



advanced FLOW engineering

Instruction Manual P/N: 46-20504-R

BladeRunner – Charge Pipe Combo Kit

Make: **Kia**

Model: **Stinger**

Year: **18-23**

Engine: **V6 – 3.3L(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.

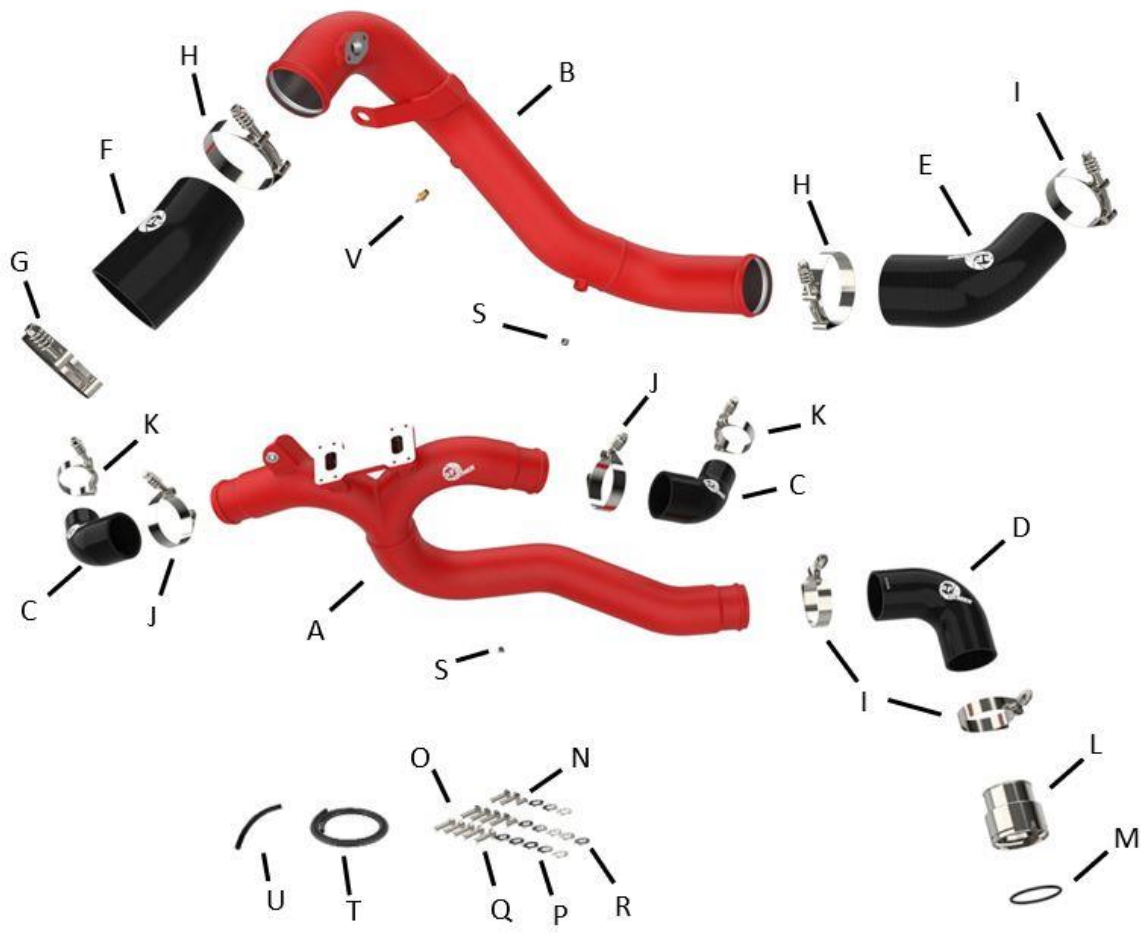
| Label | Qty. | Description | Part Number |
|-------|------|---|-------------|
| A | 1 | Tube, Hot Side Upper: 46-20508-R | 05-61218R |
| B | 1 | Tube, Cold Side: 46-20509-R | 05-61219R |
| C | 2 | Coupling, Silicone Reducer Elbow: 2.25" x 1.5" 65 Deg | 05-61220 |
| D | 1 | Coupling, Silicone Elbow: 2.5" x 90 Deg; 1.6" Legs | 05-60174 |
| E | 1 | Coupling, Silicone Reducer Elbow: 3" x 2.5" 75 Deg | 05-61221 |
| F | 1 | Coupling, Silicone Reducer Elbow: 3.15" x 3" 20 Deg | 05-61222 |
| G | 1 | Clamp, Spring Loaded T-Bolt: (3.5" - 3.75") (ss) | 03-50376 |
| H | 2 | Clamp, Spring Loaded T-Bolt: (3.25" - 3.5") (ss) | 03-50530 |
| I | 3 | Clamp, Spring Loaded T-Bolt: (2.75" - 3") (ss) | 05-60039 |
| J | 2 | Clamp, Spring Loaded T-Bolt: (2.5" - 2.75") (ss) | 03-50560 |
| K | 2 | Clamp, Spring Loaded T-Bolt: (2" - 2.25") (ss) | 03-50613 |
| L | 1 | Intercooler Adaptor: 46-2050X | 05-61225 |
| M | 1 | O-Ring, 60mm ID x 4mm W | 05-60615 |
| N | 1 | Screw, Button Head Socket: M6x1x12 | 03-50102 |
| O | 10 | Screw, Socket Head Cap: M6x1.0x20, S/S | 03-50241 |
| P | 11 | Washer, M6 (12mm OD x 6.4mm ID) | 03-50177 |
| Q | 1 | Screw, Socket Head Cap: M8 x 1.25 x 30, S/S | 03-50379 |
| R | 1 | Washer, Flat M8: 16mm OD S/S | 03-50159 |
| S | 2 | Plug, Hex Head Socket: 1/8" NPT (Zinc Plated) | 03-50029 |
| T | 1 | Hose, Vacuum: 5/32" ID, Black: 10" | 05-00122 |
| U | 1 | Hose, Vacuum: 5/32" ID, Black: 4" | 05-00122 |
| V | 1 | Nipple, Brass Hose: 3/16ID x 1/8npt | 03-50191 |

