Part #: WPH WPH-BS



THANK YOU AND CONGRATULATIONS FOR PURCHASING YOUR NEW KILLER B MOTORSPORT HIGH PERFORMANCE WATER PUMP HOUSING FOR YOUR EJ POWERED SUBARU!



**BEFORE INSTALLATION** 

AFTER INSTALLATION

The following literature includes a recommended tool list and an in-depth instruction manual for installing your new Killer B Motorsport Black Series/ Pro Series High Performance water pump inlet. If you follow these instructions closely, you should have no issues throughout the installation procedure. Take caution with older vehicles, rubber and plastic parts tend to become brittle and can easily break while servicing.

## **DISCLAIMER**

PROFESSIONAL INSTALLATION IS RECOMMENDED, BUT NOT REQUIRED.

THE FOLLOWING PROCEDURES CALL FOR DRAINING AND REFILLING OF THE ENGINE'S COOLING SYSTEM. A RECENTLY DRIVEN VEHICLE CAN HAVE SCALDING HOT COOLANT INSIDE THE ENGINE, IF YOU ARE NOT QUITE SURE HOW TO PROPERLY PERFORM THE RADIATOR/COOLANT FILLING AND BLEEDING PROCEDURE, DO NOT PROCEED. INSTEAD, CONTACT YOUR NEAREST KILLER B MOTORSPORT DEALER OR INFO@KILLERBMOTORSPORT.COM. IF YOU CHOOSE TO PERFORM THIS SERVICE YOURSELF, AND YOU FAIL TO PROPERLY BLEED THE COOLANT SYSTEM OF AIR,

YOUR ENGINE CAN OVERHEAT.

\*ALWAYS WORK IN A SAFE MANNER\*

\*USE PROPERLY MAINTAINED EQUIPMENT\*

\*USE UP TO DATE PERSONAL PROTECTIVE EQUIPMENT\*

\*ALWAYS USE THE RIGHT TOOLS FOR THE JOB\*

## INSPECT ALL PARTS THOROUGHLY BEFORE INSTALLATION

You are about to remove a component that has a one time use gasket on the thermostat (the thermostat gasket). Make sure you have a new part on hand for the installation of the Killer B Motorsport High Flow Water Pump Housing. You are required to cut both ends of your lower radiator hose, below is included the OEM part number should you want a new part.

THE OEM PART NUMBER IS FOR THE THERMOSTAT GASKET IS 21236AA010

THE OEM PART NUMBER FOR THE LOWER RADIATOR HOSE IS 45161AG010



## **RECOMMENDED TOOLS:**

- -Pop clip panel tool OR flathead screwdriver to remove belly pan.
- -10mm & 12mm socket (deep or shallow) with corresponding size ratcheting wrench (3/8" drive is enough for this service). A 3" long 3/8" drive extension wouldn't hurt as well.
- -1/4" drive torque wrench, reading in INCH POUNDS. A 1" extension will help you.
- -5mm hex socket in ¼" drive. IT IS \*STRONGLY RECOMMENDED\* THAT YOU USE A TORQUE WRENCH TO INSTALL THE INLET TO THE WATER PUMP. PROPER CARE AND TORQUE WILL HELP PREVENT COOLANT LEAKS, OVERHEATING AND ENGINE FAILURE.
- -Pliers to remove and reinstall the hose clamps on the radiator lower hose.
- -Box or hose cutter to remove length from the factory hose.
- -A new thermostat gasket is strongly recommended, especially for older vehicles. This is a one-time use item, you may get lucky reusing the original gasket, but don't count on it. (21236AA010)
- -Thoroughly inspect parts before installation.

- 1. ENGAGE PARKING BRAKE. Raise the front of the vehicle and then lower onto jack stands.
- 2. Once the vehicle is securely raised, take a pop clip tool or flathead screwdriver and remove the 6 plastic clips holding the side of belly pan in place. (The belly pan is the black plastic cover under the bottom side of the engine) It is also secured into place with (3) 12mm-head bolts, and (2) plastic C-clips holding the rear section of the pan to engine cradle.





