



advanced FLOW engineering

Instruction Manual P/N: 46-20434-B

BladeRunner – Charge Pipe Kit

Make: **Jeep** Model: **Wrangler JL** Year: **2020-2021** Engine: **V6 – 3.0L(td)**

Make: **Jeep** Model: **Gladiator JT** Year: **2021** 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
A	1	Tube, Hot Side	05-61115B
B	1	Tube, Cold Side	05-61116B
C	1	Coupling, Silicone Reducer: (2-1/2" x 2") x 76 Deg	05-61117
D	1	Coupling, Silicone Reducer (2-1/2" x 2") x 86 Deg	05-61118
E	4	Clamp, Smart Seal, 044 (2-1/2" - 3-1/16")	03-50656
F	2	Plug, Hex Hd Socket: 1/8" NPT	03-50613
G	1	O-Ring, Buna-N (-226)	05-61036
H	1	O-Ring, 60mm ID x 4mm W	05-60615
I	2	Spacer: 22mm OD x 30mm L	05-60435
J	2	Screw, Hex Flange: M6 x 1.0 x 50	03-50661

Installation will require the following tools:

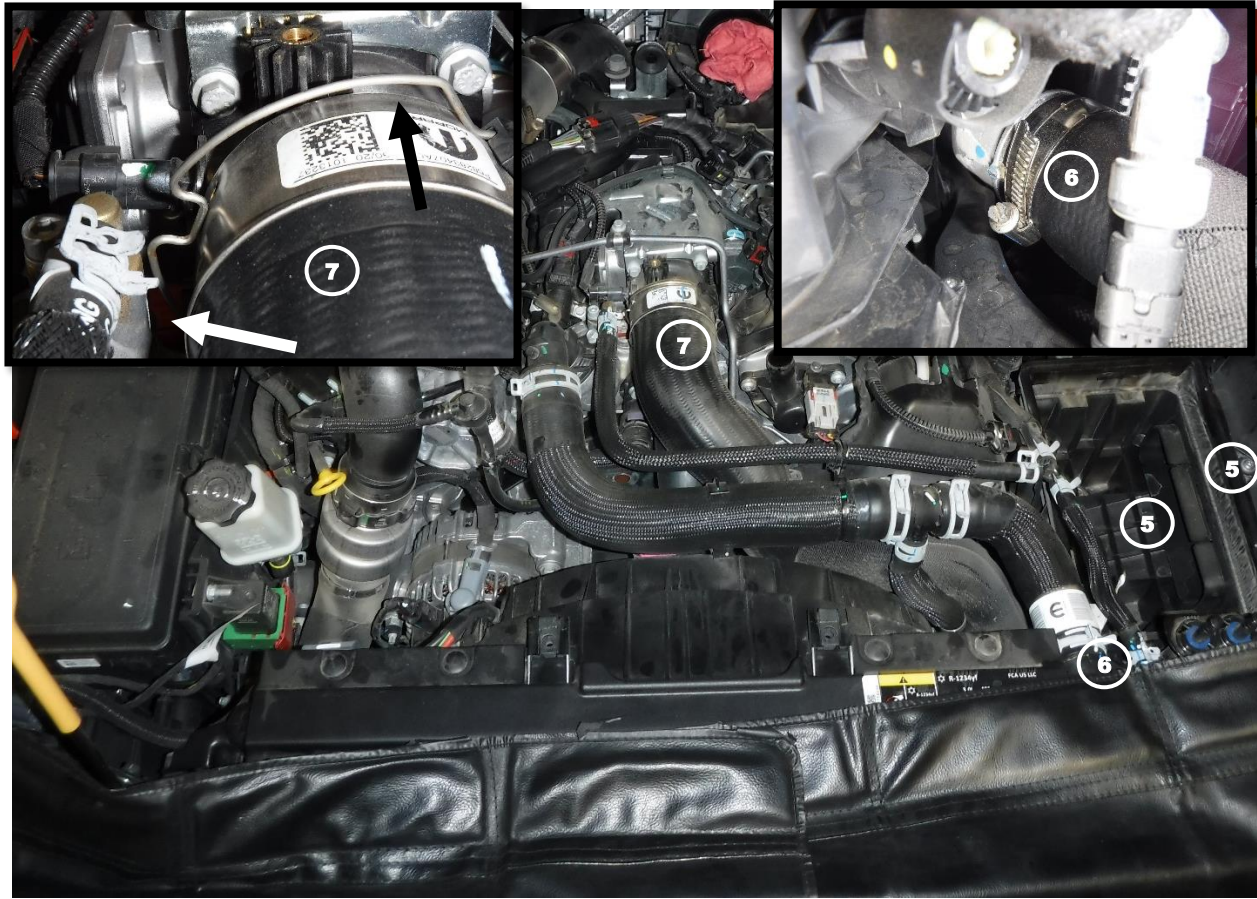
7mm socket, 8mm socket, 10mm socket, 14mm socket, 3/16" allen wrench, 6" extension, ratchet, pick, flat head screwdriver, thread sealant, grease