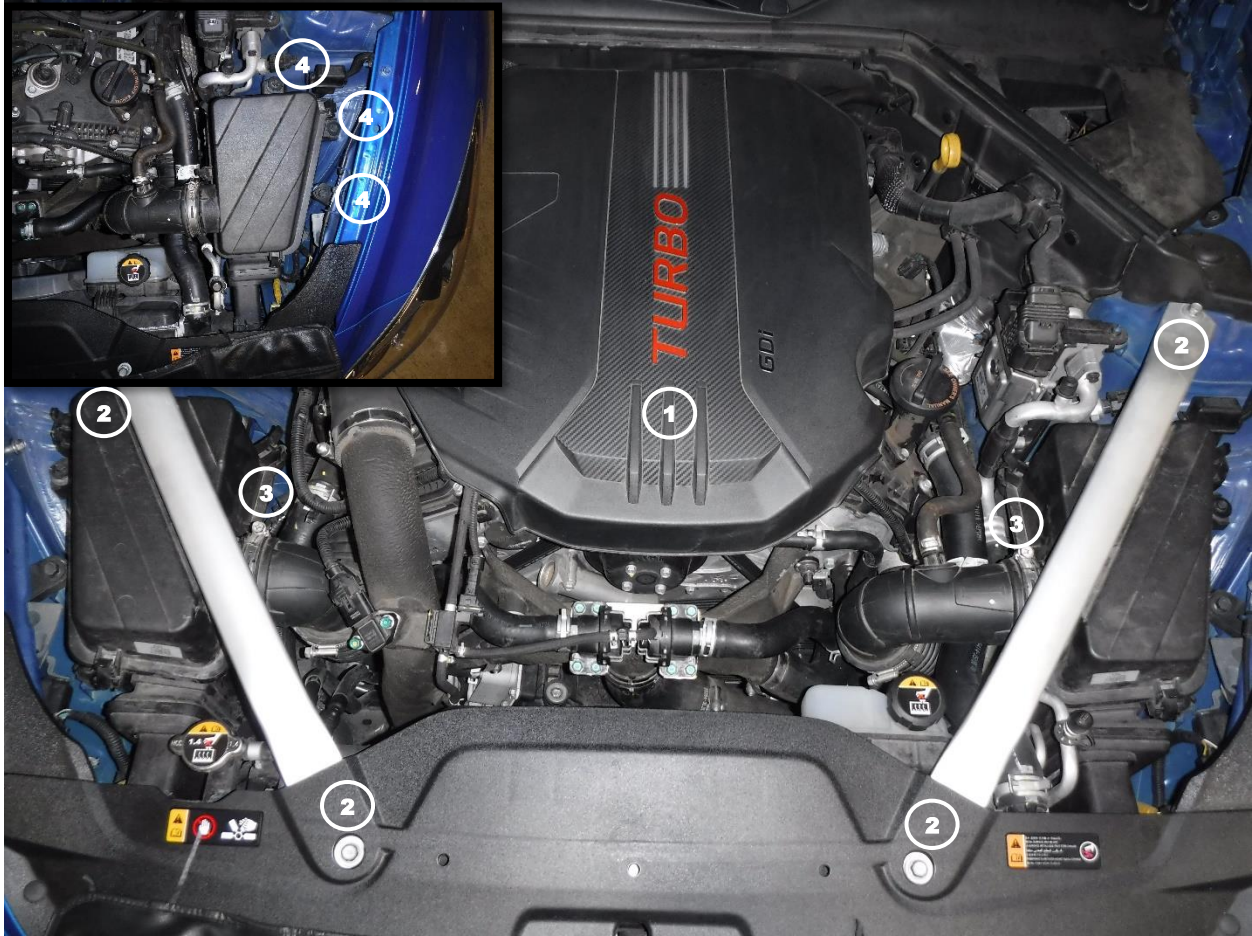
Installation will require the following tools:

8mm socket, 10mm socket, 12mm socket, 14mm socket, 7/16" deep socket, 3/16" allen wrench. 5mm allen wrench, 8mm allen wrench, 6" extension, ratchet, flat head screwdriver, pick, pliers, thread sealant, grease.

