



advanced FLOW engineering

Instruction Manual P/N: 46-20548-B

BladeRunner – Charge Pipe Kit

Make: BMW

Model: 540i

Year: 2017-2022

Engine: L6 – 3.0L(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: 46-20548	05-61230B
B	1	Coupling, Silicone Elbow: 2.5"ID x 90 Deg	05-60174
C	2	Clamp, Spring Loaded T-Bolt: (2.75" - 3") (ss)	05-60039
D	1	Adaptor: 46-20398	05-61046
E	1	O-Ring, 55mm ID x 2mm W	03-50642
F	3	Screw, Socket Head Cap: M6 x 1.00 x 25, S/S	03-50556
G	1	Screw, Socket Head Cap: M6 x 1.0 x 20, S/S	03-50241
H	4	Washer, M6 (12mm OD x 6.4mm ID)	03-50177
I	2	Plug, Hex Hd Socket: 1/8" NPT (Zn Plt)	03-50029

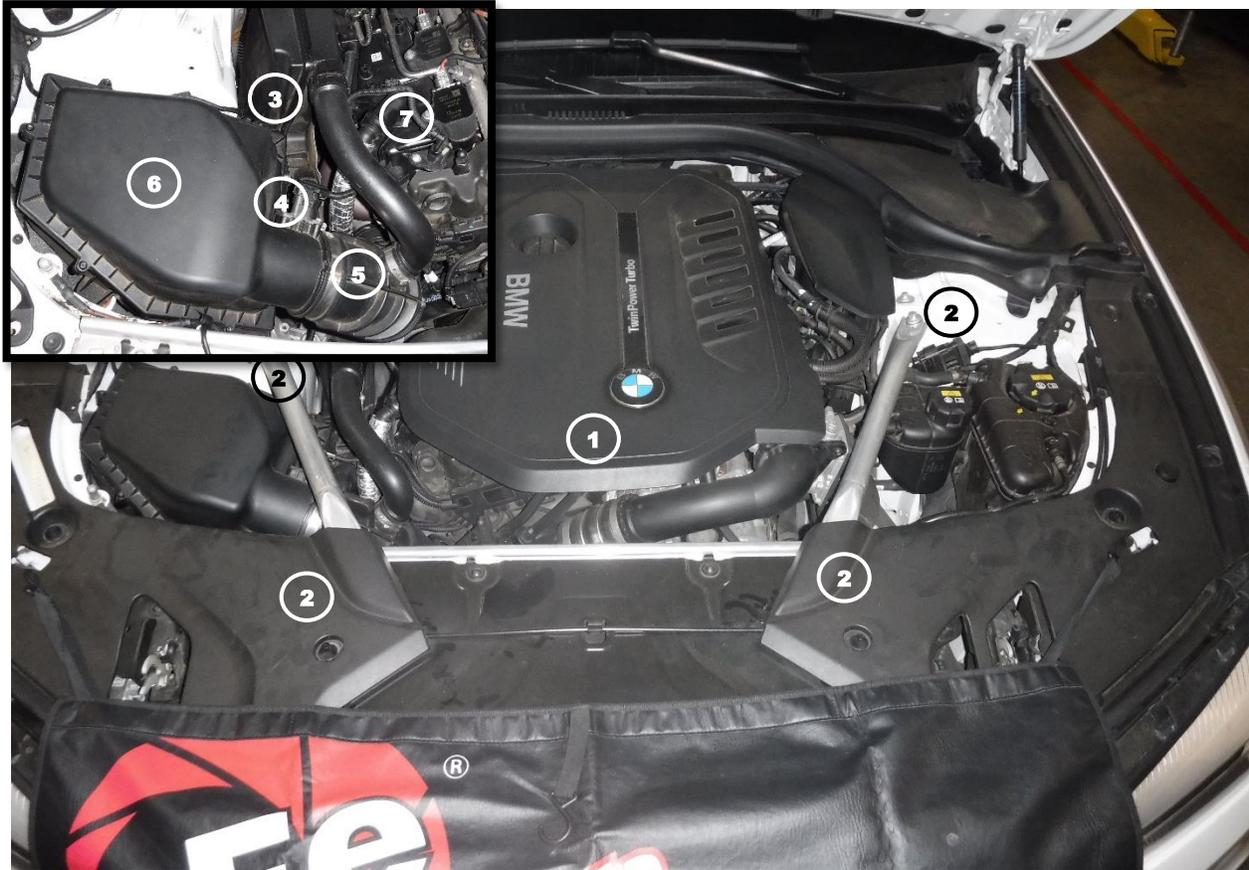
Installation will require the following tools:

6mm socket, 7/16" deep socket, 3/16" allen wrench, 5mm allen wrench, T25 Torx socket, T30 Torx socket, 17mm wrench, 6" extension, ratchet, pick, flat head screwdriver, & thread sealant.

