



## ***advanced FLOW engineering***

### **Instruction Manual P/N: 46-20454-B**

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#### **BladeRunner – Charge Pipe Combo Kit**

Make: <b>GM</b>	Model: <b>Sierra / Silverado</b>	Year: <b>20 - 24</b>	Engine: <b>L6 – 3.0L(td)</b>
Make: <b>Cadillac</b>	Model: <b>Escalade</b>	Year: <b>21 - 23</b>	Engine: <b>L6 – 3.0L(td)</b>
Make: <b>GM</b>	Model: <b>Suburban / Yukon XL</b>	Year: <b>21 - 23</b>	Engine: <b>L6 – 3.0L(td)</b>
Make: <b>GM</b>	Model: <b>Tahoe / Yukon</b>	Year: <b>21 - 23</b>	Engine: <b>L6 – 3.0L(td)</b>



- 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 46-20454-B	05-61144B
B	1	Coupling, Silicone Elbow: 2-3/8" 90 Deg	05-61145
C	1	Coupling, Silicone: 2-3/8" 126 Deg	05-61143
D	4	Clamp, SmartSeal, 044 (2-1/2" - 3-1/16")	03-50656
E	1	Clamp, Mini 008 (1/2" - 29/32")	03-50077
F	1	Fitting, Hex to 1/2" Hose, 1/8" NPT	05-61146
G	2	Plug, Hex Hd Socket: 1/8" NPT	03-50029
H	1	O-Ring, 55mm ID x 2.5mm W	05-61150

**Installation will require the following tools:**

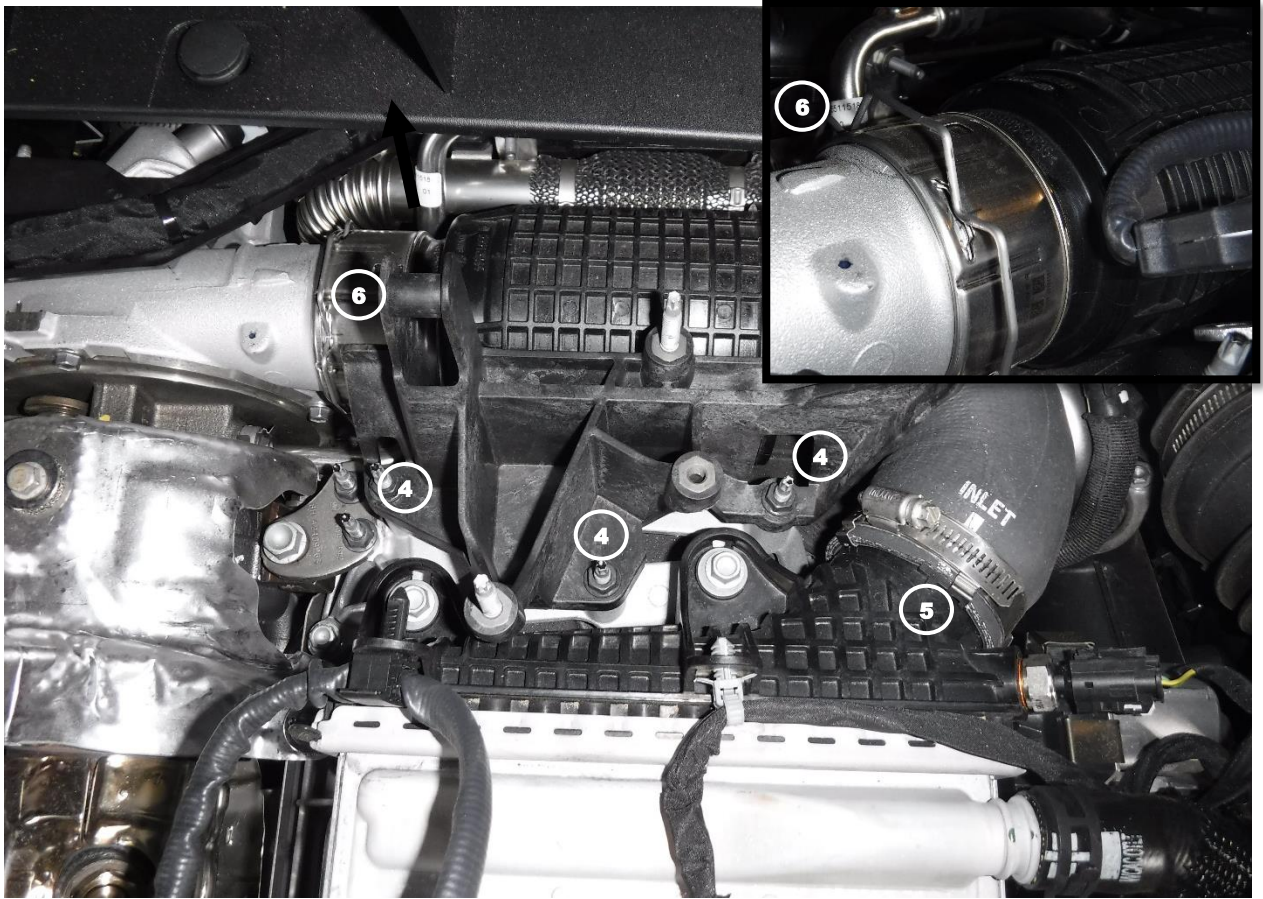
7mm socket, 8mm socket, 10mm deep socket, 3/16" allen wrench, 6" extension, ratchet, pick, flat head screwdriver, thread sealant, grease.