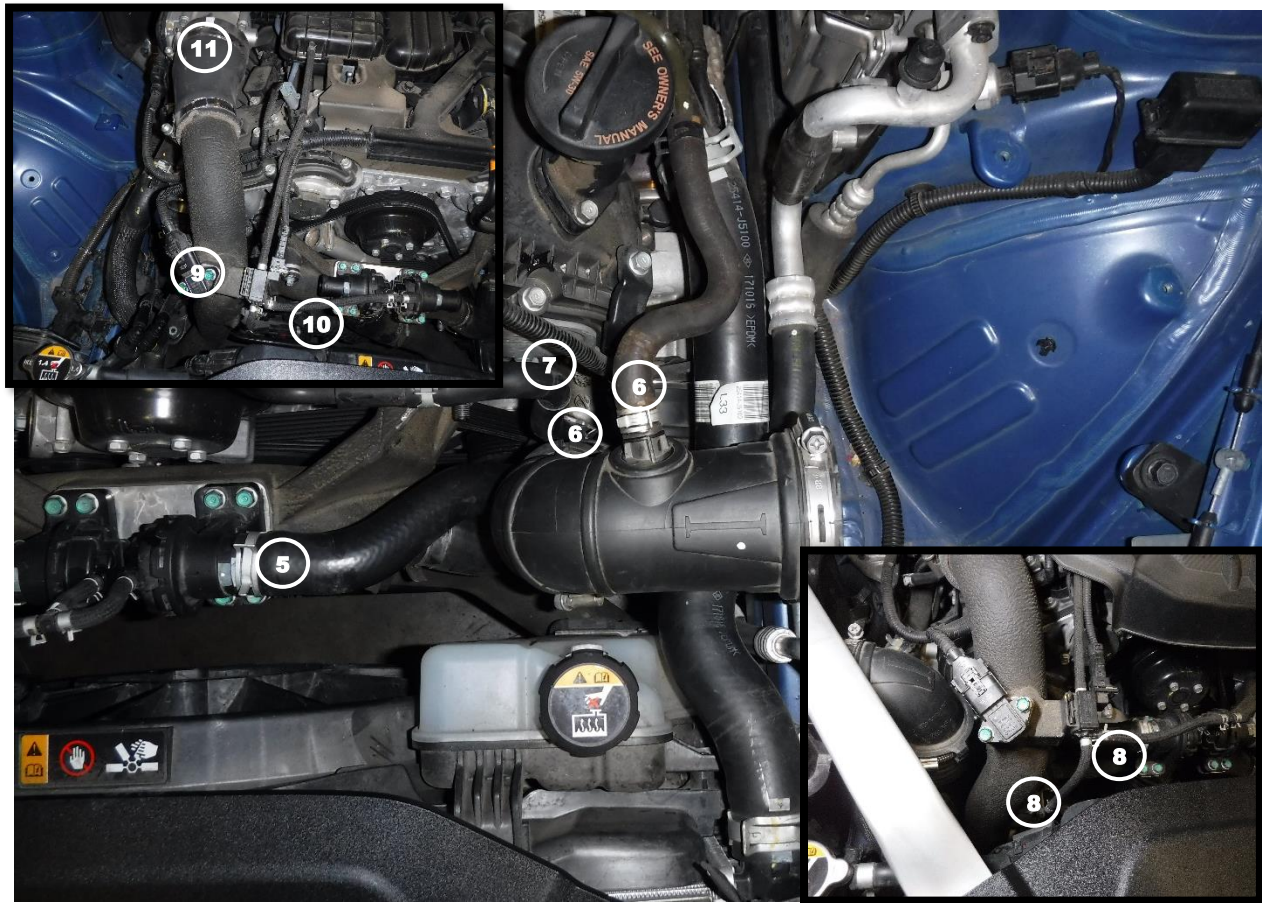
Warranty Information available at <https://afepower.com/contact#warranty>

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.

