



advanced FLOW engineering

Instruction Manual P/N: 46-20639-B

BladeRunner – Cold Side Charge Pipe Kit

Make: Hyundai	Model: Elantra GT	Year: 18 - 20	Engine: L4–1.6L(t)
Make: Hyundai	Model: Elantra	Year: 17 - 20	Engine: L4–1.6L(t)
Make: Hyundai	Model: i30 – Non-US	Year: 17 – 24	Engine: L4–1.6L(t)
Make: Kia	Model: Forte GT	Year: 19 – 24	Engine: L4–1.6L(t)



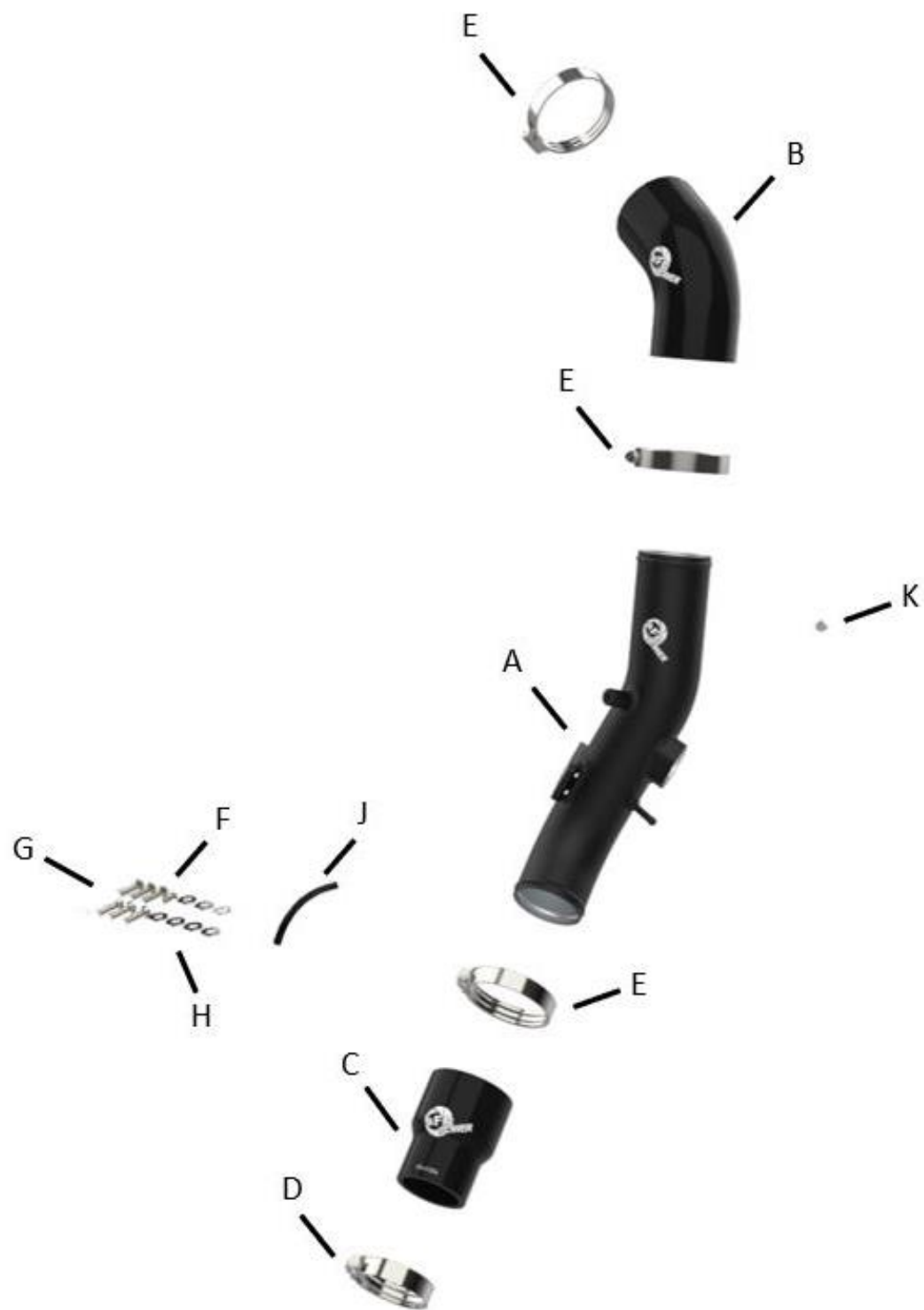
- Please read the entire instruction manual before proceeding.
- Ensure all components listed are present.
- If you are missing any of the components, call customer support at 951-493-7100.
- Ensure you have all necessary tools before proceeding.
- Do not attempt to work on your vehicle when the engine is hot.
- Disconnect the negative battery terminal before proceeding.
- Retain factory parts for future use.