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.





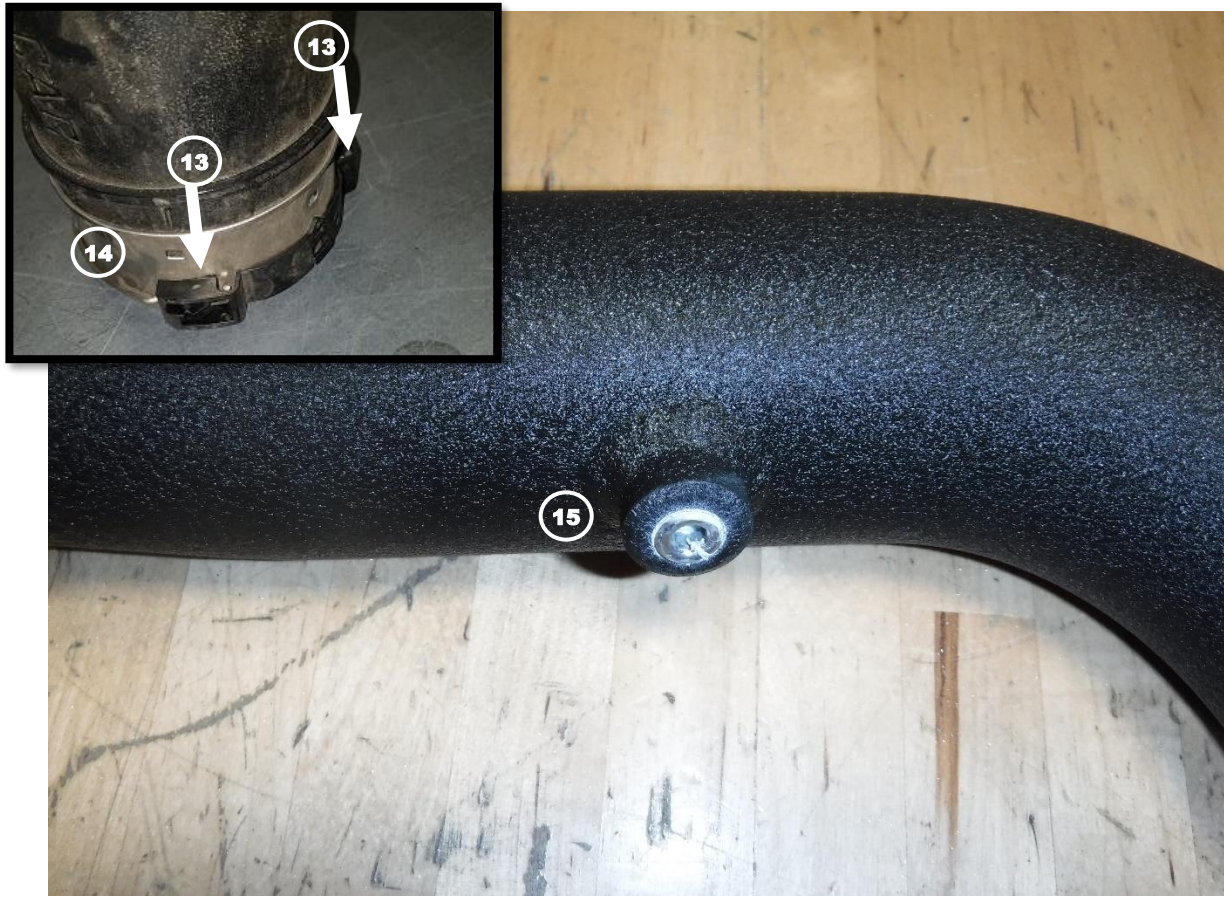
1. Park vehicle on level ground and engage the parking brake.
2. Disconnect the negative battery cable.
3. Remove the two (2) screws securing the engine cover (1) to the engine then pull forward then up and out of the vehicle.
4. Disconnect the Mass Air Flow (MAF) sensor electrical connector (2) from the air intake tube.
5. Loosen the four (4) screws securing the air box cover onto the lower half of the air box (3)
6. Gently spread the clip (4) securing the rubber portion of the air intake tube to the air box cover and separate the tube from the cover and carefully remove the cover from the vehicle.



