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Thermostat Bypass Kit

Type 105

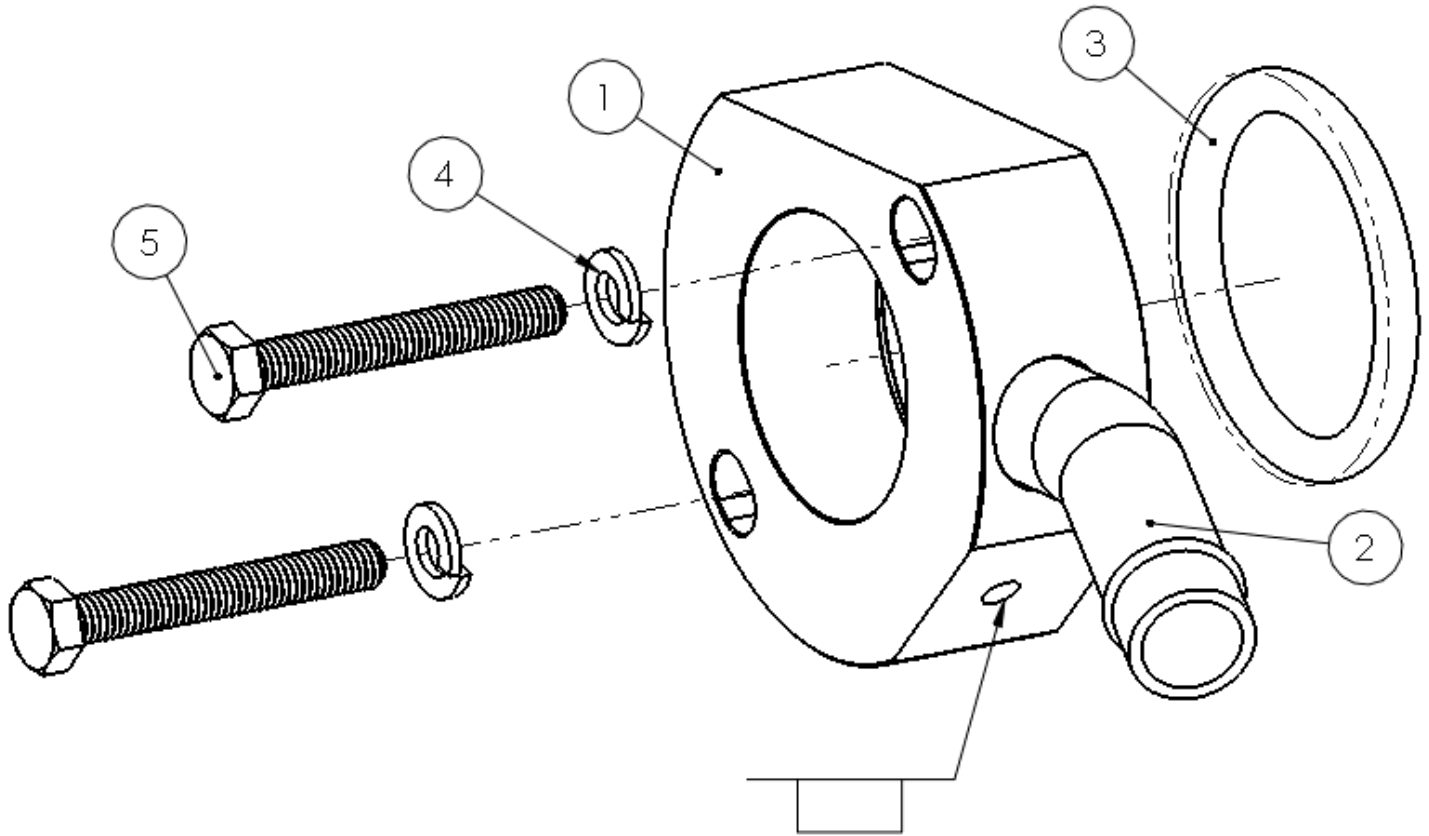
Thank you for purchasing our Firestorm Thermostat Bypass Valve. Once your vehicle is warmed up, the Thermostat Bypass Valve will cause your heater system to provide consistent heat that is independent of the thermostat position.