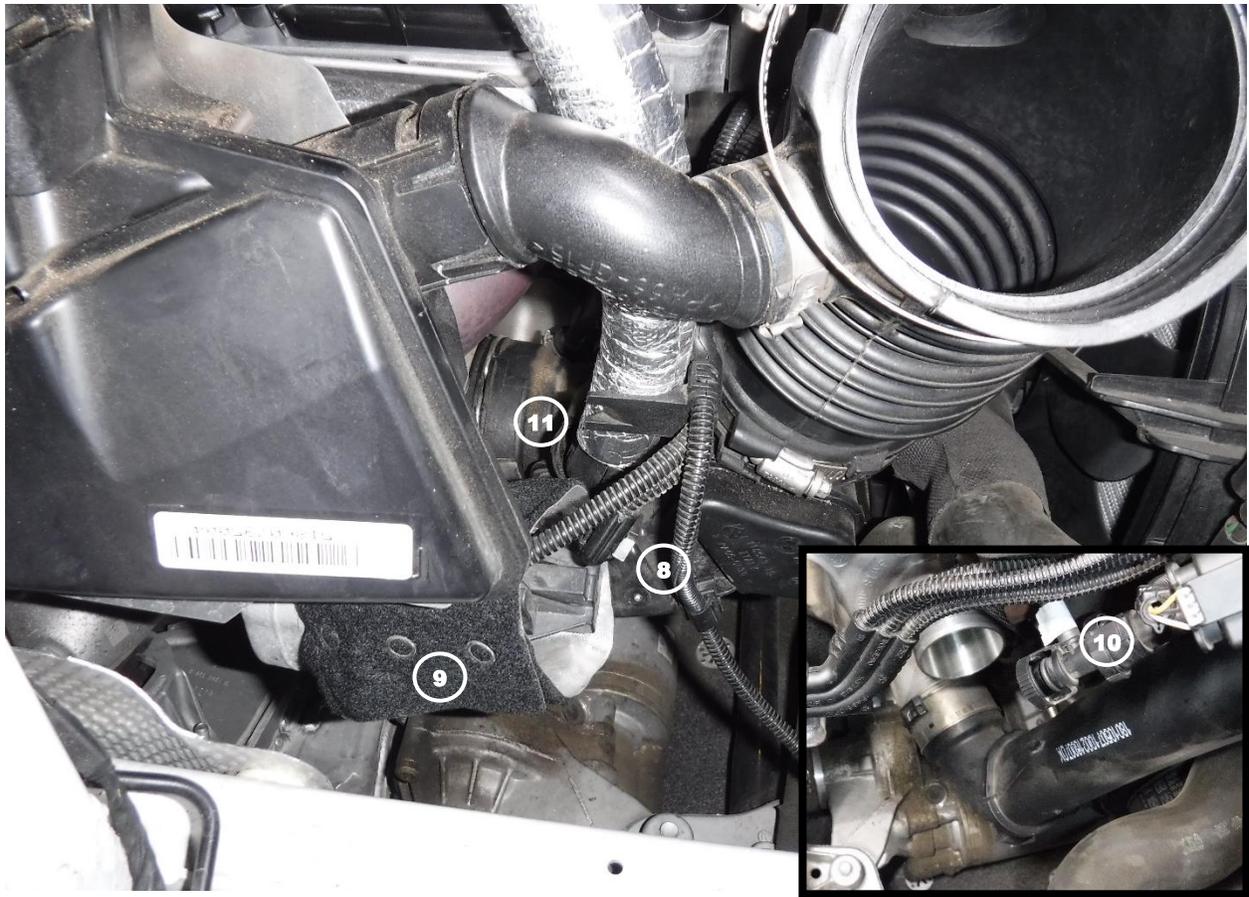
Warranty Information available at <https://afepower.com/contact#warranty>

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.