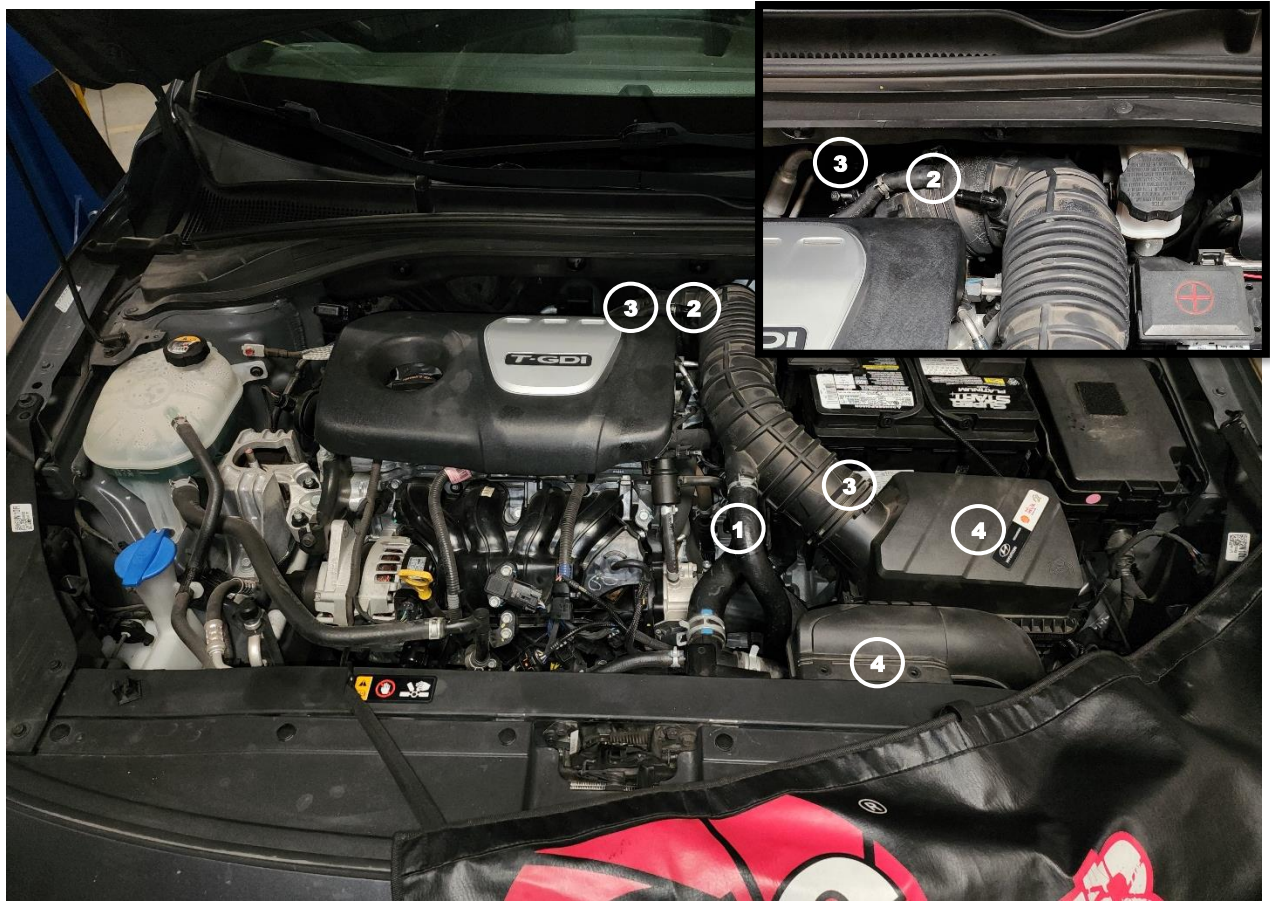
Label	Qty.	UoM	Description	Part Number
A	1	ea.	Tube, Cold Side: 46-2063X	05-61311B
B	1	ea.	Coupling, Silicone Elbow Rdr: 2.63" x 2.5" x 55 Deg	05-61305
C	1	ea.	Coupling, Silicone Straight Rdr: 2.5" x 2" x 3.5"L	05-61306
D	1	ea.	Clamp, SmartSeal, 036 (2.25" – 2.56")	03-50789
E	3	ea.	Clamp, SmartSeal, 044 (2.5" – 3.06")	03-50656
F	1	ea.	Screw, Btn Hd Socket: M6x1x12	03-50102
G	6	ea.	Screw, Socket Head Cap: M6x1.0x20	03-50241
H	7	ea.	Washer, M6 (12mm OD x 6.4mm ID)	03-50177
J	6	in.	Hose, Silicone: 4mm ID	05-46512
K	1	ea.	Plug, Hex Hd Socket: 1/8" NPT (Zn Plt)	03-50029