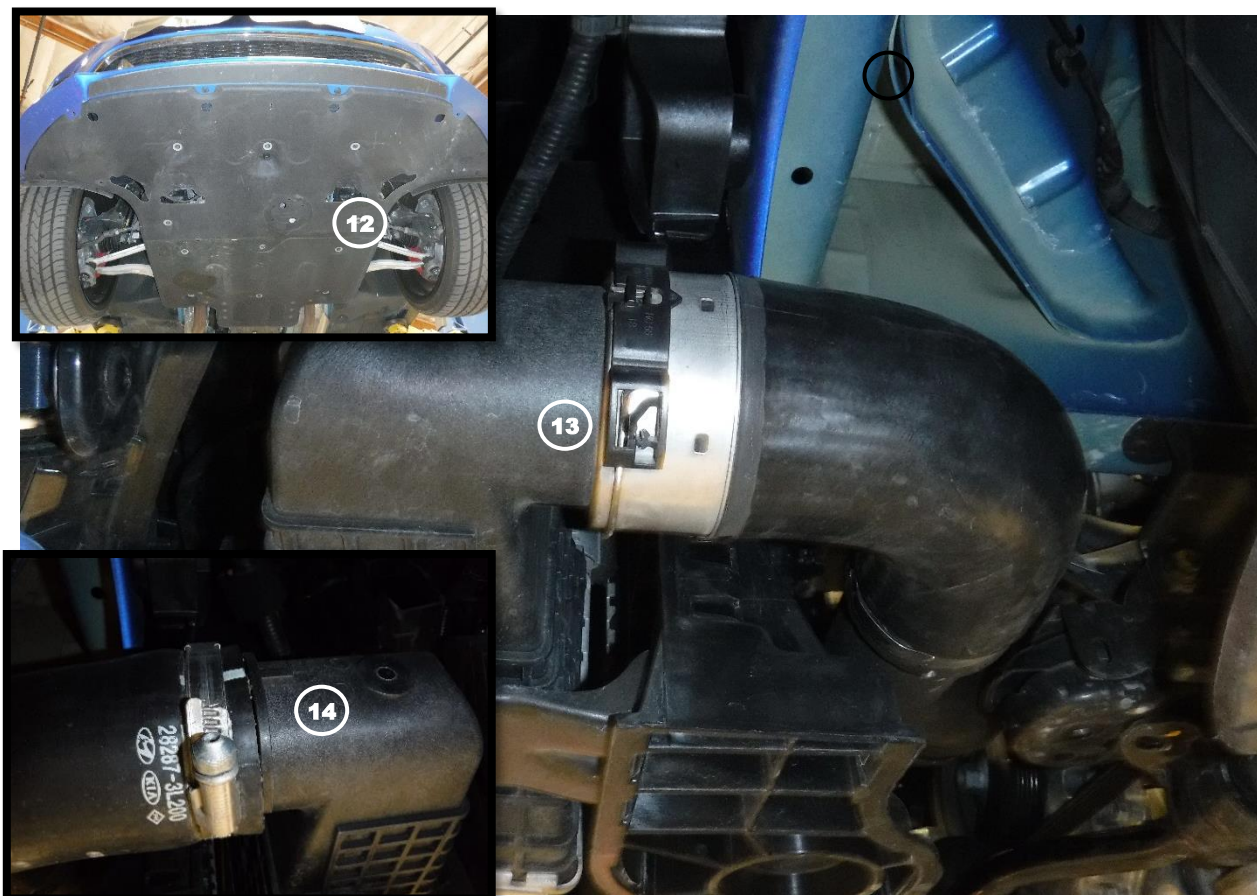




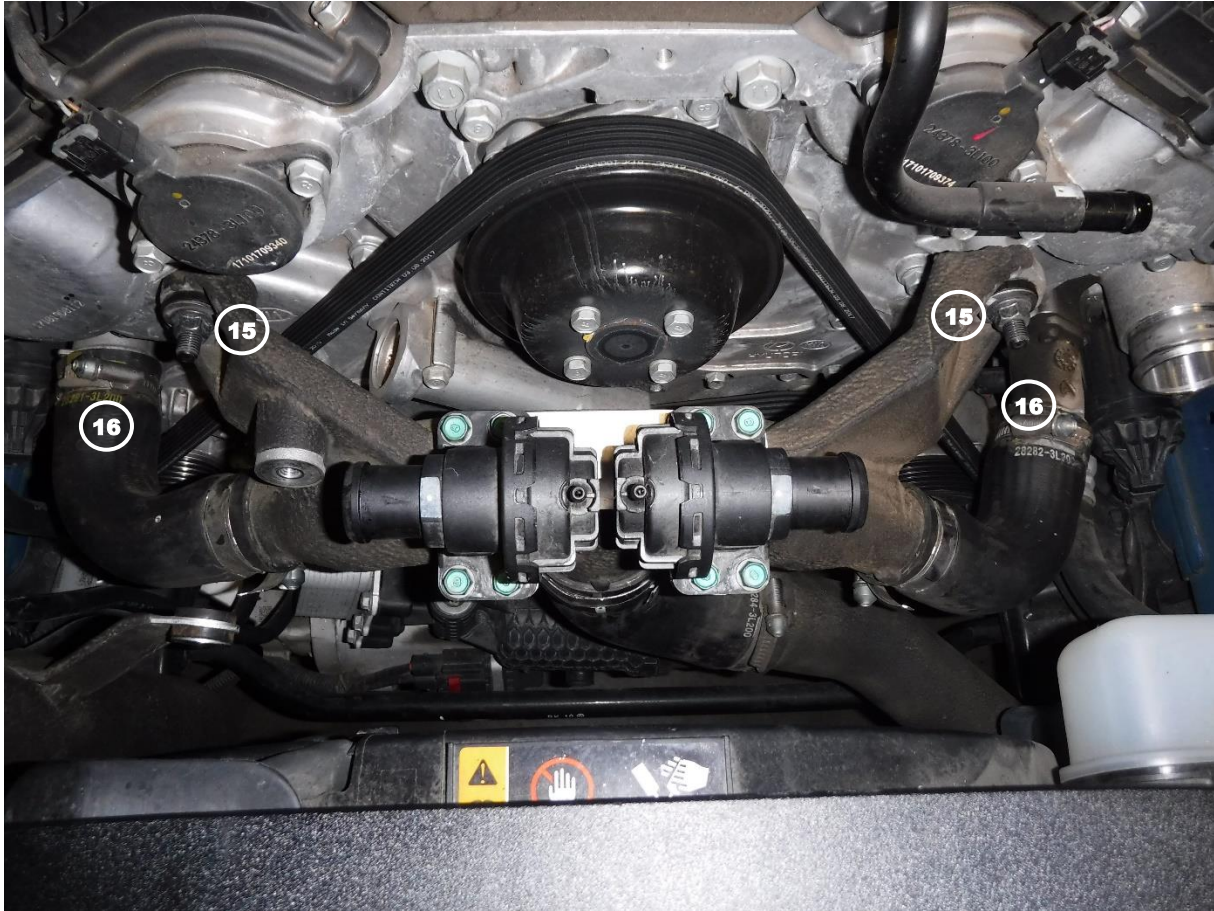
1. Park vehicle on level ground and engage the parking brake.
2. Disconnect the negative battery cable.
3. Remove the engine cover ① by firmly pulling up on all four corners.
4. Remove the strut braces ② from the vehicle .
5. Loosen the clamp securing the air intake tube to the intake box ③ and disconnect from air box on both sides.
6. Remove the three screws securing the intake boxes to the vehicle ④ on both sides.
7. Lift the entire air box up and towards the rear of the vehicle to remove it from the vehicle on each side.