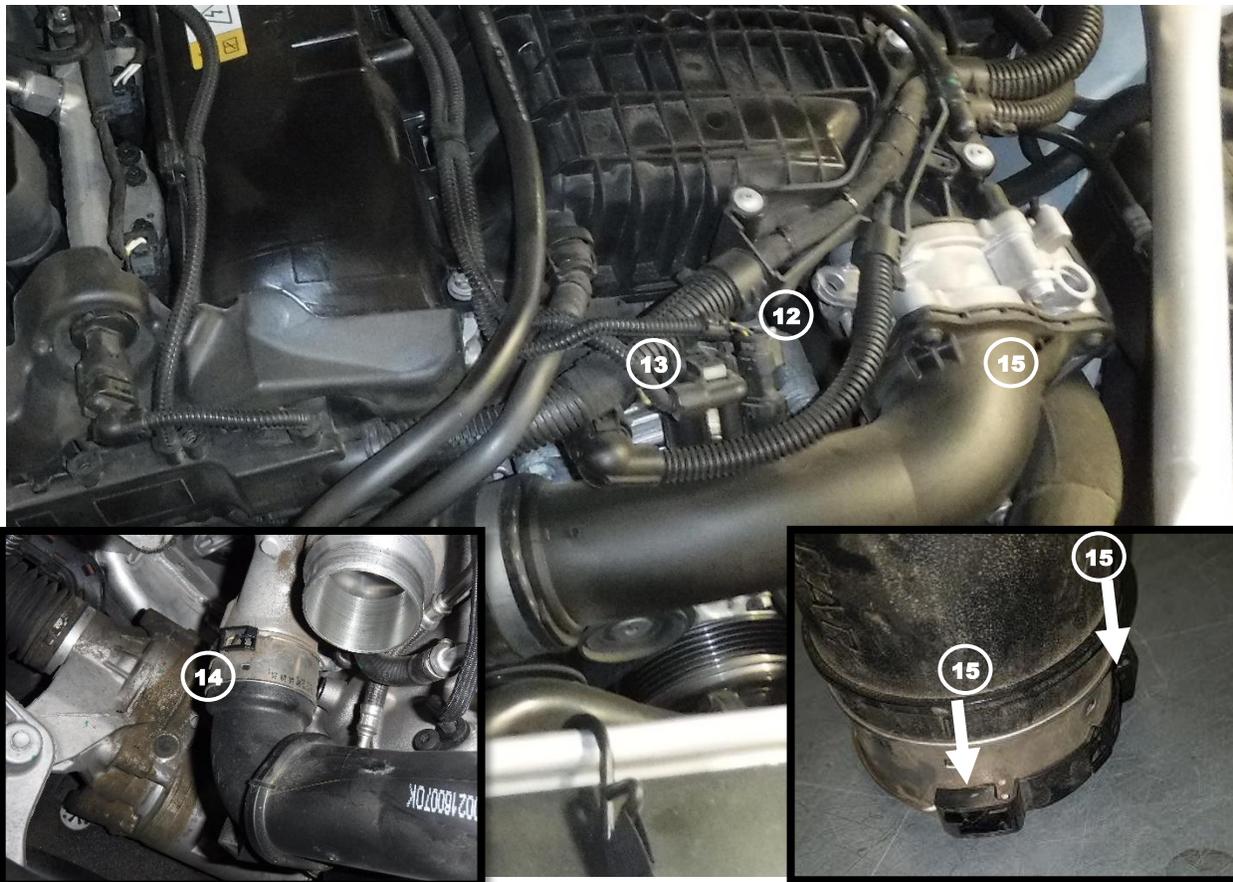




1. Park vehicle on level ground and engage the parking brake.
2. Disconnect the negative battery cable.
3. Remove the engine cover from the vehicle by lifting straight up on each of the four corners ① disconnecting it from the mounting pegs.
4. Remove the two plastic covers and two strut braces if equipped ②.
5. Remove the screw securing the resonator to the air box ③.
6. Release the security tab and disconnect the air intake sensor from the air box ④.
7. Loosen the clamp securing the air intake tube onto the air box ⑤.
8. Disconnect the air intake tube from the air box, then remove the air box from the vehicle by lifting it straight up from its mounting grommets ⑥.
9. Disconnect the PCV hose from the valve cover ⑦.