**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.**



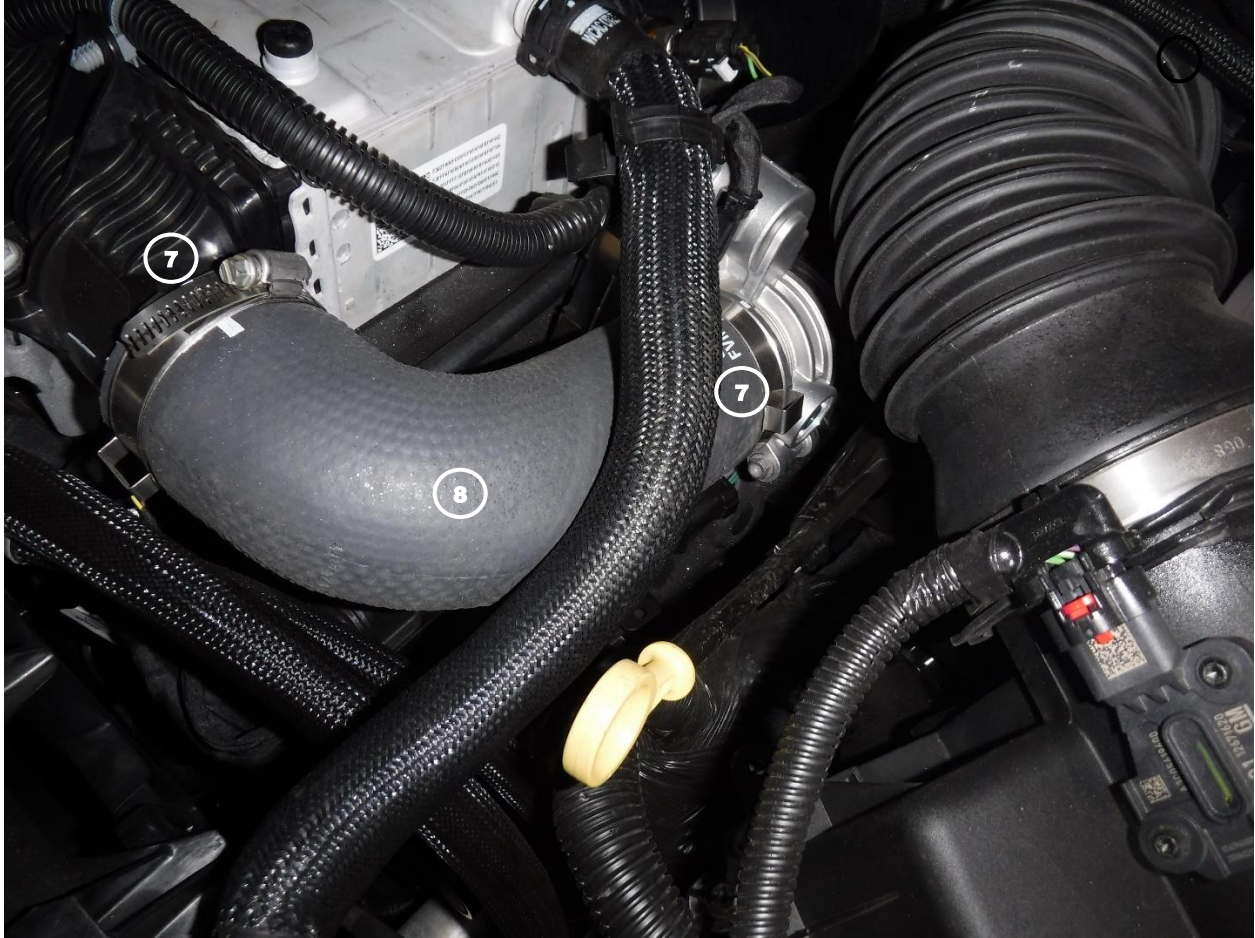


1. Park vehicle on level ground and engage the parking brake.
2. Disconnect the negative battery cable.
3. Loosen the screw securing the engine cover ① to the engine
4. Remove the oil fill cap ② from the engine, remove the engine cover from the vehicle and reinstall the oil fill cap onto the engine.
5. Remove the two (2) nuts securing the sensor onto the engine cover bracket ③ and place the sensor to the side, do not disconnect the sensor.



6. Remove the three (3) nuts securing the engine cover bracket to the engine (4) and remove the bracket from the engine.
7. Loosen the clamp securing the factory hot side charge pipe hose onto the intercooler (5).
8. To disconnect the factory charge pipe from the turbo outlet you will need to lift both sides of the retaining clip that secures the charge pipe to the turbo outlet using two flat head screwdrivers and pull the charge pipe off of the turbo outlet at the same time (6).
9. Remove the factory charge pipe from the vehicle.





10. Loosen the clamps securing the factory cold side charge pipe hose to the intercooler and engine inlet (7).

11. Remove the factory charge pipe hose from the vehicle (8).



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

12. Gently lift the metal retainer up enough to slide the retaining clip out of the factory charge pipe and remove the clip (9).

