



***advanced FLOW engineering***

**Instruction Manual** P/N: 46-20488-B/R

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BladeRunner – Charge Pipe Kit

Make: Toyota

Model: Supra

Year: 2021-2024

Engine: L4 – 2.0L(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: 46-20488                    | 05-61190    |
| B     | 1    | Coupling, Silicone Elbow: 2.5"ID x 45 Deg   | 05-60436    |
| C     | 2    | Clamp, Spring Loaded T-Bolt: 2.85" Dia      | 05-60039    |
| D     | 1    | Adaptor: 46-20488                           | 05-61193    |
| E     | 1    | O-Ring, 50mm ID x 2.5mm W                   | 05-60041    |
| 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)             | 03-50178    |
| 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, T20 Torx socket, T30 Torx socket, 19mm wrench, 6" extension, ratchet, pick, & thread sealant.

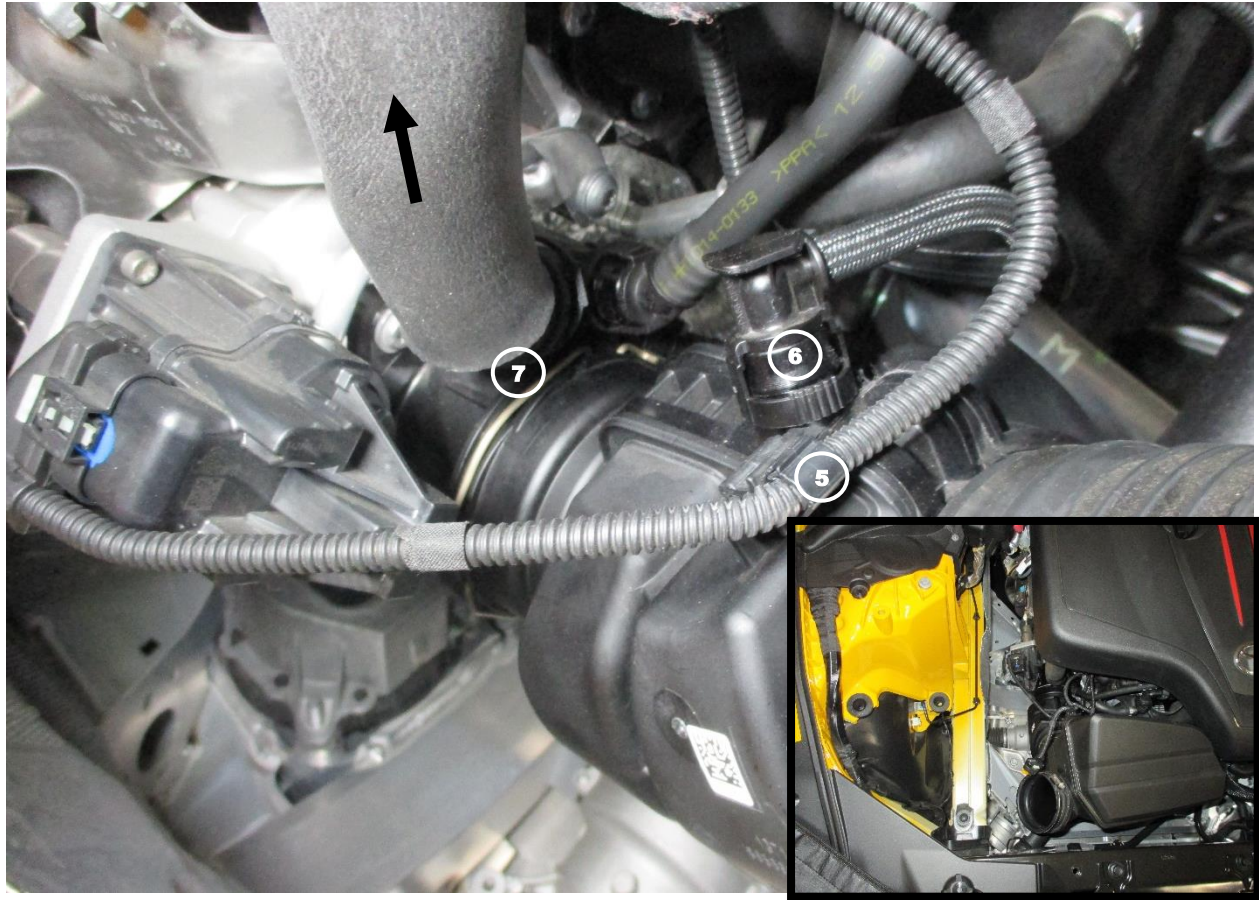
Warranty Information available at <https://afepower.com/contact#warranty>