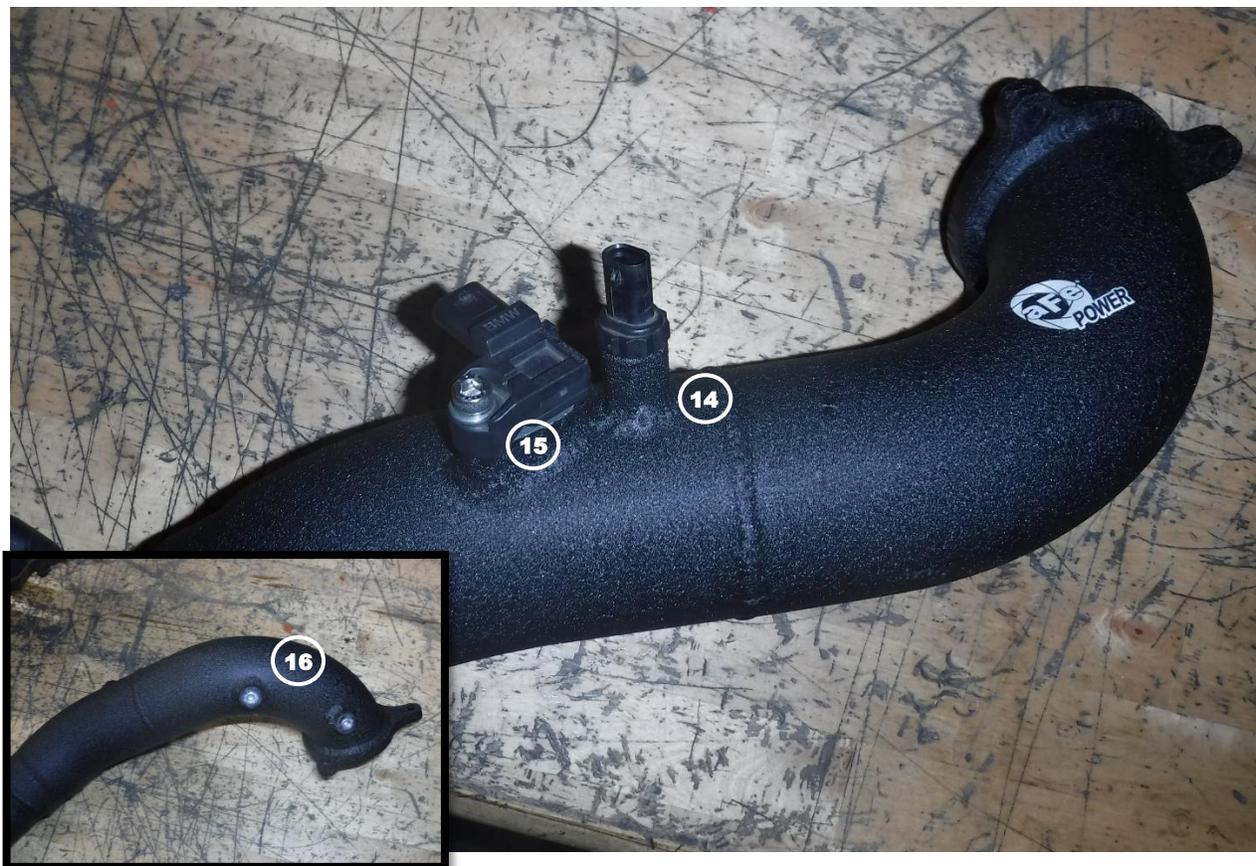
10. Disconnect the wire harness and unplug the sensor from the air intake tube ⑧
11. Unclip the cover over the turbo sensors and unplug the sensors ⑨
12. Disconnect the vacuum line from the top of the air intake tube ⑩ by squeezing the ribbed areas on the clip then pulling the connection apart.
13. Remove the clip securing the air intake tube to the turbo ⑪, then remove the tube from the vehicle along with the resonator.



14. Release the security tab and disconnect the temperature sensor from the charge pipe (12)
15. Release the security tab and disconnect the MAP sensor from the charge pipe (13)
16. Lift the retaining clip securing the charge pipe to the turbo (14) then gently disconnect the charge pipe from the turbo.
17. Remove the 3 screws securing the charge pipe to the throttle body (15) then remove the charge pipe from the vehicle.

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

18. Stand the factory charge pipe up on the end with the metal adaptor.
19. The plastic clip will need to be removed from the charge pipe by tapping it downwards on each side (16)
20. Once the plastic clip is removed you can now remove the metal retaining clip, for reuse with the aFe charge pipe.