Note: When working on your vehicle's coolant system, always ensure that the engine is cold. Neglecting to do this may result in significant burns.

**Firestorm Heater Bypass Kit
HT-BP105**

Please verify that all hardware and parts are included in your package.

Kit Contents:



Item	Description	Qty
1	Thermostat Bypass Housing Type 201	1
2	5/8" – 25 degree Outlet	1
3	2" O-Ring R1000-326 MarcoRubber.com	1
4	M6 SS Lock Washer 92153A426	2
5	M6 x 45mm SS HH Bolt 93635A232	2
8	8 Feet of 5/8" Coolant Hose (Not shown)	8
9	#10 SS Hose Clamps (Not Shown)	1

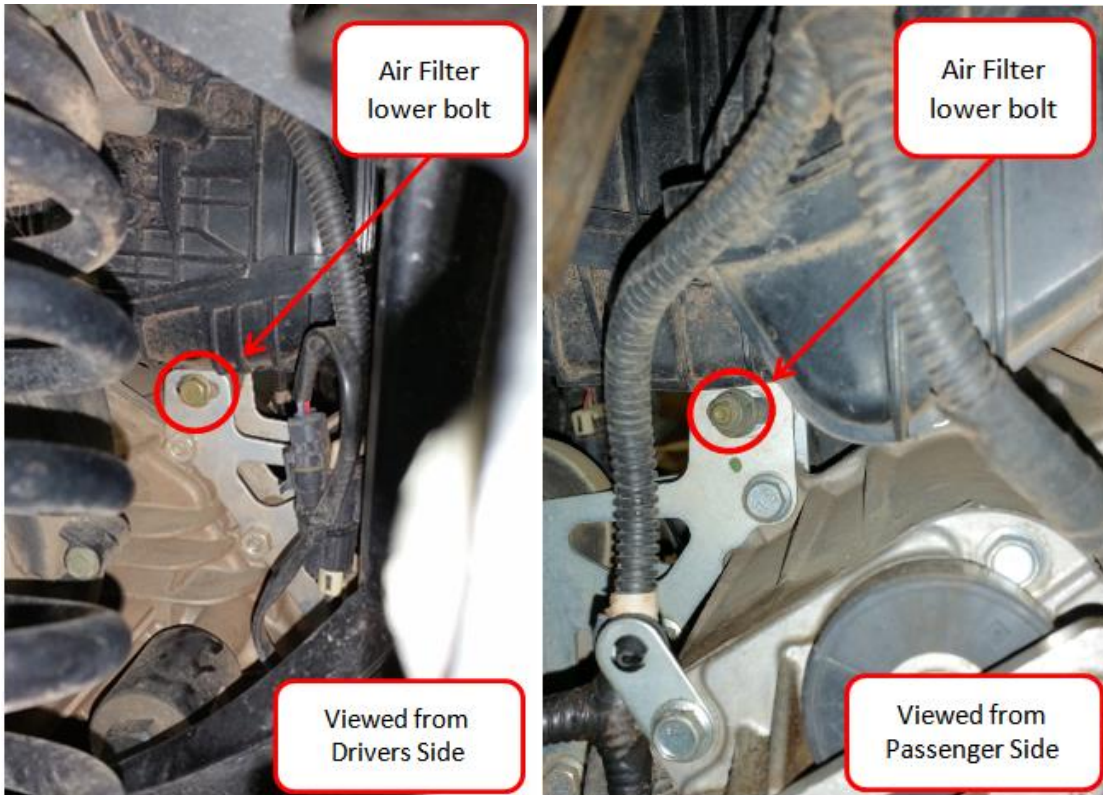
INSTALLATION:

- 1) Tip the bed of the Ranger to gain access to the engine bay. It may be necessary to unlatch the bed's pneumatic assist cylinder to improve maneuverability.
- 2) Remove the main air intake hose from the air manifold and set it aside as shown below left.