8. Disconnect the bypass hoses from the diverter valves ⑤.
9. Disconnect the three breather hoses from the air intake tubes ⑥, two on driver side and one on passenger side.
10. Loosen the clamps connecting the air intake tubes to the turbo inlets ⑦ on both turbos and remove the tubes from the vehicle.
11. Remove the mounting bolt from the vacuum distribution box ⑧ and disconnect the vacuum hose from the cold side charge pipe.
12. Disconnect the single vacuum hose at the “T” fitting coming from the diverter valves.
13. Disconnect the electrical connector from the Manifold Pressure Sensor on the cold side charge pipe ⑨
14. Remove the bolt securing the cold side charge pipe to the hot side charge pipe ⑩.
15. Remove the caps from the hose clamp screw and loosen the clamp securing the cold side charge pipe to the throttle body ⑪ and disconnect it from throttle body.



16. From underneath the vehicle, remove all screws and retaining clips securing the belly pan (12) and remove it from the vehicle.
17. Release the retaining clip securing the hot side charge pipe to the intercooler (13) by opening the clip from the raised portions on the clip and disconnect it from intercooler.
18. Loosen the clamp securing the cold side charge pipe to the intercooler (14) and disconnect the coupler from the intercooler.
19. Remove the cold side charge pipe from the vehicle through the top.