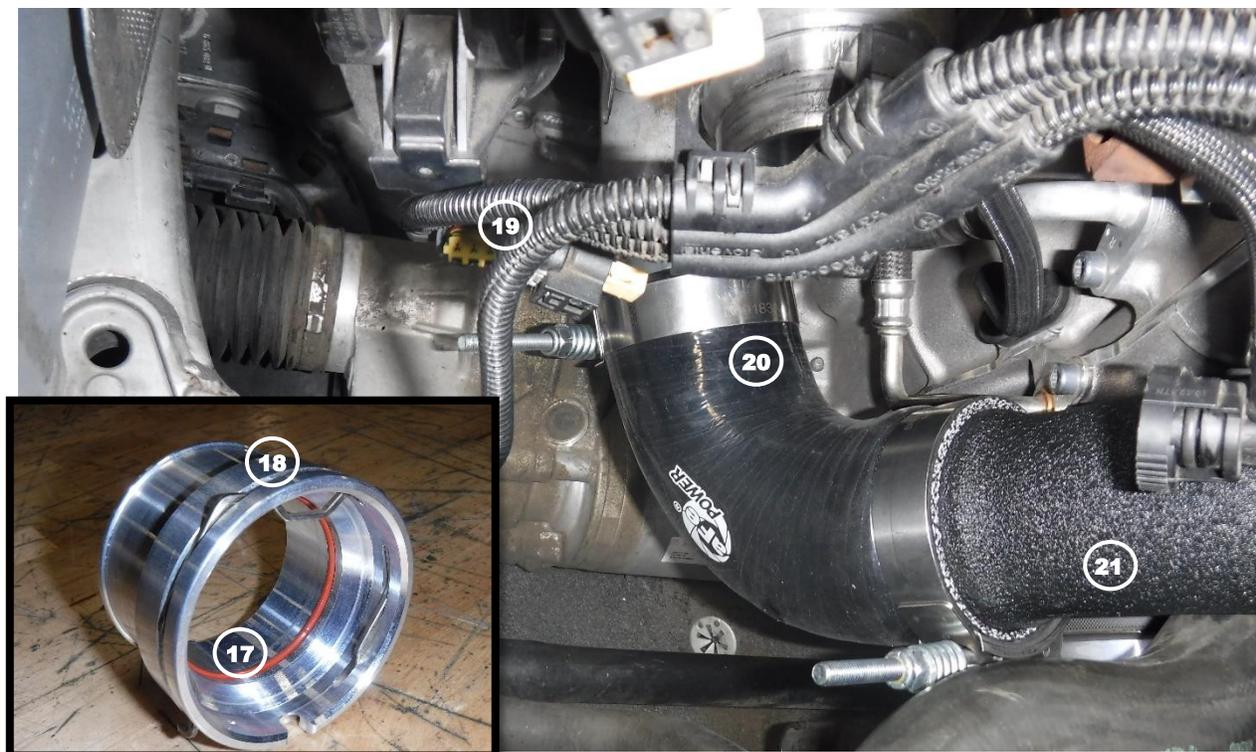


Note: Be sure to lubricate the O-rings with grease to prevent them from tearing during installation.

21. Transfer the temperature sensor from the factory charge pipe to the supplied aFe charge pipe (14)
22. Transfer the MAP sensor from the factory charge pipe to the aFe charge pipe (15)
23. Secure the MAP sensor to the aFe charge pipe using the M6x1x20 screw with an M6 washer.