- 3) Remove the clear plastic hose located below the intake manifolds as shown above right.
- 4) Use two M13 sockets to completely remove the bottom bolt of the Air Filter Housing located toward the rear of the vehicle. This step can be accomplished with one person, however, if a friend can help hold one of the wrenches it is much easier. See pictures at the top of Page 4.

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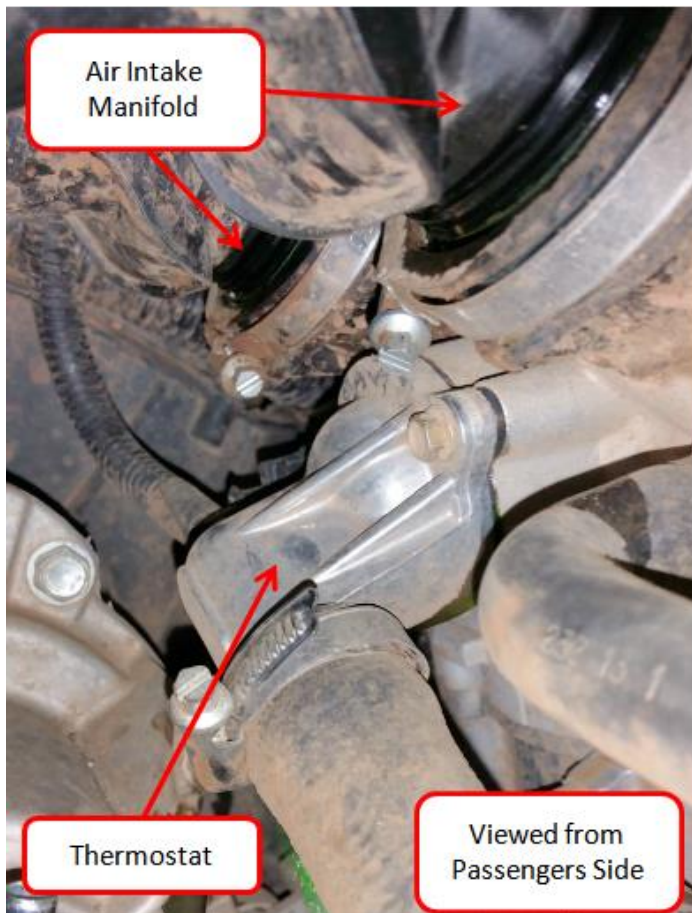


- 5) Loosen the two hose clamps on the intake manifold as far as possible without causing them to release. Pull the intake manifold assembly away from the engine block to separate the two intakes from the block. NOTE: Do not pull on the fuel rail.



- 6) Before removing the Thermostat, place a bucket of some kind to capture any fluid that drains out. Using an M8 socket wrench (1/4" Drive), remove the Thermostat from the Passenger Side of the vehicle. This step requires patience because there is very limited space to work.

Note: Make sure the vehicles engine is COLD and always wear safety glasses. Do not proceed if the engine is hot or warm.



- 7) After the coolant has stopped draining, assemble the Bypass Valve to the Thermostat using the M6 x 45mm Stainless Steel Hex Bolts so that the 5/8" Outlet on the Bypass Valve is facing toward you (positioned at the Passenger Side).
- 8) Before mounting the Thermostat and Bypass Valve, make sure the M6 x 16mm Hex Bolt and Crush Washer are tightened snug. Also make sure the green 2" O-Ring is placed in the machined slot. Hold the entire assembly up to the engine manifold and install the M6 Bolts by hand at first. Tighten the bolts in an alternating pattern so that the O-Ring is seated with even pressure on to the engine manifold. Attach the 5/8" Heater Hose and route it to the Cab

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Heater. Refill the coolant system through the radiator cap and coolant reservoir. Follow the manufacturer's services procedure to remove any air from the coolant system or refer to the Firestorm Cab Heater Instruction Manual for this procedure.