3. Once the belly pan is removed, drain the coolant. If your engine is hot, that means your coolant is the same. If coolant is hot, perform this step AFTER giving the vehicle more time to cool down. Once you have removed the cap, there are options when it comes to draining the coolant. You can use the draincock (if equipped), you can loosen the (2) 10-head bolts securing the OEM water pump inlet to the water pump, or you can remove the lower radiator hose and make it rain. Whichever method you choose to drain the coolant, just know that the lower hose must come off for trimming



4. Once the coolant has been drained; using pliers, decompress the two clamps securing the hose to the radiator and water pump inlet. While the clamps are compressed, slide them toward the center of the hose for now. You may need a run a small pointed pick around the edges of the hose to work it free.

- Remove the OEM water pump inlet by unfastening the (2) 10mm-head bolts. Set OEM inlet and hardware aside for storage, new hardware is provided with your new KILLER B MOTORSPORT performance inlet. We <u>strongly recommend</u> you replace the thermostat gasket with a new OEM part.
- 6. The lower radiator hose will require the removal ½" of hose from each end, proceed with caution, you will need a boxcutter or a hose cutter. Once trimmed you will need to switch the direction of the hose. (The hose end that was once on the radiator will now be clamped into the new water pump inlet. The end that was on the water pump inlet will now be clamped to the lower radiator.) Set the lower radiator hose to the side, you will be torqueing the water pump inlet to the pump before you reinstall the hose.(NOTE THE YELLOW ARROW ON THE HOSE, INITIALLY IT WAS POINTED TOWARD THE ENGINE. AFTER YOU REMOVE THE HOSE AND TRIM IT TO SIZE, YOU WILL NEED TO SWITCH THE DIRECTION OF THE YELLOW ARROW, SO IT SHOULD BE POINTED TOWARD THE RADIATOR)



The following photograph shows the correct orientation of the lower radiator hose. The yellow arrow should now be opposing coolant flow. This will not affect the functionality of the cooling system.



## \*\*HOSE TRIMMING FOR PRO SERIES INLETS\*\*

More trimming will be required for fitment of the PRO SERIES (welded) water pump housing, in addition to switching direction of the hose. Torque the Killer B Motorsport High Flow Water Pump Housing onto the water pump, make a small cut, test fit, repeat until desired fitment is achieved. Results may vary, depending on the radiator being used.

7. Install the thermostat/gasket assembly into the pump, make sure to orient the pintle at 12:00 (pointed straight up, and unobstructed from the water pump body behind it)



- 8. In your parts kit, you will receive two blue M6 fasteners with the KILLER B MOTORSPORT performance pump inlet.
- 9. Thread the fasteners in evenly by hand. Then torque the two bolts to 8.9 FT-LB (106.8IN-LB).
- 10. After torqueing the water pump housing to the water pump. You can now install the lower radiator hose on the vehicle. It is a good idea to use new clamps, especially if you have an older vehicle (clamps can lose tension over time) Remember that the hose goes on the opposite direction of flow, as opposed to its initial orientation. The yellow arrow should now be pointed toward the radiator.



- 11. Once you have securely tightened the clamps and inlet, refill the coolant in the vehicle.
- 12. With the front of the vehicle still slightly raised, start the engine and begin the coolant bleeding process. Set the climate control to hot with the blower fan running, not on defrost.
- 13. Reinstall belly pan (if equipped)
- 14. Lower vehicle, and you are finished!
  - PLEASE REMEMBER THAT THIS IS A GUIDE TO ASSIST WITH YOUR INSTALLATION.
  - YOU MAY NEED TO ADD, CHANGE OR SKIP A STEP.
  - THE TOOLS AND STEPS LISTED ARE STEPS WE TAKE TO ENSURE A QUALITY INSTALL WITH QUALITY RESULTS. YOU MAY NEED A FEW EXTRA TOOLS.