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

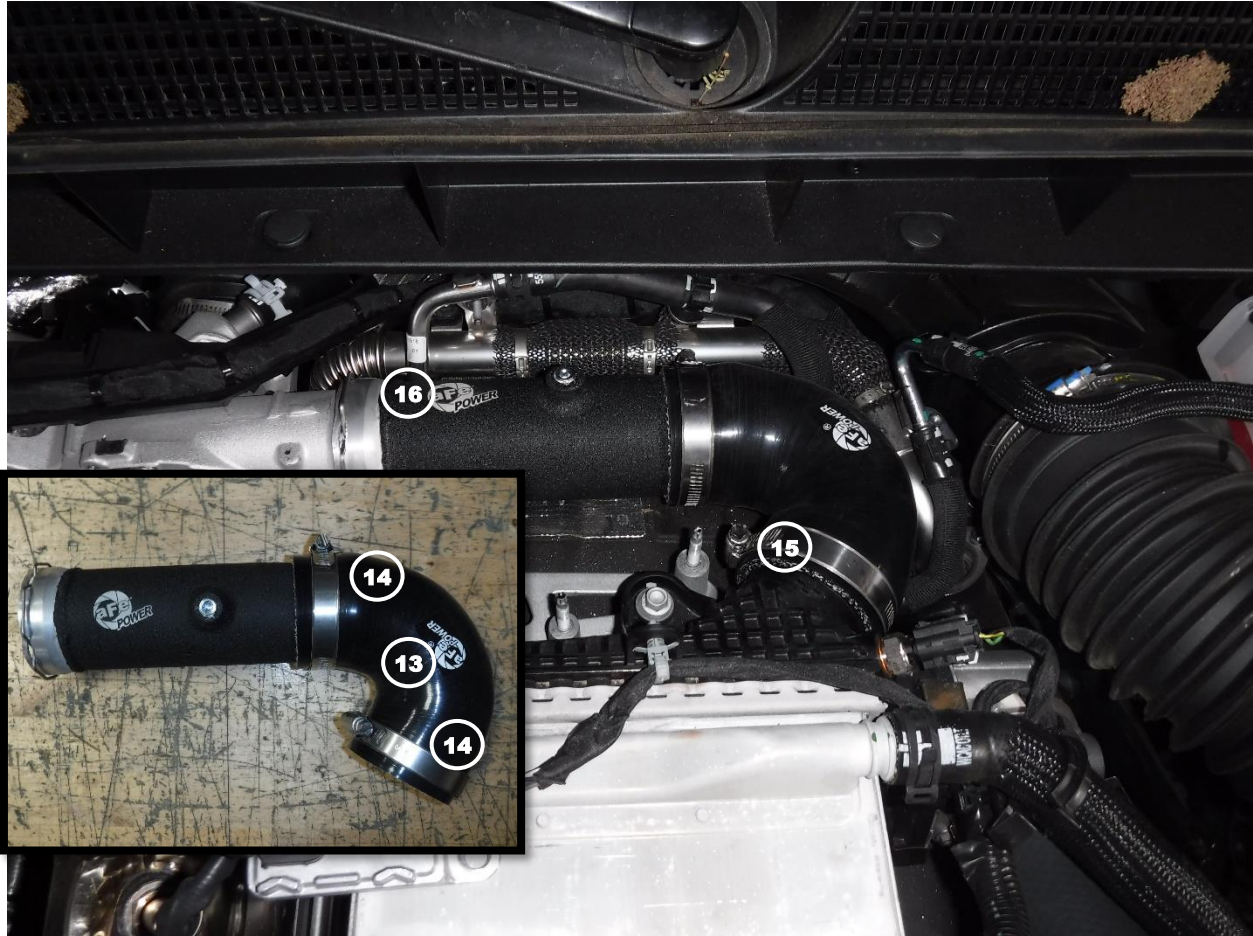
13. If you are not using any aftermarket sensors, install the supplied 1/8" NPT plug (10) into the threaded fitting on the aFe hot side charge pipe.



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

14. Install the supplied 55mm x 2.5mm O-ring into the groove (11) on the aFe hot side charge pipe turbo adapter as shown above.
15. Install the factory retaining clip, removed from Step 12, onto the aFe hot side charge pipe turbo adapter (12)





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

16. Install the supplied aFe silicone elbow coupling, 2-3/8" 126 Deg, (13) and two (2) of the supplied SmartSeal, 044 (2-1/2" - 3-1/16") clamps (14) onto the aFe hot side charge pipe in the same orientation as the factory clamps, do not tighten the clamps yet.
17. Install the aFe hot side charge pipe with clamps and coupling into the vehicle. First connect the coupling to the intercooler (15), then connect the charge pipe to the turbo outlet (16) but do not tighten the clamps yet.
18. Ensure the retaining clip is clipped into the groove on the turbo outlet all the way around.
19. Ensure the aFe hot side charge pipe is not touching anything.
20. Tighten both clamps from Steps 16.



21. Install the supplied hex to 1/2" hose, 1/8" NPT fitting (17) to the port on the supplied aFe silicone elbow coupling, 2-3/8" 90 Deg (18)
22. Install the supplied Mini 008 (1/2" - 29/32") (19) onto the aFe silicone elbow coupling, 2-3/8" 90 Deg, and tighten the clamp.