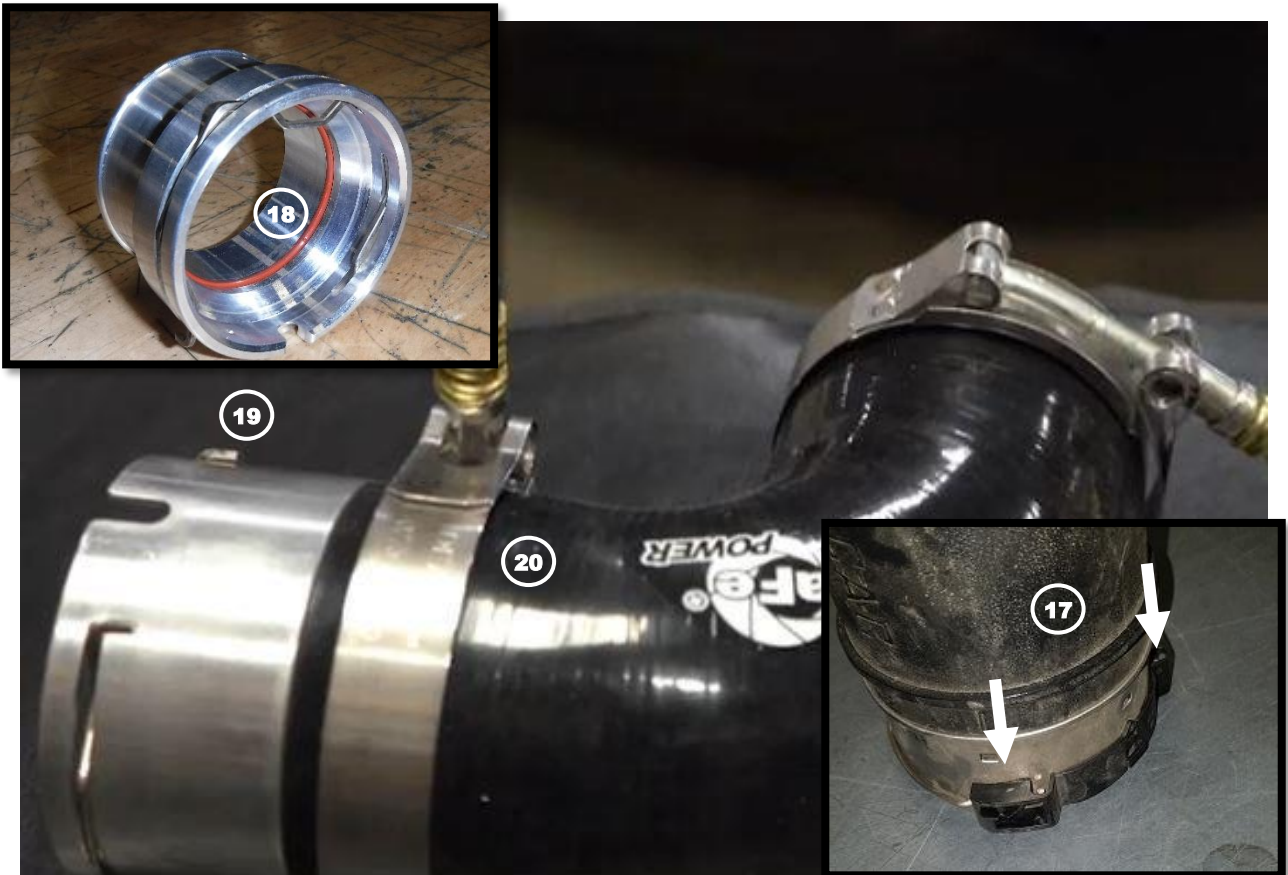


20. Remove the two nuts securing the hot side charge pipe to the engine (15)

It may be necessary to use a pick to break the connection between the charge pipe couplings and the vehicle in order to disconnect the couplings.

21. Loosen the clamps securing the hot side charge pipe couplings to the turbo outlets (16) and disconnect the couplings from the turbos.

22. Remove the hot side charge pipe from the top of the vehicle.



Note: The retaining clip will need to be removed from the factory charge pipe for reuse with the aFe charge pipe

23. The plastic clip will need to be removed from the charge pipe by standing the factory charge pipe up on the end with the metal adaptor and tapping it down on each side (17)
24. Once the plastic clip is removed you can now remove the metal retaining clip, for reuse with the aFe charge pipe.

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

25. Install the supplied 60mm inner diameter x 4mm width O-ring into the groove on the inside of the supplied aFe intercooler inlet adaptor (18)
26. Install the factory retaining clips onto the aFe intercooler inlet adaptor (19) with the opening facing the notch on the adaptor.
27. Install the supplied aFe silicone elbow coupling 2.5" ID x 90° and two 2.75" - 3" spring-loaded T-Bolt clamps onto the aFe intercooler inlet adaptor (20)



28. Install the aFe adaptor onto the intercooler and line the notch up with the intercooler (21)

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

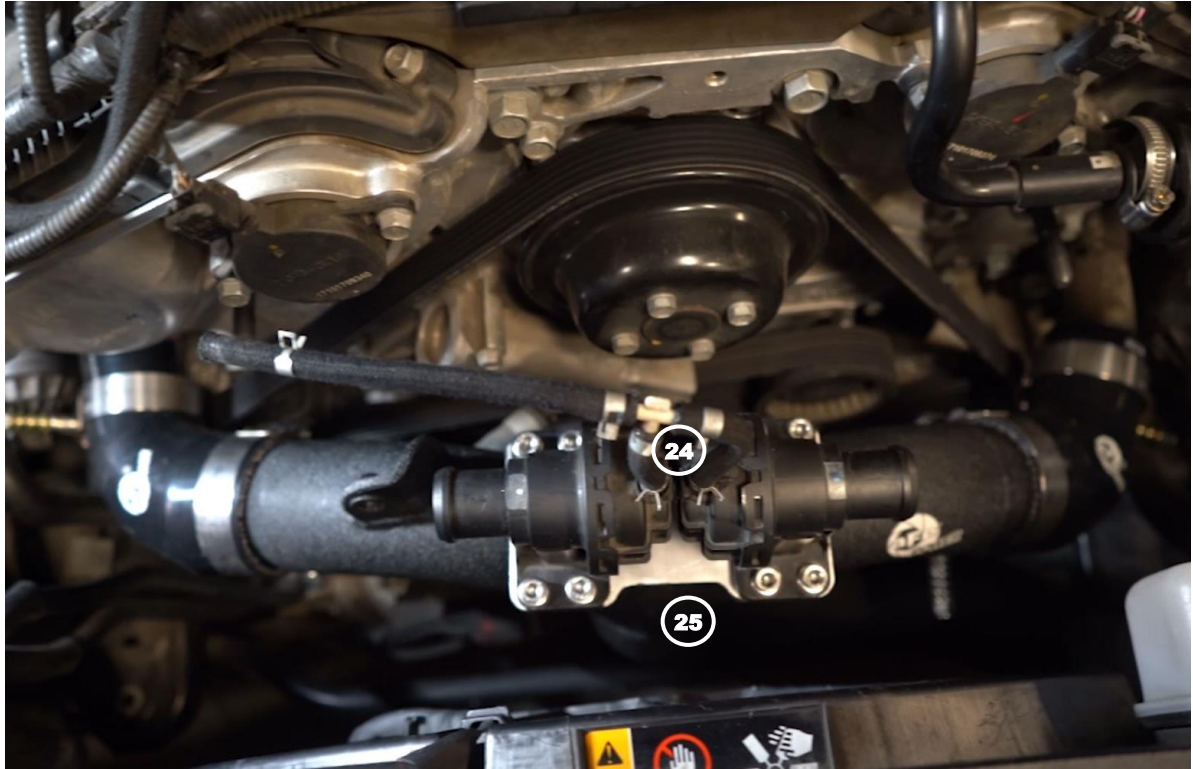
29. If you are not using any aftermarket sensors, install the supplied 1/8" NPT plug (22) into the threaded fitting on the aFe hot side charge pipe.