7. Remove the screw securing the bottom of the air box to the vehicle then, lift the bottom of the air box (5) up and out of the vehicle.
8. Loosen the clamp securing the factory cold side charge pipe hose onto the intercooler (6) and disconnect the hose from the intercooler.
9. To disconnect the factory charge pipe from the engine inlet you will need to lift both sides of the retaining clip that secures the charge pipe to the engine inlet using two flat head screwdrivers and pull the charge hose off the engine inlet at the same time (7).
10. Remove the factory charge pipe from the vehicle.



11. Release the retaining clip from the vacuum line that crosses the charge pipe by spreading the green taps and pressing them back, then disconnect the vacuum hose from the sensor (8).
12. Unclip the hose retainer securing the vacuum hose to the coolant hose (9).
13. Remove the screw securing the hot side charge pipe to the engine (10).
14. Loosen the clamp securing the factory hot side charge pipe onto the intercooler (11) and disconnect it from the intercooler.
15. Release the retaining clip securing the hot side charge pipe to the turbo outlet (12) then remove the charge pipe from the vehicle.



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

16. Stand the factory charge pipe up on the end with the metal adapter.
17. The plastic clip will need to be removed from the charge pipe by tapping it downwards on each side (13)
18. Once the plastic clip is removed you can now remove the metal retaining clip (14) for reuse with the aFe charge pipe.

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 plugs (15) into the threaded fittings on the both of the aFe charge pipes.



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

20. Install the supplied Bunna N (-226) O-ring into the groove (16) on the aFe hot side charge pipe turbo adapter as shown above.
21. Install the factory retaining clip, removed from Step 18, onto the aFe hot side charge pipe turbo adapter (17)



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

22. Install the supplied aFe silicone elbow reducer coupling, 2.50"x 2"x 76 Deg, and one of the supplied Smart Seal, 044 (2-1/2" - 3-1/16") clamps onto the aFe hot side charge pipe, do not tighten the clamp yet.
23. Install the aFe hot side charge pipe and one Smart Seal, 044 (2-1/2" - 3-1/16") clamps into the vehicle (18) first connect the charge pipe to the turbo outlet (19) and then to the intercooler, do not tighten the clamp yet.
24. Ensure the retaining clip is clipped into the groove on the turbo outlet all the way around.
25. Ensure the aFe hot side charge pipe is not touching anything.
26. Secure the aFe hot side charge pipe to the engine using the factory hardware (20)
27. Tighten both clamps from Steps 22 and 23.
28. Reconnect the vacuum hose (21) from Step 12.



