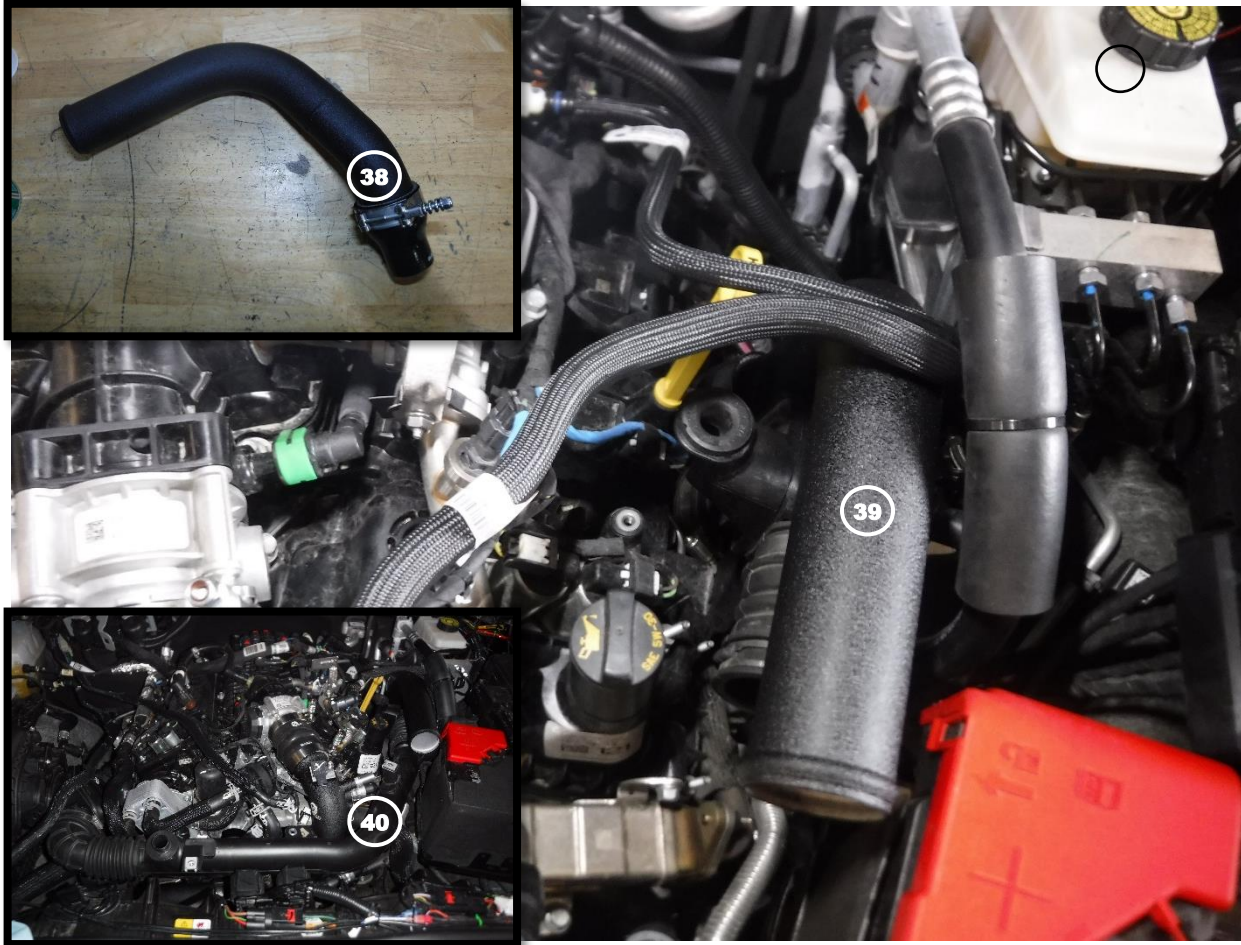
37. Install one of the supplied aFe silicone hump couplings 2.75"x 4"L and one supplied 3" – 3.25" spring loaded T-Bolt clamp onto the throttle body (30) do not tighten the clamps yet.

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

38. Install one of the aFe intercooler adaptors onto the intercooler on the passenger 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 (31)
39. Install one of the supplied aFe silicone elbow couplings 2.75"x 90Deg and one 3" – 3.25" spring loaded T-Bolt clamp onto the adaptor from the previous step (32) do not tighten the clamps yet.
40. Install one M6x1 clip nut onto the factory lower cold side charge pipe mounting bracket on the engine (33).



41. Install the aFe upper cold side charge pipe into the vehicle (34) along with one 3" – 3.25" spring loaded T-Bolt clamp, do not tighten the clamp yet..
42. Install one aFe silicone hump coupling 2.75"x 4"L and one 3" – 3.25" spring loaded T-Bolt clamp onto the bottom of the aFe upper cold side charge pipe (35) do not tighten the clamp yet.
43. Install the supplied aFe lower cold side charge pipe into the vehicle (36) connecting it to the coupling from the previous step and the intercooler coupling from Step 39, along with one 3" – 3.25" spring loaded T-Bolt clamp on each end, do not tighten the clamps yet.
44. Install one supplied M6x1x20 screw with one M6 washer into the vehicle connecting the aFe lower cold side charge pipe to the factory mounting bracket on the engine (37) do not tighten this screw yet.