30. Install the supplied aFe silicone reducer elbow coupling: 2.25" x 1.5" x 65° and one of the supplied 2.5" - 2.75" spring-loaded T-Bolt clamps onto the hot side charge pipe (23) next to the aFe logo, do not tighten the clamps yet.

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

31. Install the remaining silicone reducer elbow coupling: 2.25" x 1.5" x 65° onto the passenger side turbo outlet with one 2" - 2.25" spring-loaded T-Bolt clamp, do not tighten clamp yet.

32. Place the remaining 2" - 2.25" spring-loaded T-Bolt clamp onto the driver side turbo for use later.



33. Install the diverter valves onto the aFe charge pipe using the supplied socket head cap screws: M6x1.0x20 and M6 washers (24).
34. Install the aFe hot side charge pipe (25) into the vehicle from the top, connect the charge pipe to the intercooler inlet coupling from Step 27, then connect the charge pipe to the turbos along with the remaining 2.5" - 2.75" spring-loaded T-Bolt clamp on the passenger side.

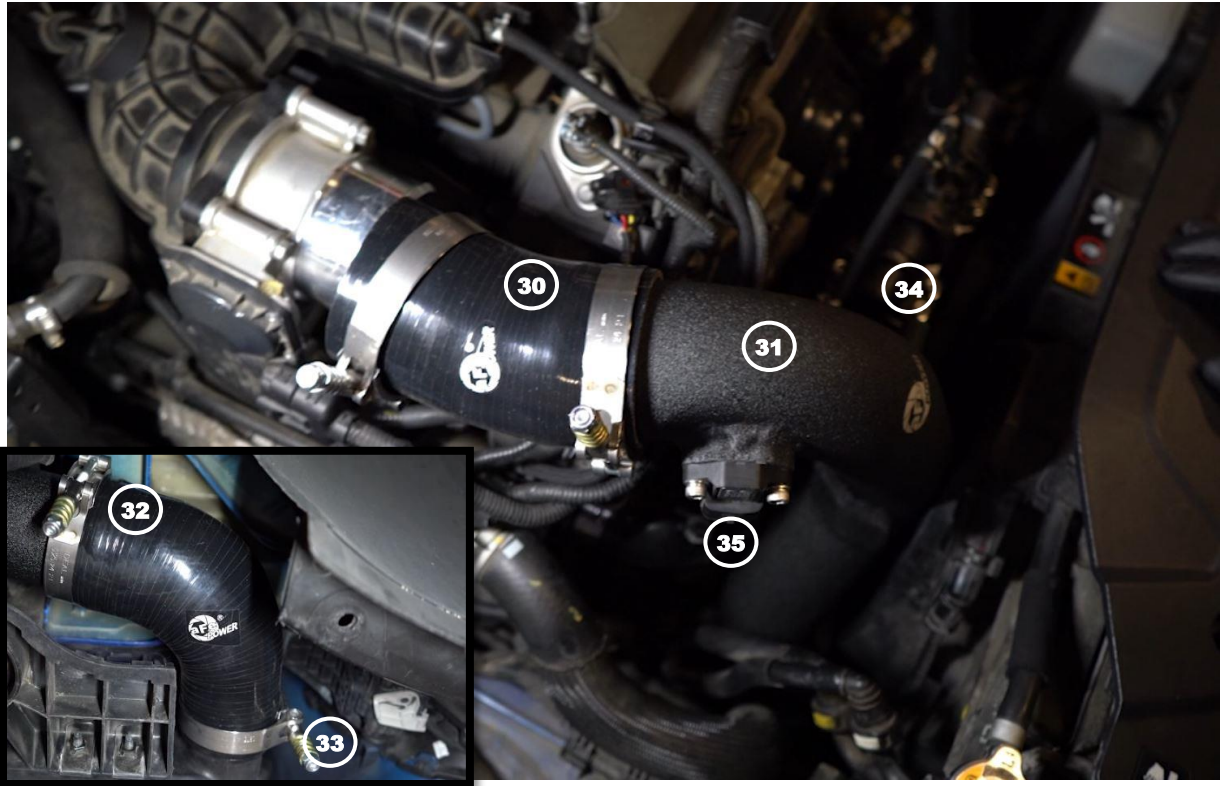
Insure all clamps are rotated out of the way so the air intake tubes will fit into the vehicle and do not interfere with the belt.