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

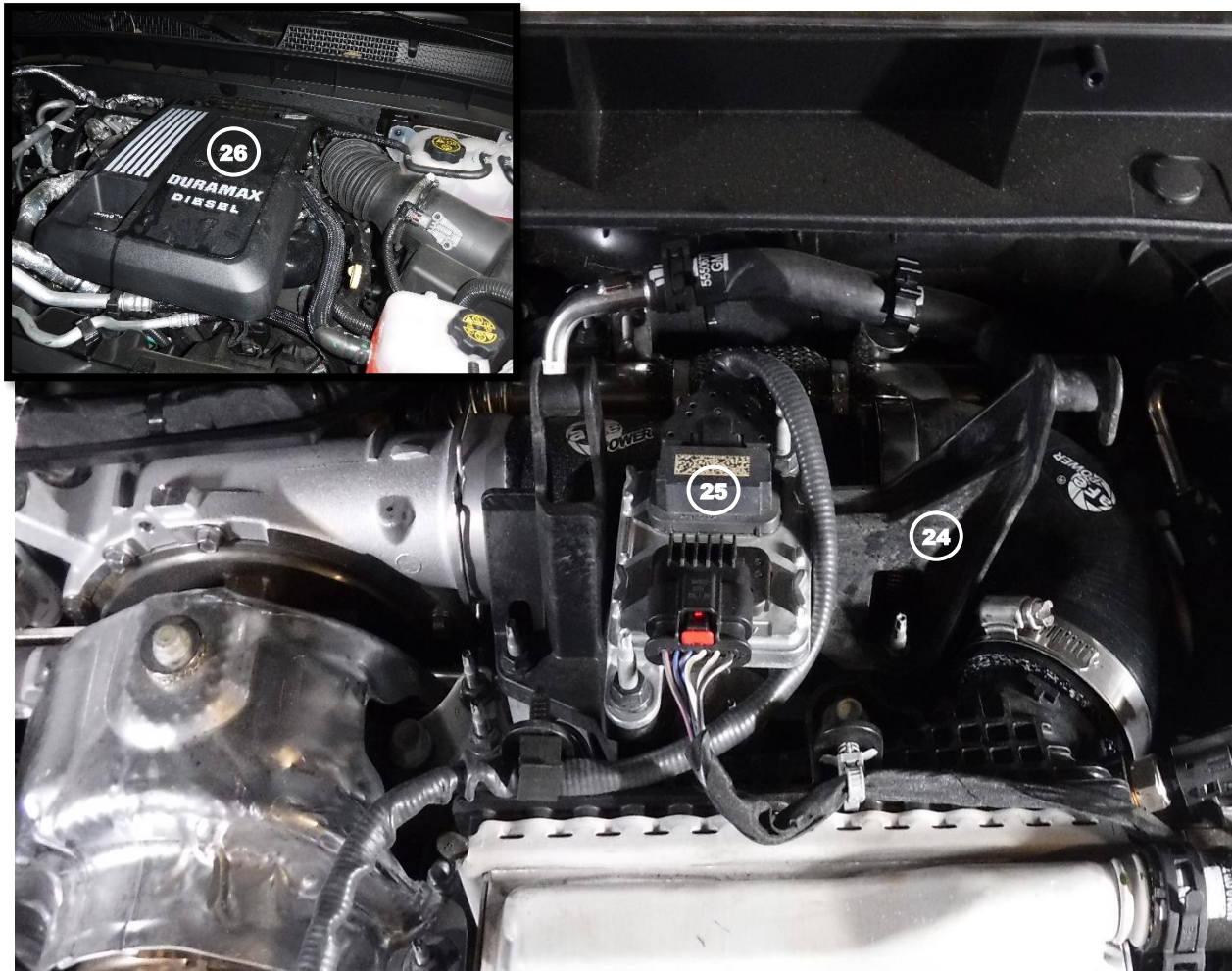
23. If you are not using any aftermarket sensors, install the 1/8" NPT plug (20) into the hex fitting from Step 21 while holding it with a 17mm wrench.





**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 aFe silicone elbow coupling, 2-3/8" 90 Deg, (21) and two (2) of the SmartSeal, 044 (2-1/2" - 3-1/16") clamps into the vehicle. First connect the coupling to the engine inlet (22) and then connect the coupling to the intercooler (23) do not tighten the clamps yet.
25. Ensure the aFe silicone elbow coupling, 2-3/8" 90 Deg, is not touching anything.
26. Tighten both clamps from Step 24.



27. Reinstall the engine cover bracket (24) into the vehicle and secure with the factory nuts.
28. Reinstall the sensor (25) onto the engine cover bracket and secure with the factory nuts.
29. Remove the oil fill cap
30. Reinstall the engine cover (26) onto the vehicle and secure using the factory screw, then reinstall the oil fill cap.
31. Reconnect the negative battery cable.
32. Install is now complete.

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



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***advanced FLOW engineering, inc.***

Corona, CA 92879

[aFepower.com](http://aFepower.com)