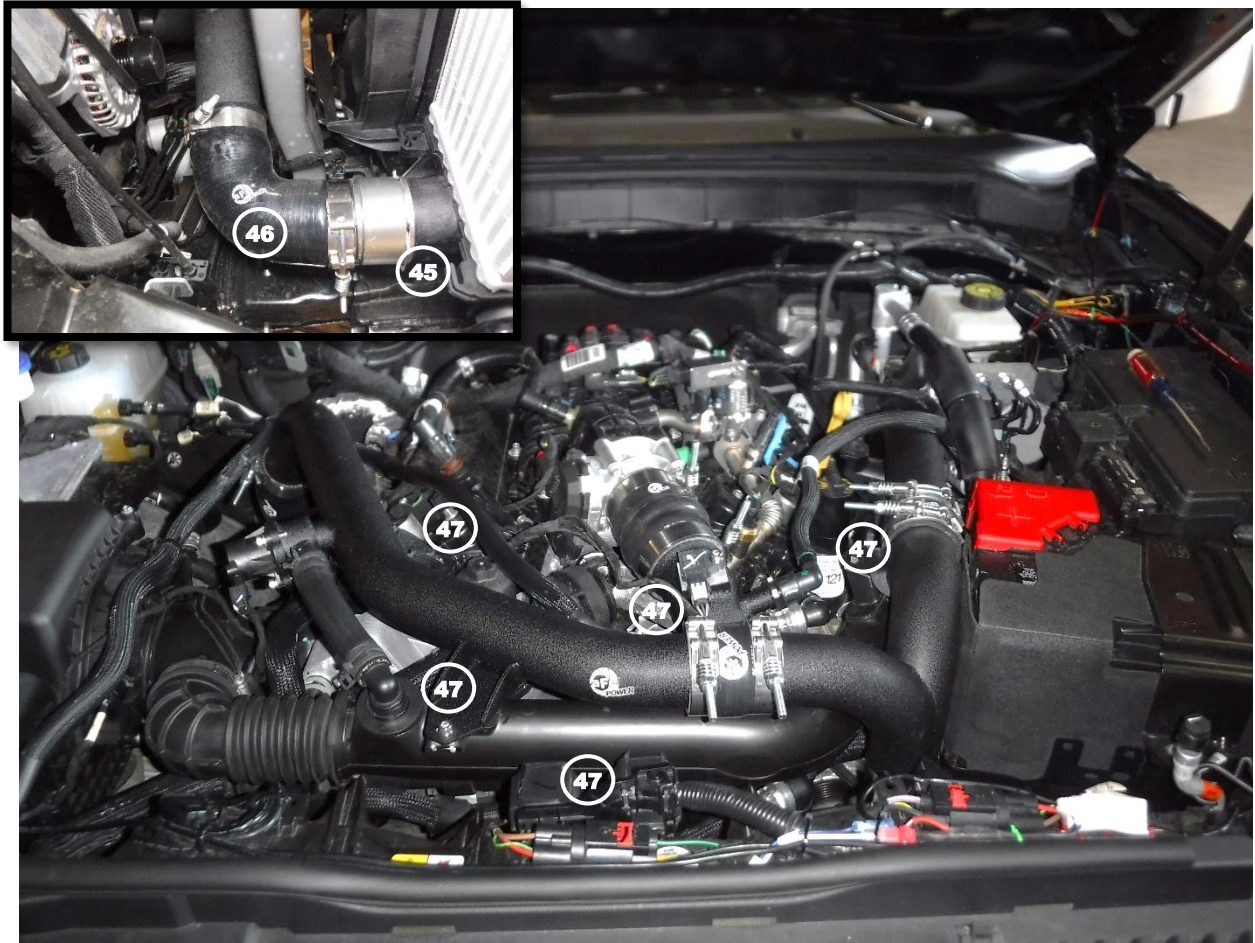


Note: Be sure to thoroughly clean all oil residue off of the connections before installing any of the aFe couplings onto the vehicle.