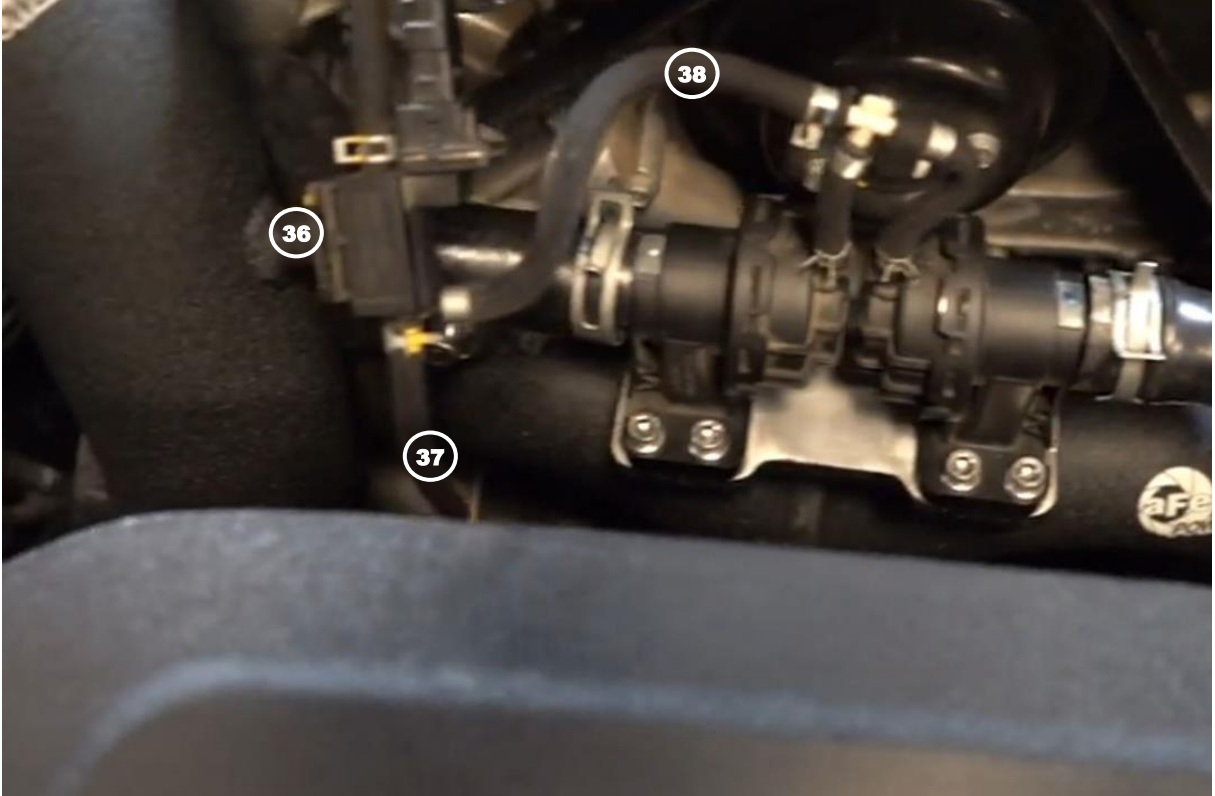
35. Transfer the factory Manifold Pressure Sensor from the factory charge pipe to the supplied aFe cold side charge pipe (26) and secure it using the two of the supplied M6 screws and washers
36. Transfer the factory mounting grommet and spacer from the factory charge pipe to the supplied aFe cold side charge pipe (27)

Note: Be sure to use thread sealant on the brass NPT fitting to prevent any leaking

37. Install the supplied brass hose nipple fitting on to the upper NPT port on the aFe cold side charge pipe (28)
38. If you are not using any aftermarket sensors, install the remaining 1/8" NPT plug (29) into the bottom threaded fitting on the aFe cold side charge pipe.



39. Install the supplied aFe silicone reducer elbow (3.15" x 3") 20° to the cold side charge pipe (30) with one 3.25" - 3.5" spring-loaded T-bolt clamp and one 3.5" - 3.75" spring-loaded T-bolt clamp for the throttle body. Do not tighten clamps yet.
40. Install the aFe cold side charge pipe into the vehicle from the top (31) and connect the coupling to the throttle body.
41. Install the supplied silicone reducer elbow coupling: 3" x 2.5" 75° onto the intercooler outlet along with one 2.75" - 3" spring-loaded T-bolt clamp (32) from the bottom.
42. Place the remaining 3.25" - 3.5" spring-loaded T-bolt clamp onto the aFe cold side charge pipe and connect it to the coupling from the previous step (33)
43. Adjust both charge pipes as necessary and make sure they are not touching anything and secure the cold side charge pipe to the hot side charge pipe using the supplied socket head cap screw: M8x1.25x30 and M8 washer (34)
44. Reconnect the MAP sensor connector to the sensor on the aFe cold side charge pipe (35)
45. Tighten all clamps on both aFe hot and cold side charge pipes.



46. Mount the vacuum distribution block onto the cold side aFe charge pipe **36** using the supplied socket head cap screw: M6x1.0x12 and M6 washer.
47. Install the supplied 10" long vacuum hose **37** from the brass nipple on the aFe cold side charge pipe to the vacuum distribution block.
48. Install the 4" long vacuum hose **38** from the distribution block to the diverter valve "T" connection.
49. Reinstall both air intake tubes and air boxes.
50. Reconnect all vacuum lines and crankcase breather hoses to the air intake tubes.
51. Reconnect the recirculation hoses between the diverter valves and the air intake tubes.



52. Reinstall the strut braces into the vehicle (39)

53. Reinstall the belly pan underneath the vehicle.

54. Reinstall the engine cover (40)

55. Reconnect the negative battery cables.

56. Install is now complete.

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

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