**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.**



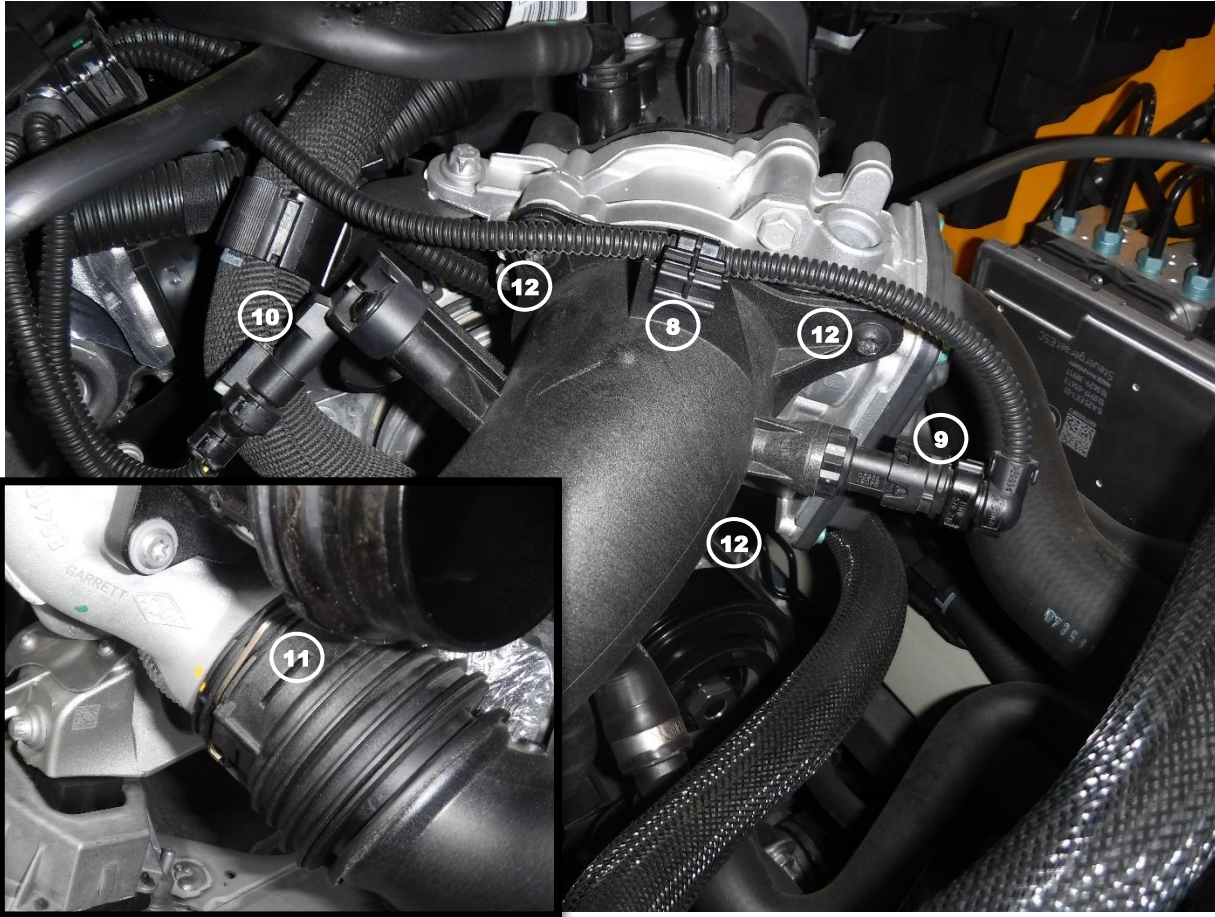


1. Park vehicle on level ground and engage the parking brake.
2. Disconnect the negative battery cable.
3. Remove the engine cover from the vehicle by lifting straight up on each of the four corners  
① disconnecting it from the mounting pegs.
4. Release the security tab and disconnect the air intake sensor from the air box ②
5. Loosen the clamp securing the air intake tube onto the air box ③
6. 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 ④



7. Disconnect the wire harness from the air intake tube (5).
8. Disconnect the crank case breather line from the air intake tube (6) by squeezing the ribbed areas on the clip then pulling the connection apart.
9. Remove the clip securing the air intake tube to the turbo (7), then remove the tube from the vehicle.