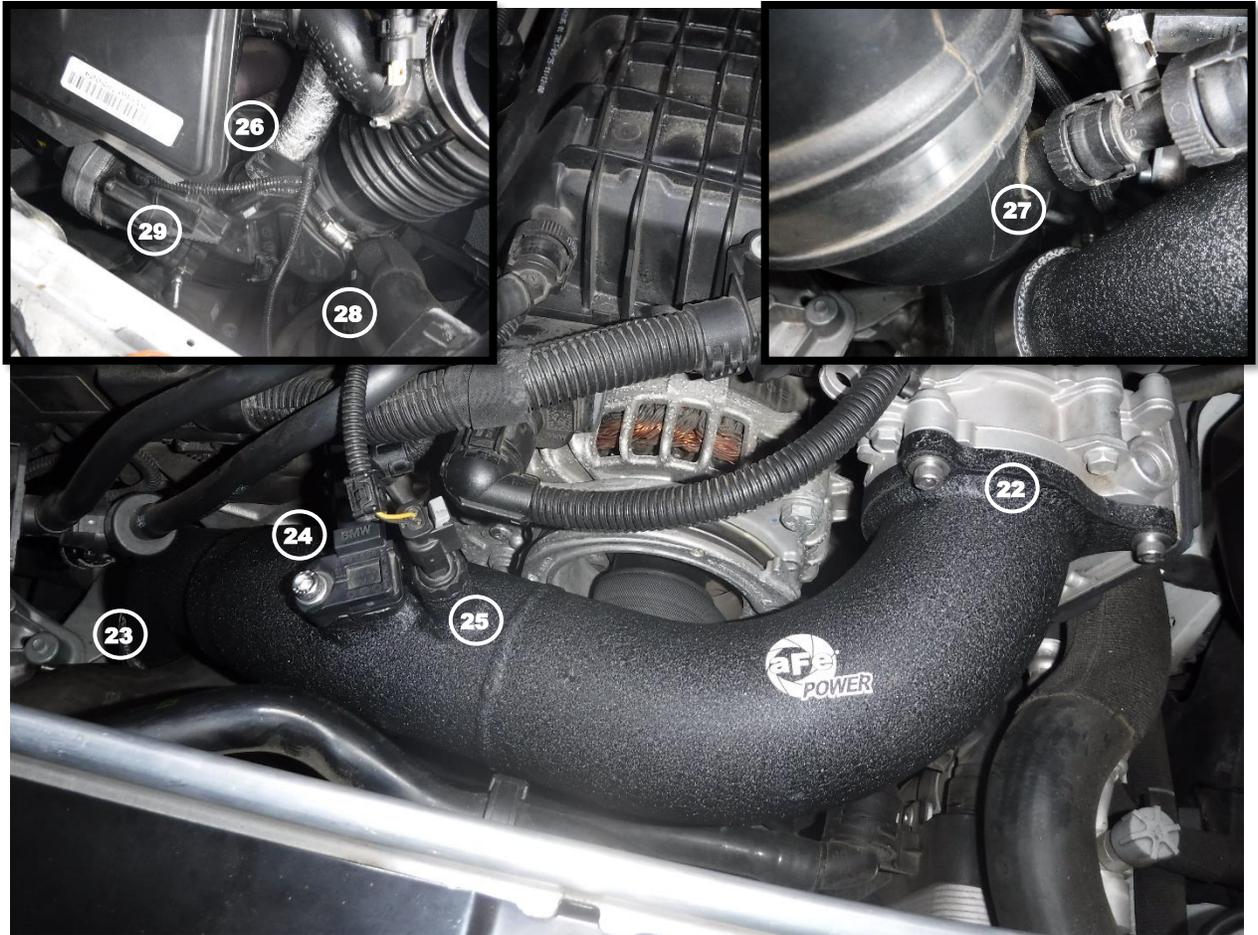
Note: Be sure to use thread sealant on the plugs or sensors to prevent any leaking.

24. If you are not using any aftermarket sensors, install the supplied 1/8" NPT plugs (16) into the threaded fittings on the aFe charge pipe.

