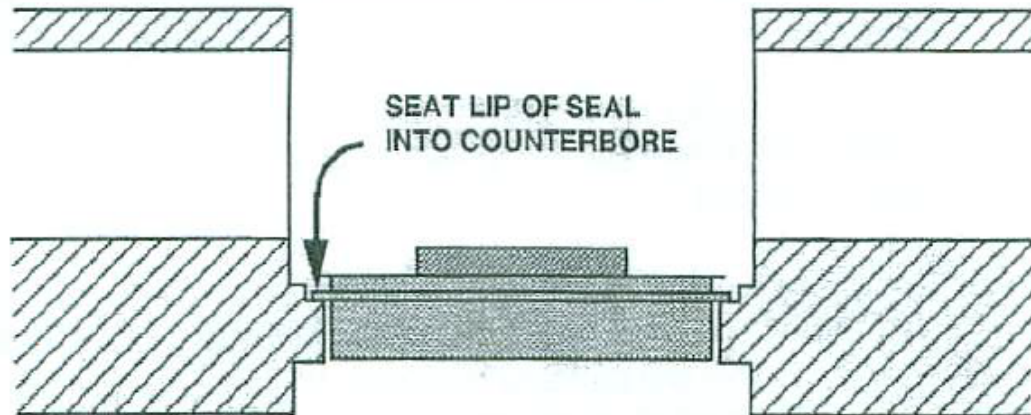




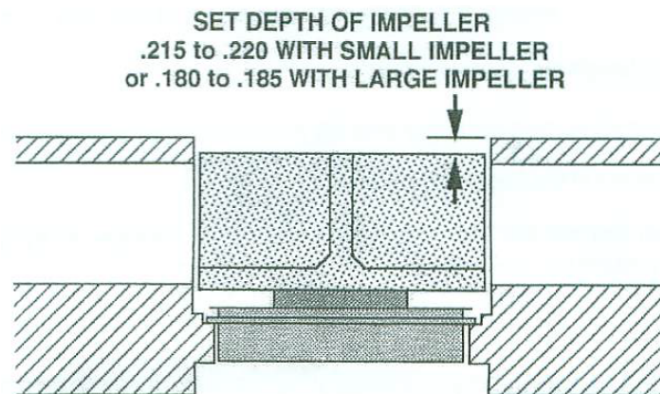
SKWP SEAL REBUILD KIT INSTRUCTIONS FOR WP-1, WP-2, AND WP-3 WATER PUMPS

- 1) Remove the water pump from the engine and remove the inlet from the pump body.
- 2) Remove the 1/8-in. NPT pipe plug or Bleed Valve from the front of the pump body.
- 3) Insert a 5/64-in allen wrench through the pipe plug hole and undo the impeller screw set.
- 4) Slide the impeller off the motor shaft.
- 5) Undo the two nuts holding the motor onto the pump body and then remove the motor.
- 6) Press the seal out of pump body.
- 7) Press the new seal into the body. Make sure that you do not allow anything to touch the carbon face (the black part) of the seal because a scratch, grit or oil from your fingers can cause the seal to leak. It's important to press the seal all the way down into the counter bore so that the lip of the seal bottoms out



- 8) Remove the rubber slinger from the motor shaft and install the new slinger. The slinger should be about 1/16-in. away from the face of the motor.
- 9) Reinstall the motor.
- 10) Remove the seal seat and if equipped, the nore O-ring from the impeller. If your impeller had an O-ring, use a little WD-40 and install the new O-ring. Do not nick the O-ring or allow it to buckle up in the bore or it will leak. Newer impellers do not have a hole all the way through so no O-ring is needed. Push the new seal seat into the back of the impeller being very careful to keeo the lapped face clean and making sure theat the seat is bottomed into the impeller.
- 11) Roate the motor shaft so that the flat is facing toward the front of the pump where the 1/8-in. pipe plug, or bleed valve was loacted.

- 12) Slide the impeller onto the motor shaft. Put sealer on the set screw (blue Loctite) and thread it into the impeller by using an allen wrench through the pipe plug hole. **DO NOT TIGHTEN YET!**
- 13) Measure down from the end of the pump to the end of the impeller with a depth micrometer or dial calipers and **set the depth of the impeller as shown**. While holding the impeller at this depth, tighten the impeller set screw. **The depth of the impeller is critical!** If it is set too deep the motor can lock up when the pump gets hot and will burn up. If it is set too shallow the seal may not have enough pre-load and could leak. Double check this measurement after you have tightened the set screw.



- 14) Reinstall the 1/8-in. pipe plug or bleed valve using a sealer (liquid teflon, hydraulic fitting sealant) and then reinstall the inlet elbow with a new gasket. (Each seal kit contains (1) WP-1, 2 inlet elbow gasket and (1) WP-3 inlet elbow gasket.)
- 15) Flush out the cooling system with water. Reinstall the pump onto the engine, using new gaskets. Re-Fill the cooling system with water and antifreeze. **DO NOT USE BLOCK SEALER or RADIATOR SEALER** in the engine, as this will damage the seal. When the engine and radiator are full, turn on the water pump motor and if needed, momentarily remove the pipe plug or press the bleed valve to release any trapped air in the water pump cavity.

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