



# advanced FLOW engineering

## Instruction Manual P/N: 46-20598-B

 BladeRunner – Hot Side Charge Pipe Kit

 Make: Ram
 Model: 1500

 Year: 2020-2022
 Engine: V6–3.0L(td)



- 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
А	1	Tube, Hot Side Upper	05-61282B
В	1	Tube, Hot Side Lower	05-61283B
С	1	Coupling, Silicone Hump: 2-3/4"ID x 7"L w/Int Bead	05-60382
D	2	Clamp, Spring Loaded T-Bolt: 3.00"	05-60435
Е	1	O-Ring, Viton (-226)	05-61036
F	1	O-Ring, 60mm ID x 4mm W	05-60615
G	1	Plug,1/8" NPT	03-50029

#### Installation will require the following tools:

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

<u>Note: Legal in California for use on race vehicles only. The use of this device on vehicles used on public</u> <u>streets or highways is strictly prohibited in California and others states that have adopted California</u> <u>emission regulations</u>



A



- 1. Park vehicle on level ground and engage the parking brake.
- 2. Disconnect the negative battery cable.
- 3. Remove the engine cover (1) by removing the two screws securing it to the engine, then lift and pull forward to remove the engine cover from the vehicle.
- 4. Remove the screw securing the air intake tube to the engine (2)
- 5. Disconnect coolant over flow hose (3) from the air intake tube.
- 6. Loosen the two clamps securing the air intake tube onto the air box and the turbo inlet tube



- 7. Disconnect the Positive Crankcase Ventilation (PCV) wire harness (5) from the air intake tube.
- 8. Disconnect the PCV hose from the engine 6 by squeezing the ribbed areas on the connector, then pulling it off of the engine.
- 9. Disconnect the air intake tube from the mounting pin on the charge pipe by lifting up on the air intake tube and holding the pin in its place.
- 10. Remove the air intake tube from the vehicle.



- 11. Remove the screw securing the hot side charge pipe to the engine 3
- 12. Release the retaining clip securing the hot side charge pipe to the turbo outlet tube (9) by opening the clip from the raised portions on the clip and disconnect.
- 13. Release the retaining clip securing the hot side charge pipe to the intercooler 10 from underneath the vehicle.
- 14. Remove the hot side charge pipe from the vehicle from the top.



- 15. Remove the air intake grommet from the mounting pin(1) if it is still connected and set it asside to be installed later.
- 16. Unscrew the mounting pin from the factory charge pipe 12 and set it asside to be installed later
- 17. The plastic retainers will need to be removed from the charge pipe by standing it up on the end with the metal adaptor and tapping it down on either side of the plastic retainer 13
- 18. Once the plastic retainers are removed, remove the metal retaining clips for reuse with the aFe charge pipes.



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

- 19. If you are not using any aftermarket sensors, install the supplied 1/8'' NPT plug 14 into the threaded fitting on the upper aFe hot side charge pipe.
- 20. Install the factory clips 15 onto the corresponding ends of the aFe hot side charge pipes in the same orientation as removed from the factory charge pipes.

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

- 21. Install the supplied -226 O-ring 16 into the groove on the inside of the upper aFe hot side charge pipe.
- 22. Install the factory air intake mounting pin(17) onto the upper aFe hot side charge pipe.



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

- 23. Install the supplied 60mm ID x 4mm W 18 O-ring into the groove on the inside of the lower aFe hot side charge pipe.
- 24. Install supplied aFe silicone hump coupling, 2.75"x 7"L w/int bead and one of the 3.00" spring-loaded t-bolt clamps 19 onto the end of the lower aFe hot side charge pipe 20 do not tighten the clamp yet. Be sure the bead on the inside of the coupling pops into the groove on the end of the lower aFe hot side charge pipe.
- 25. Install the lower aFe hot side charge pipe (21) onto the intercooler from underneath the vehicle, be sure the retaining clip snaps into place all the way around.



- 26. Install the upper aFe hot side charge pipe with one  $3.00^{"}$  t-bolt clamp into the vehicle, first connect it to the coupling from step 24, then connect it to the turbo outlet 22
- 27. Ensure sure the retaining clip at the turbo connection snaps into place all the way around.
- 28. Install the factory mounting screw into the mounting hole for the charge pipe (23) the mounting bracket may need to be adjusted to line up properly.
- 29. Tighten all of the clamps.



- 30. Install the factory air intake tube mounting grommet into the intake tube 24
- 31. Install the air intake tube into the vehicle.
- 32. Install the mounting screw for the air intake (25) then secure it to the mounting pin and tighten the clamps.
- 33. Reconnect the PCV wire harness to the sensor 26
- 34. Reconnect the PCV hose to the engine 27



- 35. Reconnect the coolant overflow hose to the intake tube (28)
- 36. Reinstall the engine cover 29 onto the vehicle.
- 37. Reconnect the negative battery cable.
- 38. Install is now complete.

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

This Page Was Left Intentionally Blank

This Page Was Left Intentionally Blank

This Page Was Left Intentionally Blank



### advanced FLOW engineering, inc.

252 Granite Street Corona, CA 92879 TEL: 951.493.7100 • TECH: 951.493.7100 x23 E-Mail:Tech@aFepower.com

> 46-20598-B 12/15/2022 KF