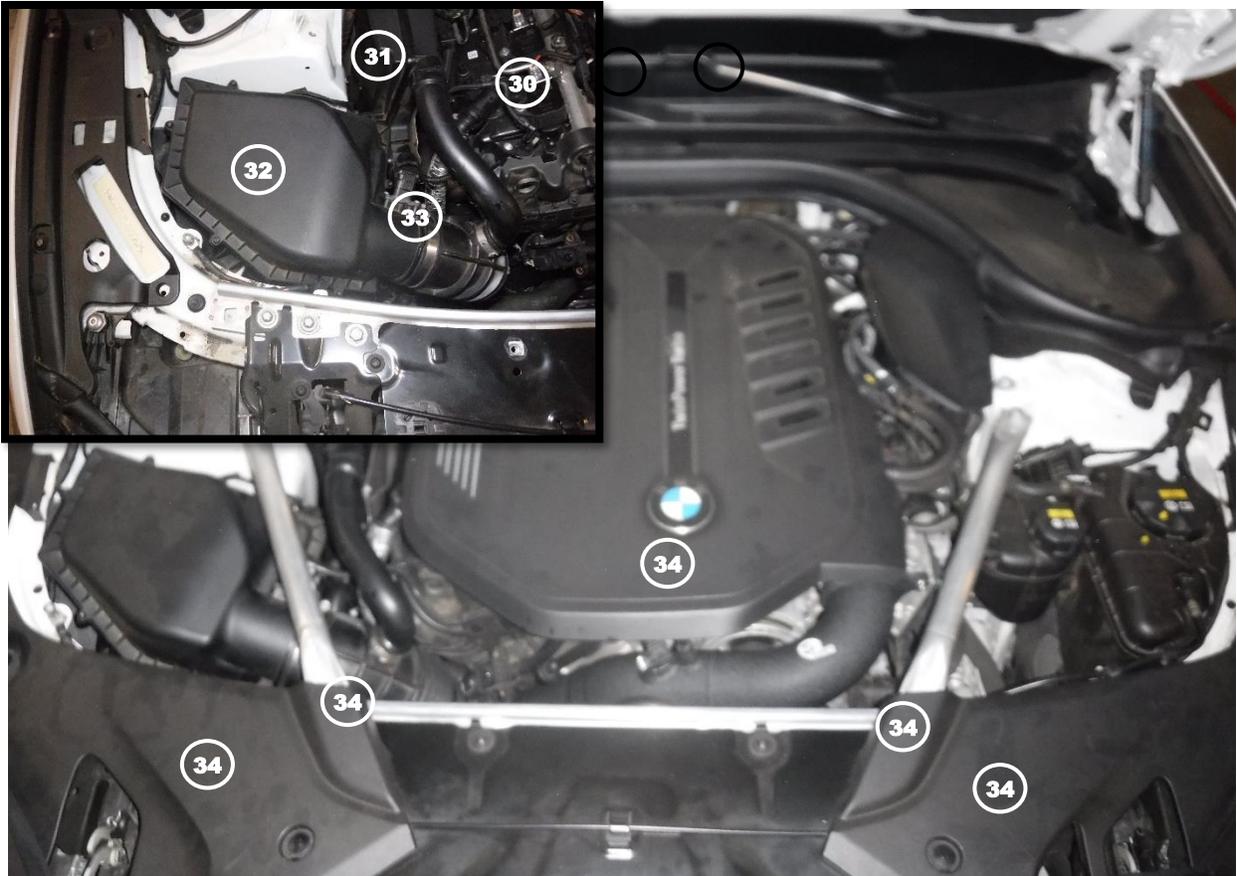


Note: Be sure to lubricate the O-ring with grease to prevent it from tearing during installation.

25. Install the supplied 55mm x 2mm O-ring into the groove on the inside of the supplied aFe turbo adaptor (17)
26. Install the factory retaining clip onto the aFe turbo adaptor (18)
27. Install the aFe turbo adaptor onto the turbo and ensure the retaining clip snaps all the way into the groove on the turbo (19)
28. Install the supplied aFe silicone elbow coupling 2.5"ID x 90Deg and one 2.75" - 3" spring-loaded T-Bolt clamp onto the aFe turbo adaptor (20) then tighten the clamp.
29. Place the remaining clamp onto the end of the coupling from the previous step.
30. Install the aFe hot side charge pipe (21) into the vehicle by first connecting it to the coupling then lining up the flange with the throttle body.



31. Secure the aFe charge pipe to the throttle body using the supplied M6x1x25 screw with M6 washers (22)
32. Ensure the afe charge pipe is not touching anything and tighten the clamp (23)
33. Reconnect the MAP sensor connector and engage the security tab (24)
34. Reconnect the temperature sensor connector and engage the security tab (25)
35. Reinstall the clip onto the air intake tube (26) then slide the tube onto the turbo along with the resonator.
36. Reconnect the vacuum line to the air intake tube (27) ensure it snaps into place.
37. Reconnect the wire harness and plug in the sensor on the air intake tube (28)
38. Reconnect the turbo sensor and secure the cover cover over the sensor (29)



39. Reconnect the PCV line to the valve cover (30)
40. Ensure the resonator box is secured into its grommets (31)
41. Install the air box into the vehicle and secure the air intake tube to it (32)
42. Reconnect the air intake sensor connector and engage the security tab (33)
43. Secure the air box to the resonator using the factory screw.
44. Reinstall the engine cover, strut bars, and plastic covers (34)
45. Reconnect the negative battery cable.
46. Install is now complete.

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

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