10. Disconnect the wire harness from the factory charge pipe (8)
11. Release the security tab and disconnect the temperature sensor from the charge pipe (9)
12. Release the security tab and disconnect the MAP sensor from the charge pipe (10)
13. Remove the retaining clip securing the charge pipe to the turbo (11)
14. Remove the 3 screws securing the charge pipe to the throttle body (12) then remove the tube from the vehicle.



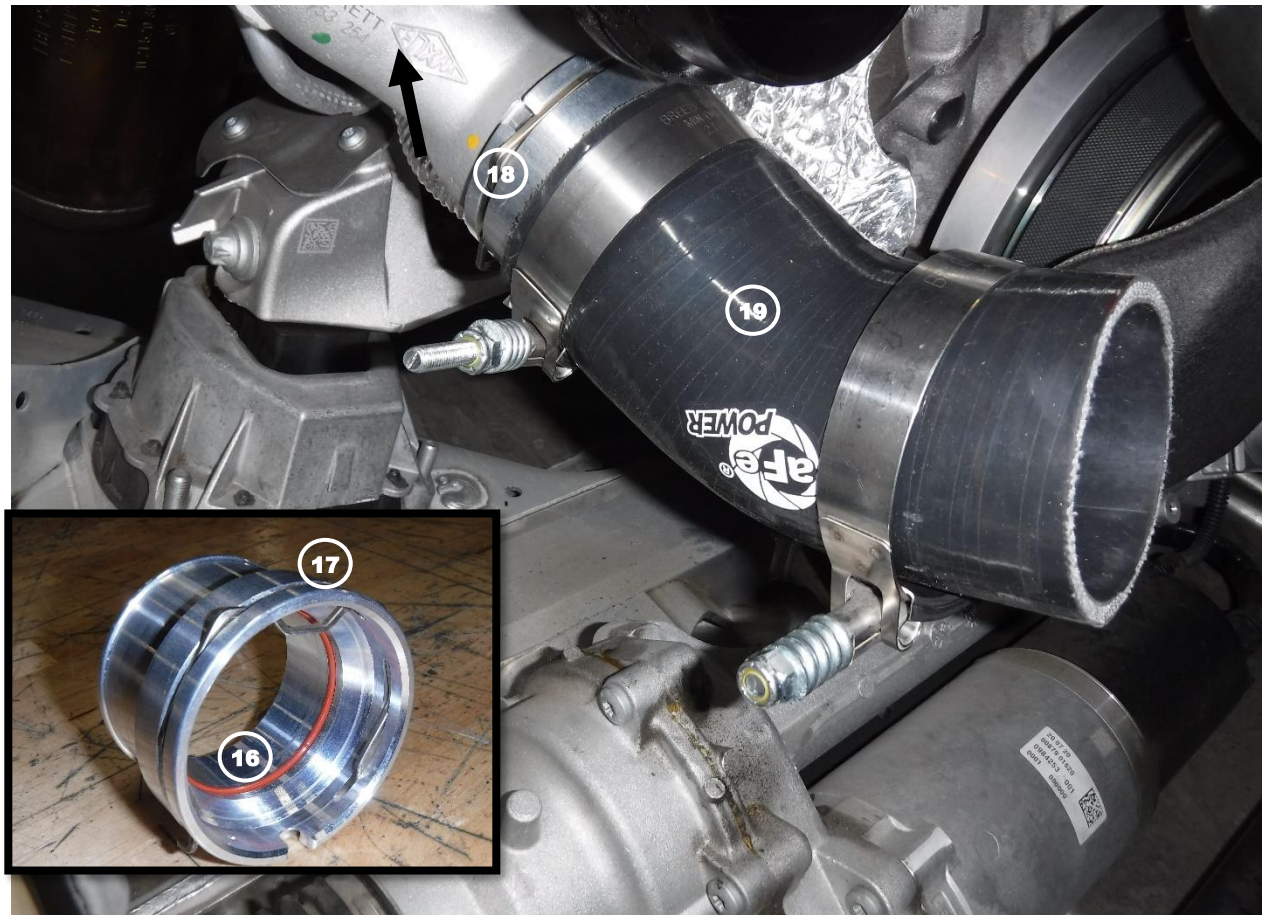
**Note: Be sure to lubricate the O-rings with grease to prevent them from tearing during installation.**

15. Transfer the temperature sensor from the factory charge pipe to the supplied aFe charge pipe (13)
16. Transfer the MAP sensor from the factory charge pipe to the aFe charge pipe (14).
17. 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.**

18. If you are not using any aftermarket sensors, install the supplied 1/8" NPT plugs (15) into the threaded fittings on the aFe charge pipe.