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

29. Install the supplied 60mm ID x 4mm W O-ring into the groove (22) on the supplied aFe cold side charge pipe engine inlet adapter as shown above.
30. Install the factory retaining clip onto the aFe cold side charge pipe adapter (23)



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 supplied aFe silicone elbow reducer coupling, 2.50"x 2" 86 Deg, and one of the Smart Seal, 044 (2-1/2" - 3-1/16") clamps onto the aFe cold side charge pipe, do not tighten the clamp yet.
32. Install the aFe cold side charge pipe and one Smart Seal, 044 (2-1/2" - 3-1/16") clamp into the vehicle (24) first connect the charge pipe to the engine inlet (25) and then to the intercooler, do not tighten the clamp yet.
33. Ensure the retaining clip is clipped into the groove on the engine all the way around.
34. Ensure the aFe hot side charge pipe is not touching anything.
35. Tighten both clamps from Steps 31 and 32.



36. Install the lower half of the air box (26) into the vehicle
37. Install the top of the air box into the vehicle and reconnect the intake tube using the factory retaining clip (27) Tighten the four (4) screws to secure the cover to the lower air box.
38. Reconnect the electrical connection for the MAF sensor (28)
39. Remove the two (2) factory metal insert from the bottom side of the engine cover grommets (29)
40. Install the supplied aFe spacer: 22mm OD x 30mm L into the bottom side of the engine cover grommets (30)
41. Reinstall the engine cover (31) onto the vehicle and secure using the supplied M6x1x50mm hex flange screws.
42. Reconnect the negative battery cable.
43. Install is now complete.

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

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Warranty

General Terms:

- aFe warrants their products to be free from manufacturer’s defects due to workmanship and material.
- This warranty applies only to the original purchaser of the product and is non-transferrable.
- Proof of purchase of the aFe product is required for all warranty claims.
- Warranty is valid provided aFe instructions for installation and/or cleaning were properly followed.
- Proper maintenance with regular inspections of product is required to insure warranty coverage.
- Damage due to improper installation, abuse, unauthorized repair or alteration is not warranted.
- Incidental or consequential damages or cost, including installation and removal of part, incurred due to failure of aFe product is not covered under this warranty.
- All warranty is limited to the repair and/or replacement of the aFe part. To request Return Goods Authorization (“RGA”), email RGA@afepower.com or call (951)493-7100. Upon receipt of the RGA, you must return the product to the address provided in the RGA, freight prepaid and accompanied with a dated proof of purchase and the RGA. Upon receipt of the defective product and upon verification of proof of purchase, aFe will either repair or replace the defective product within a reasonable time, not to exceed thirty days.

<u>Product Category</u>	<u>P/N Prefix</u>	<u>Warranty duration</u>
Direct OE Replacement Filters	10, 11, 30, 31, 71, 73	Life of the vehicle
Racing Filters	18	1 year
Universal	21, 24, 72	2 years
Air Intake Systems	50, 51, 54, 55, 75	2 years
Exhaust Systems	49	2 years
Intercoolers & Intercooler Tubes	46-2	2 years
Intake Manifolds	46-1	2 years
Differential Cover	46-7	Life of the vehicle
Transmission Pans / Oil Pans	46-7	Life of the vehicle
Turbochargers	46-6	2 years
Exhaust Manifolds	46	2 years
Throttle Body Spacers	46-3	2 years
Fluid Filters	44	90 days
Pre-Filters	28	2 years
Heavy Duty OE Replacement	70	2 years
PowerSports OE Replacement	81,87	2 years
PowerSports Intake Systems	85	2 years

No other warranty expressed or implied applies nor is any person or advanced FLOW engineering authorized to assume

any other warranty. Some States do not allow the exclusion or limitation of incidental or consequential damages or do not allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.



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