

# A-8591-SB/SSZ - Water Pump Kit Instructions

1. Before assembling anything into your old water pump housing, verify that the bushing bore in the rear of the pump is the correct size. It **MUST** be 1.015/1.016" for the proper press fit of the rear cartridge.
2. Locate the rear cartridge assembly, it will consist of a part that looks like the original pack nut and thrust washer. Stand the pump on its nose and press the thrust washer (A) into the back end of the water pump.
3. Flip the pump over so the nose of the casting is pointing upward. Now press the cartridge (B) that looks like the original pack nut into the rear bushing cavity of the pump until it stops. Drop a long 3/8" socket extension down through the nose of the pump casting and then install about a 3/4" socket into the extension. This will make a nice pusher to push the rear cartridge into place using your arbor press.
4. Assemble the remaining components into the pump housing per the line drawing below. **NOTE**, when you slide the shaft into the pump, apply some grease or oil to the shaft so it slides through the seals easily.
5. **YOU MUST FIT YOUR PUMP TO THE HEAD.** The shaft in your kit is 1/4" longer than the original shaft. This is to eliminate end play that will cause your pump to fail prematurely. Normally excessive end play is due to wear in the cylinder head where the back of the shaft rides. Keep grinding or filing off the back end of the pump shaft until you can get the water pump casting to seat against the head **WITHOUT** the gasket in place. Then when you assemble the pump to the head using the gasket, you will have the proper amount of end play in the shaft.
6. Install the fan belt and set the belt deflection at about 1". Over-tightening will cause the front bearing to fail prematurely.
7. Do not grease the rear grease fitting of your water pump. The new cartridge you installed is sealed and doesn't require any greasing. You **WILL** have to grease the front bearing assembly. Rotate the fan while you grease the front grease fitting to ensure that the bearing cavity is full of grease. Grease until you see grease coming out around the shaft. Grease about every 500 miles.