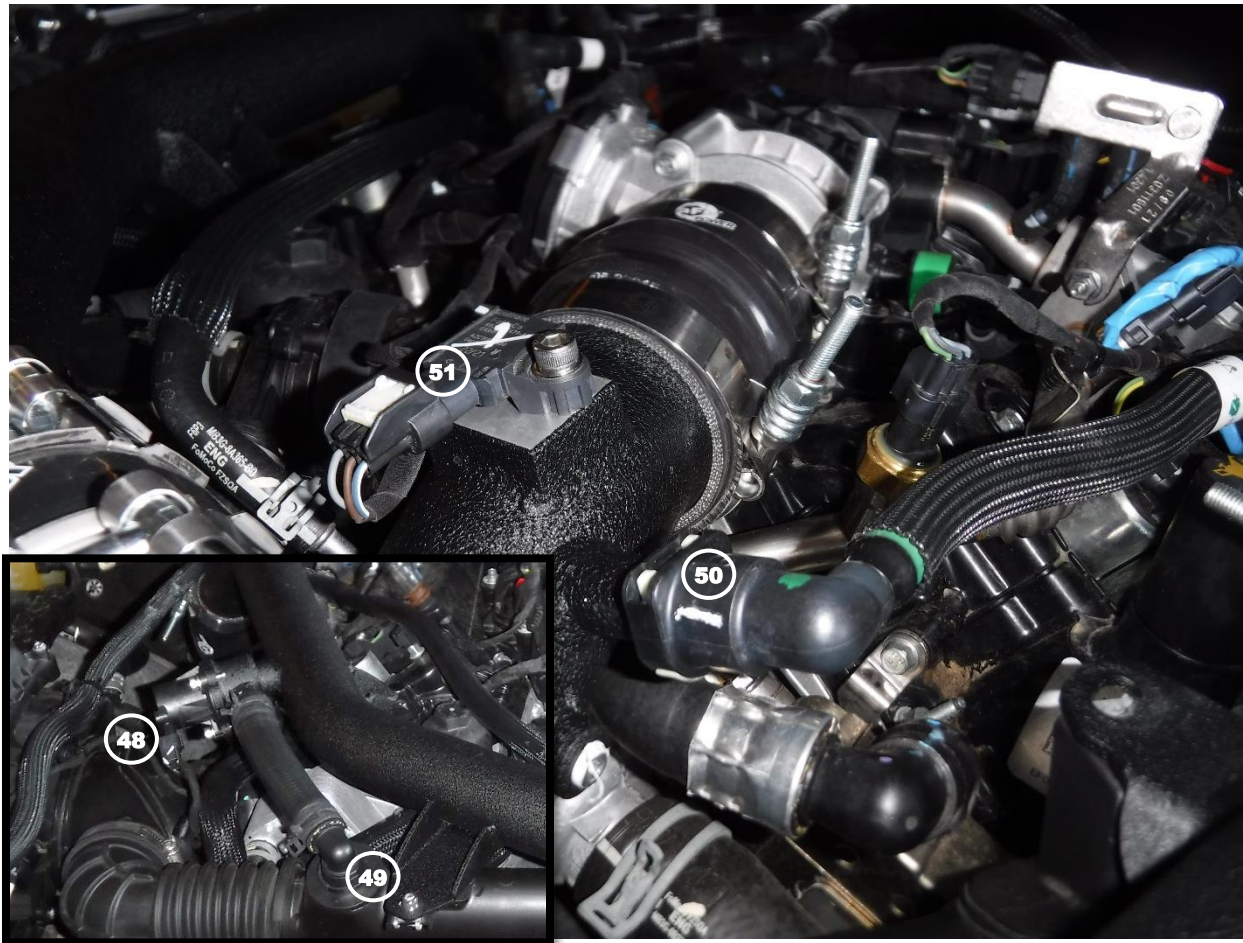
45. Install the supplied aFe silicone reducer couplings 2.25"x1.50"x 4"L and one supplied 2.50" – 2.75" spring loaded T-Bolt clamp onto the shorter end of the supplied aFe driver's side charge pipe (38) do not tighten the clamps yet.
46. Install the aFe driver's side hot charge pipe into the vehicle (39) along with one supplied SmartSeal 032 (1.94" – 2.31") clamp, do not tighten the clamp yet.
47. Install the factory driver's side air intake tube back into the vehicle (40) do not tighten the clamps yet.



48. 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 (41) do not tighten the clamps yet.
49. Install the aFe lower hot side charge pipe into the vehicle (42) 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.
50. Install the aFe passenger side hot charge pipe into the vehicle (43) 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.
51. Connect the opposite end of the aFe passenger side hot charge pipe to the turbo outlet (44) along with one SmartSeal 032 (1.94" – 2.31") clamp, do not tighten the clamp yet.



52. Install one 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 (45).
53. Install one 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 (46) do not tighten the clamp yet.
54. Adjust all of the aFe charge pipes so they are not touching anything and lined up with the mounting holes on the vehicle.
55. Secure the aFe charge pipes to the vehicle using five of the M6 x 1 x 20mm and M6 washers (47)
56. Tighten all of the clamps on the aFe charge pipes and the air intake tube.
57. Reinstall skid plate onto the vehicle.



58. Reconnect the bypass valve actuator connector on the aFe hot side charge pipe (48) be sure to lock the security tab.
59. Reconnect the bypass valve recirculation hose to the air intake tube (49) ensure it snaps into place.
60. Connect the crankcase breather hose to the aFe cold side charge pipe (50) ensure the clip snaps into place.
61. Reconnect the MAP sensor connector and lock the security tab (51)
62. Reconnect the negative battery cable.
63. Install is now complete.

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

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advanced FLOW engineering, inc.

252 Granite Street Corona, CA 92879

TEL: 951.493.7100 • TECH: 951.493.7100 x23

E-Mail: Tech@aFepower.com