



advanced FLOW engineering

Instruction Manual P/N: 46-20646-B

BladeRunner – Lower Hot Side Charge Pipe Kit

Make: Hyundai

Model: Veloster N

Year: 19 - 22

Engine: L4-2.0L(t)

Make: Hyundai

Model: Kona N

Year: 22- 23

Engine: L4-2.0L(t)



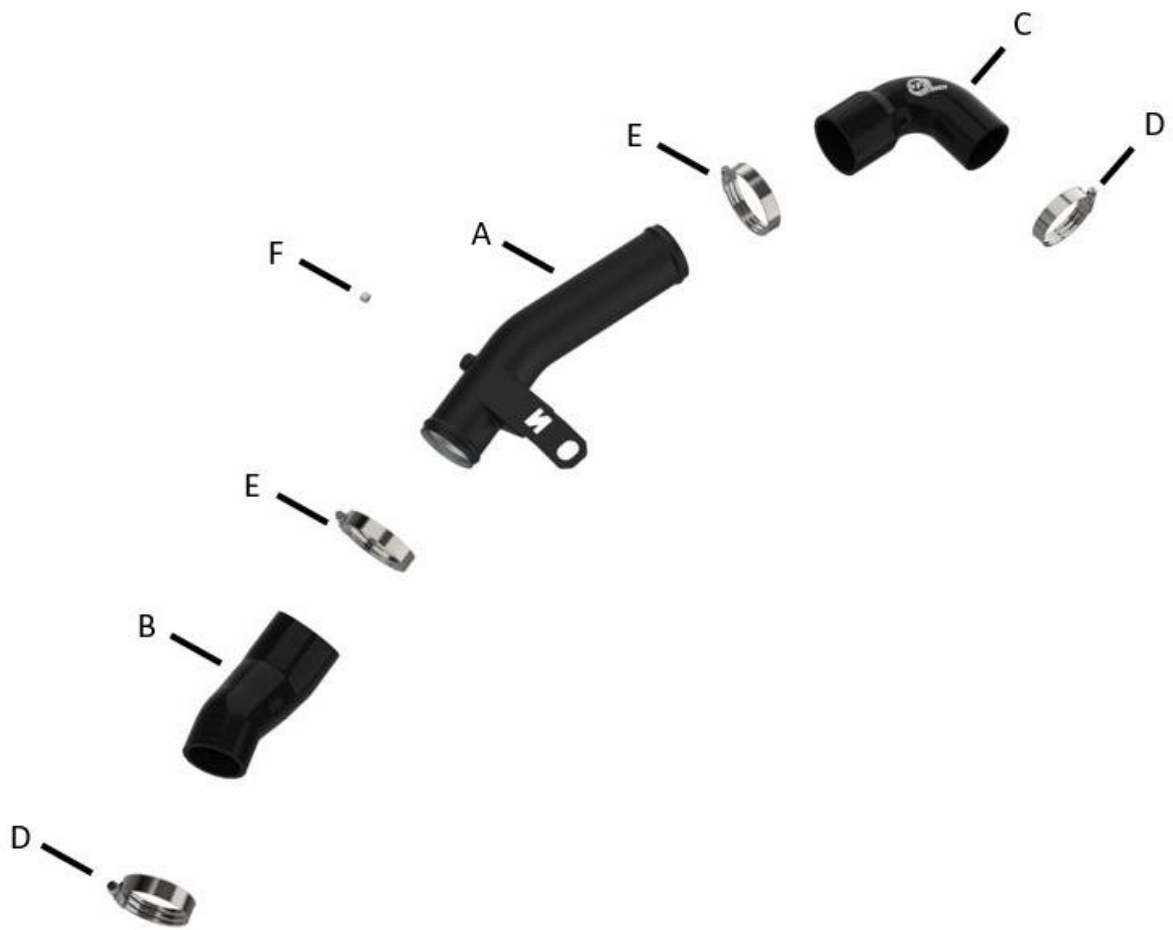
- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 951-493-7100.
- Ensure you have all necessary tools before proceeding.
- Do not attempt to work on your vehicle when the engine 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 Lower: 46-20646	05-61304B
B	1	Coupling, Silicone Dbl Elbow Rdr: 2.5" x 2"	05-61301
C	1	Coupling, Silicone Elbow Rdr: 2.5"ID x 2" x 90 Deg	05-60437
D	2	Clamp, SmartSeal, 032 (1.94" – 2.31")	03-50655
E	2	Clamp, SmartSeal, 044 (2.50" – 3.06")	03-50656
F	1	Plug, 1/8" NPT	03-50029

Installation will require the following tools:

8mm socket, 10mm socket, 3/16" allen wrench, ratchet, pick, flat head screwdriver, thread sealant

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 all of the screws and clips from belly pan and remove it from the vehicle ①
4. Remove the caps from the hose clamp screws and loosen the clamps securing the factory lower hot side charge pipe to the intercooler and to the upper hot side charge pipe ②
5. Remove the screw securing the lower hot side charge pipe to the engine ③ then remove it from the vehicle.



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

6. If you are not using any aftermarket sensors, install the supplied 1/8" NPT plug ④ into the threaded fitting on the supplied aFe lower hot side charge pipe.
7. Transfer the mounting grommet from the factory lower hot side charge pipe to the aFe lower hot side charge pipe in the same orientation as removed ⑤
8. Install the aFe silicone elbow reducer coupling, 2.50"x 2", ⑥ and one of the supplied 044 SmartSeal clamps onto the end of the aFe lower hot side charge pipe with the bracket, do not tighten the clamp yet.
9. Adjust the coupling in a similar direction as the factory hot side charge pipe.



Note: Be sure to thoroughly clean all oil residue off of the connections before installing the aFe charge pipe into the vehicle

10. Install the supplied aFe elbow reducer coupling, 2.5"ID x 2" x 90 Deg, onto the factory upper hot side charge pipe along with the one of the supplied 032 SmartSeal clamps ⑦ do not tighten the clamp yet.
11. Install the aFe lower hot side charge pipe into the vehicle from the bottom. Connect the end of the charge pipe to the aFe coupling from the previous step, along with one of the supplied 044 SmartSeal clamps ⑧ do not tighten the clamp yet.
12. Connect the aFe double elbow reducer coupling, 2.50"x 2", to the intercooler along with one of the supplied 032 SmartSeal clamps ⑨ do not tighten the clamp yet.
13. Adjust the couplings as necessary and be sure the aFe lower hot side charge pipe is not touching anything.
14. Secure the aFe lower hot side charge pipe to the engine using the factory screw ⑩
15. Tighten all of the clamps on the aFe lower hot side charge pipe.



16. Reinstall the belly pan (11)

17. Reconnect the negative battery cable.

18. Installation 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