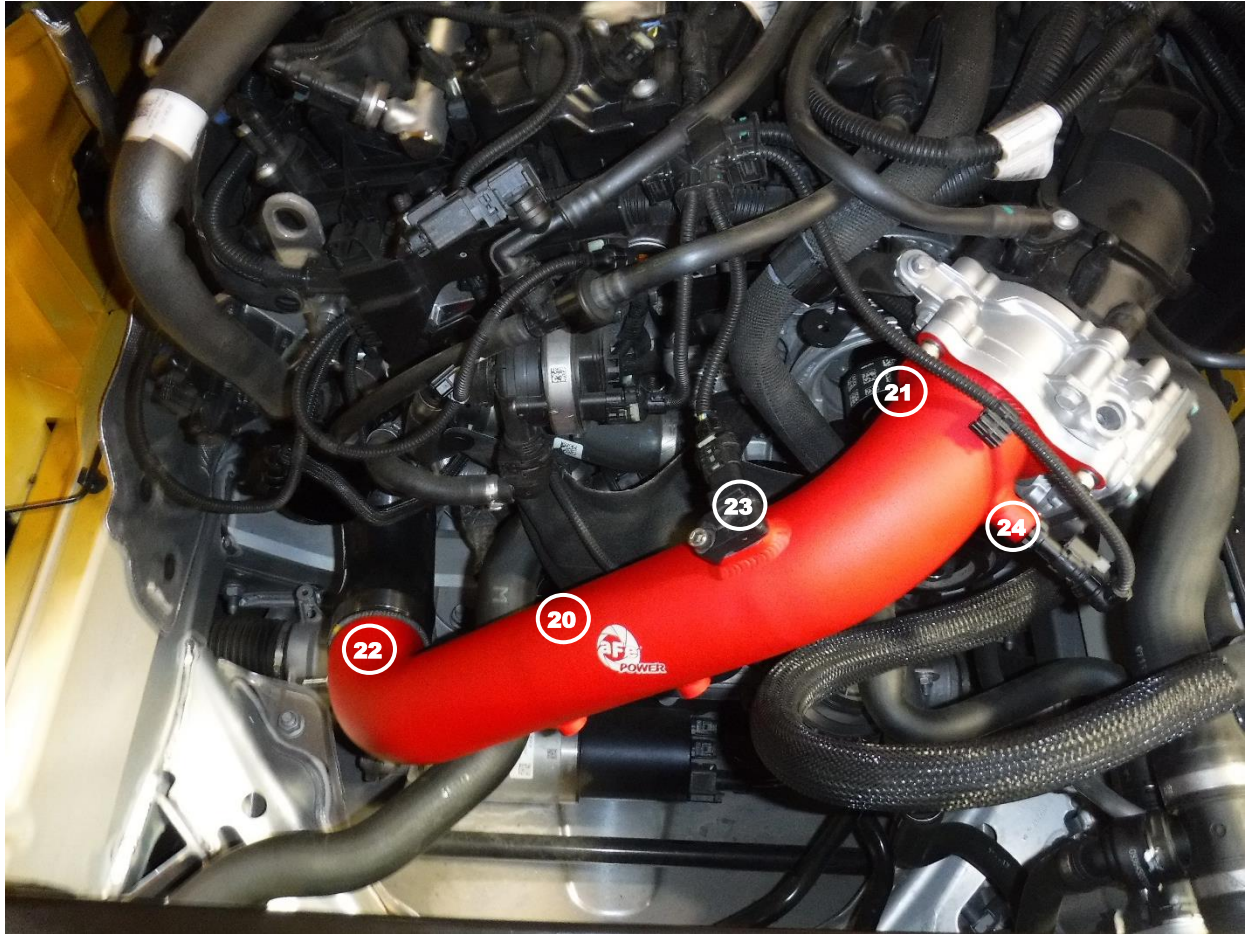




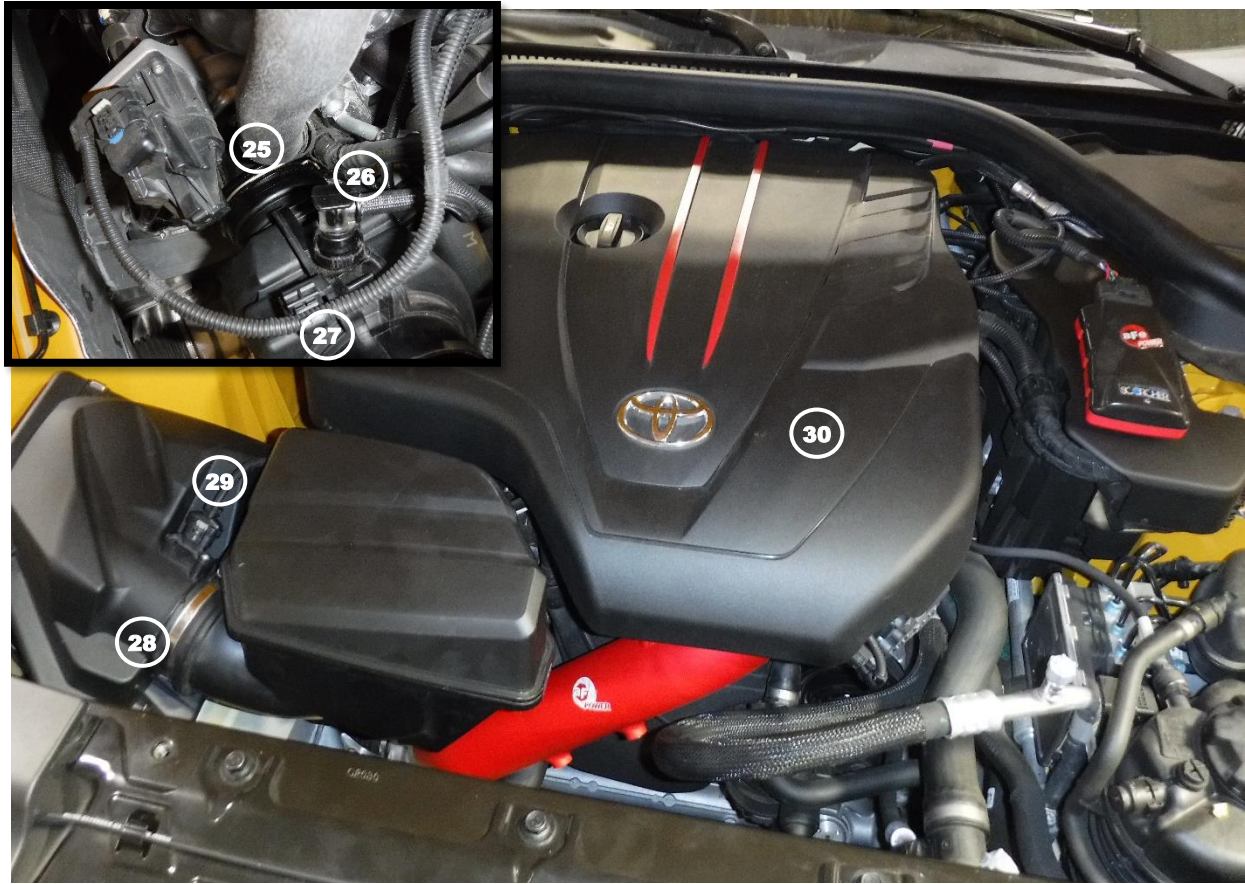
**Note: Be sure to lubricate the O-ring with grease to prevent it from tearing during installation.**

19. Install the supplied 50mm x 2.5mm O-ring into the groove on the inside of the supplied aFe turbo adaptor (16)
20. Install the factory retaining clip onto the aFe turbo adaptor (17)
21. Install the aFe turbo adaptor onto the turbo and ensure the retaining clip snaps all the way into the groove on the turbo (18)
22. Install the supplied aFe silicone elbow coupling 2.5"ID x 45Deg and one 2.85" spring-loaded T-Bolt clamp onto the aFe turbo adaptor (19) then tighten the clamp.
23. Place the remaining clamp onto the end of the coupling from the previous step.





24. Install the aFe hot side charge pipe (20) into the vehicle by first connecting it to the coupling then lining up the flange with the throttle body.
25. Secure the aFe charge pipe to the throttle body using the supplied M6x1x25 screw with M6 washers (21).
26. Ensure the afe charge pipe is not touching anything and tighten the clamp (22).
27. Reconnect the MAP sensor connector and engage the security tab (23).
28. Reconnect the temperature sensor connector and engage the security tab (24).



29. Install the air intake tube into the vehicle and secure it to the turbo using the factory clip (25) ensure the clip is locked into the groove on the turbo.
30. Reconnect the crank case breather line to the air intake tube (26)
31. Reconnect the wire harness to the air intake tube (27)
32. Install the air box into the vehicle and secure the air intake tube to it (28)
33. Reconnect the air intake sensor connector and engage the security tab (29)
34. Reinstall the engine cover (30)
35. Reconnect the negative battery cable.
36. Install is now complete.

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

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