Installation will require the following tools:

8mm socket, 10mm socket, extension, 3/16" allen wrench, 5mm 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. Disconnect the diverter valve recirculation hose from the front of the air intake tube ①.
4. Disconnect the hose from the back of the air intake tube ②
5. Loosen the two (2) clamps securing the air intake tube onto the turbo inlet and air intake box, then remove the tube from the vehicle ③.
6. Remove the two (2) clips and three (3) mounting screws securing the air intake box to the vehicle, then remove the air box from the vehicle ④



7. Disconnect the electrical connections for the Manifold Absolute Pressure (MAP) sensor and the turbo boost solenoid ⑤
8. Disconnect the vacuum hose from the top port of the turbo boost solenoid ⑥
9. Remove the caps from the hose clamp screws, loosen the clamps securing the factory cold side charge pipe couplings to the throttle body and intercooler ⑦, and remove it from the vehicle.



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

10. If you are not using any aftermarket sensors, install the supplied 1/8" NPT plug (8) into the threaded fitting on the aFe cold side charge pipe.
11. Transfer the factory diverter valve onto the aFe cold side charge pipe (9) Secure it with four (4) of the supplied M6 x 1 x 20mm screws and M6 washers.
12. Transfer the factory turbo boost solenoid onto the aFe cold side charge pipe (10) Secure it with the supplied M6 x 1 x 12mm screw and M6 washer, be sure to install it in the same orientation as it was removed.
13. Transfer the factory MAP sensor onto the aFe cold side charge pipe (11) Secure it with two (2) of the supplied M6 x 1 x 20mm screws and M6 washers.
14. Lubricate the nipple fitting on the aFe cold side charge pipe and install the supplied 6" long silicone hose. Connect the opposing end to the bottom port of the turbo boost solenoid (12)



15. Install the smaller side of the aFe elbow reducer coupling, 2.63"x 2.5" x 55 degrees, (13) and one of the supplied 044 SmartSeal clamps onto the longer end of the aFe cold side charge pipe, do not tighten the clamp yet.
16. Install the aFe straight reducer coupling, 2.5"x2"x3.5"L, (14) and one of the 044 SmartSeal clamps onto the shorter end of the aFe cold side charge pipe, do not tighten the clamp yet.
17. Adjust the coupling in a similar direction as the factory cold side charge pipe.



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

18. Install the aFe cold side charge pipe into the vehicle. Connect the aFe straight reducer coupling, 2.50"x 2", to the intercooler (15) with the supplied 036 SmartSeal clamp, do not tighten the clamp yet.
19. Connect the aFe elbow reducer coupling, 2.63"x 2.5"x 55 degrees, to the throttle body along with one of the supplied 044 SmartSeal clamps, (16) do not tighten the clamp yet.
20. Adjust the couplings as necessary and be sure the aFe cold side charge pipe is not touching anything.
21. Tighten all of the clamps on the aFe cold side charge pipe.
22. Reconnect the electrical connections for the MAP sensor and the turbo boost solenoid (17)
23. Reconnect the vacuum hose to the top port on the turbo boost solenoid (18)



- 24. Reinstall the air intake box into the vehicle (19).
- 25. Reinstall the air intake tube into the vehicle (20).
- 26. Reconnect the hose to the back of the air intake tube (21).
- 27. Reconnect the diverter valve recirculation hose to the front of the air intake tube (22).
- 28. Reconnect the negative battery cable.
- 29. 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